

Commission of Inquiry into the Decline of
Sockeye Salmon in the Fraser River



Commission d'enquête sur le déclin des
populations de saumon rouge du fleuve Fraser

Public Hearings

Audience publique

Commissioner

L'Honorable juge /
The Honourable Justice
Bruce Cohen

Commissaire

Held at:

Room 801
Federal Courthouse
701 West Georgia Street
Vancouver, B.C.

Thursday, February 3, 2011

Tenue à :

Salle 801
Cour fédérale
701, rue West Georgia
Vancouver (C.-B.)

le jeudi 3 février 2011

APPEARANCES / COMPARUTIONS

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Hugh MacAulay Mitch Taylor, Q.C.	Government of Canada
Clifton Prowse, Q.C.	Province of British Columbia
No appearance	Pacific Salmon Commission
No appearance	B.C. Public Service Alliance of Canada Union of Environment Workers B.C. ("BCPSAC")
No appearance	Rio Tinto Alcan Inc. ("RTAI")
No appearance	B.C. Salmon Farmers Association ("BCSFA")
No appearance	Seafood Producers Association of B.C. ("SPABC")
No appearance	Aquaculture Coalition: Alexandra Morton; Raincoast Research Society; Pacific Coast Wild Salmon Society ("AQUA")
Tim Leadem, Q.C.	Conservation Coalition: Coastal Alliance for Aquaculture Reform Fraser Riverkeeper Society; Georgia Strait Alliance; Raincoast Conservation Foundation; Watershed Watch Salmon Society; Mr. Otto Langer; David Suzuki Foundation ("CONSERV")
Don Rosenbloom	Area D Salmon Gillnet Association; Area B Harvest Committee (Seine) ("GILLFSC")

APPEARANCES / COMPARUTIONS, cont'd.

No appearance	Southern Area E Gillnetters Assn. B.C. Fisheries Survival Coalition ("SGAHC")
No appearance	West Coast Trollers Area G Association; United Fishermen and Allied Workers' Union ("TWCTUFA")
No appearance	B.C. Wildlife Federation; B.C. Federation of Drift Fishers ("WFFDF")
No appearance	Maa-nulth Treaty Society; Tsawwassen First Nation; Musqueam First Nation ("MTM")
No appearance	Western Central Coast Salish First Nations: Cowichan Tribes and Chemainus First Nation Hwlitsum First Nation and Penelakut Tribe Te'mexw Treaty Association ("WCCSFN")
Brenda Gaertner Leah Pence	First Nations Coalition: First Nations Fisheries Council; Aboriginal Caucus of the Fraser River; Aboriginal Fisheries Secretariat; Fraser Valley Aboriginal Fisheries Society; Northern Shuswap Tribal Council; Chehalis Indian Band; Secwepemc Fisheries Commission of the Shuswap Nation Tribal Council; Upper Fraser Fisheries Conservation Alliance; Other Douglas Treaty First Nations who applied together (the Snuneymuxw, Tsartlip and Tsawout)
No appearance	Adams Lake Indian Band
No appearance	Carrier Sekani Tribal Council ("FNC")
No appearance	Council of Haida Nation

APPEARANCES / COMPARUTIONS, cont'd.

No appearance	Métis Nation British Columbia ("MNBC")
Tim Dickson	Sto:lo Tribal Council Cheam Indian Band ("STCCIB")
No appearance	Laich-kwil-tach Treaty Society Chief Harold Sewid Aboriginal Aquaculture Association ("LJHAH")
No appearance	Musgamagw Tsawataineuk Tribal Council ("MTTC")
No appearance	Heiltsuk Tribal Council ("HTC") Articled Student

TABLE OF CONTENTS / TABLE DES MATIERES

	PAGE
PANEL NO. 16:	
TIMBER WHITEHOUSE	
Cross-exam by Mr. Rosenbloom	7/11/14/16/23/31
Cross-exam by Ms. Gaertner	38/42/44/46/48/51/53/55/57
BRIAN RIDDELL	
Cross-exam by Mr. Leadem (cont'd)	1
Cross-exam by Mr. Rosenbloom	10/13/15/20/27/34
Cross-exam by Ms. Gaertner	40/43/45/47/50/51/52/56/57/58
Cross-exam by Mr. Dickson	59
GORD STERRITT, Affirmed	
In chief by Ms. Baker	60
Cross-exam by Ms. Pence	61
Cross-exam by Mr. Dickson	67
PANEL NO. 15:	
PAT MATTHEW, Resumed	
Cross-exam by Ms. Pence	77
WAYNE SAITO, Resumed	
Cross-exam by Mr. Prowse	77
	90

EXHIBITS / PIECES

<u>No.</u>	<u>Description</u>	<u>Page</u>
389	<i>Curriculum vitae</i> of Gord Sterritt	61
390	Secwepemc Fisheries Commission - Consultation and Engagement Matrix	82
391	Letter dated April 20, 2009, from Secwepemc Fisheries Commission to Jeff Grout	87
392	Framework for the Integrated Salmon Dialogue Forum	91
393	Module 1	97
393-A	Module 2	97
393-B	Module 3	97
393-C	Module 4	97

1 Vancouver, B.C. /Vancouver
2 (C.-B.)
3 February 3, 2010/le 3 fevrier
4 2011
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6 THE REGISTRAR: Hearing is now resumed.

7 MR. LEADEM: I'm up on my feet, Mr. Commissioner. For
8 the record, Leadem, initial T. appearing as
9 counsel for the Conservation Coalition.

10
11 CROSS-EXAMINATION BY MR. LEADEM, continuing:
12

13 Q The remainder of my questions are for you, Dr.
14 Riddell. I was intrigued by the smolt tagging
15 study that you did on Chilko -- with the Chilko
16 smolts and with your finding that they experienced
17 a high degree of in river out-migration mortality
18 before they reached the Strait of Georgia. The
19 first question is is I understand also they
20 exhibited a high rate of mortality once they were
21 in the Strait of Georgia, as well, so that the
22 next time that you picked up signals in Queen
23 Charlotte Strait or Queen Charlotte Sound, they
24 were further reduced; is that right?

25 DR. RIDDELL: Yes, we had survival rate estimates from
26 Chilko Lake to the mouth of the Fraser River and
27 then we have a line about central Strait of
28 Georgia at the top of Texada to Hornby Island and
29 across, and they had a longer period of residence
30 in that area and some continued mortality, but
31 their survival rate was quite high in that area.
32 There was then a long migration of probably 200
33 kilometres from the top of that line to the outlet
34 of Queen Charlotte Sound and we only observed, I
35 believe it was three or four tags at that point.
36 So the mortality was very high from the northern
37 part of the Strait of Georgia through Johnstone
38 Strait and we saw no tags going out through Juan
39 de Fuca but it was aligned for detection of tagged
40 fish, as well.

41 Q I was reminded when you were giving your evidence
42 of Dr. Welch's evidence who came earlier and
43 presented a similar study that he had done on
44 smolts in Cultus Lake, I believe, that he radio
45 tagged smolts from Cultus Lake and was able to
46 track them through right through to the Strait of
47 Georgia and then out to sea. And did he not --

2

PANEL NO. 16

Cross-exam by Mr. Leadem (cont'd) (CONSERV)

1 did he show the same degree of mortality in-river
2 and their out-migration pattern?

3 DR. RIDDELL: Not quite, no. Dave applied the same
4 type of tags to very large smolts, because they
5 were wiered at Rosewall Creek and then brought
6 back and they were very big animals to carry this
7 tag, and they moved very, very rapidly down Chilko
8 -- or, sorry, the Cultus --

9 Q The Fraser?

10 DR. RIDDELL: -- Lake --

11 Q Right.

12 DR. RIDDELL: -- Sweltzer Creek into the Fraser and out
13 and there was only two or three days there and
14 they had a pretty high survival in that trip. But
15 I think many people are concerned in Dave's is
16 that it's a nice demonstration of the technology
17 in itself but the fish were so large that we don't
18 believe that they were representative of the
19 natural populations. But they did follow a very
20 similar pattern of mortality through the Strait of
21 Georgia.

22 Q That you saw in your Chilko smolts?

23 DR. RIDDELL: Yes.

24 Q In the order of magnitude I think the Cultus Lake
25 smolts were 20 centimetres roughly and yours were
26 something in the range of eight or nine; is that
27 right?

28 DR. RIDDELL: No. No, that's not right. Actually,
29 ours were much larger.

30 Q Okay.

31 DR. RIDDELL: The eight or nine is probably a comment
32 that Timber made is that roughly eight is about
33 the size of a one-year-old smolt, eight
34 centimetres. The two-year-old smolts are larger
35 than that and the fish that we tagged were down to
36 about 11.5 centimetres. So ours were atypical in
37 the natural range. They were the largest
38 naturally produced fish, but they're still bigger
39 than the typical smolt leaving the Fraser River.

40 Q Do I have it right that with respect to our
41 ability to capture smolts that there's only two
42 locations where we can do that currently? One is
43 obviously the Chilko, at the outlet of Chilko Lake
44 into Chilko River and the other one is Sweltzer
45 Creek or into the Cultus Lake pattern; is that
46 right?

47 DR. RIDDELL: It's the only two places that we have

February 3, 2011

1 fences that facilitate handling fish easily.
2 There are other places where you could capture
3 smolts, but those are the only two fences where
4 you can work easily to get the fish with minimal
5 harm to the animals.

6 Q Would you agree as a scientist that it would be of
7 some scientific benefit to have another additional
8 place that we can conduct a study to make further
9 determinations of what's going on in terms of the
10 mortality pattern?

11 DR. RIDDELL: Well, if we continue to see that the --
12 if we can demonstrate that the natural populations
13 are suffering mortality rates like these larger
14 smolts, and I think as I said yesterday my concern
15 is why would you assume that small smolts are
16 going to have a much higher survival rate than
17 large smolts? There are some reasons you can
18 postulate, but I mean I think we need to
19 demonstrate that.

20 If we're actually losing fish along the
21 migration routes leaving then, yes, it would be
22 advantageous to have other sites tagged so that we
23 can actually look at what type of loss, what's
24 causing the loss? We don't have any idea what
25 that is. The obvious examples are predation and
26 now with this concern about a virus-like signature
27 in some fish, maybe there is a fish health issue
28 involved that could be brought out by rate of
29 passage and stress. But we need to really do some
30 additional science on that component, as well.

31 Q Okay. That leads me into the next line of
32 questions which focuses upon your comment that if
33 you want to tackle the scientific explanation of
34 why we have fluctuating populations or returns,
35 for example, the declines that we saw exhibited in
36 the first part of this decade culminating in the
37 decline of 2009, and then the increase or the
38 abundance in 2010, that the best place in your
39 estimation would be to examine the Strait of
40 Georgia to see if there's something going on in
41 the Strait of Georgia. Do I have that right?

42 DR. RIDDELL: Yes. I think the only thing I qualified
43 later, I came back and said and we shouldn't
44 forget that there is this compounding factor of
45 the fish health issue now, that if the fish are
46 carrying something that we don't fully understand
47 but it does look disease-like or a viral signature

1 they referred to, then that may confound what's
2 going on in the Strait of Georgia. But the Strait
3 of Georgia has been largely neglected as a major
4 study in terms of ecosystems that salmon all use,
5 and there really hasn't been a comprehensive study
6 of the strait and what determines marine survival
7 in the early phase.

8 Most countries around the North Pacific are
9 certainly coming to agreement that the majority of
10 the survivorship in terms of numbers of animals
11 does occur in the early marine period, probably a
12 month to two months even.

13 Q If you were to try to delineate where in Georgia
14 Strait you would best conduct those studies, where
15 would you postulate would be a good place to
16 start?

17 DR. RIDDELL: Well, we've actually talked about that
18 quite a bit in the last couple of years. I'm not
19 sure that we would guess at a place to start. I
20 think you'd need to clearly -- if you believe that
21 the mortality is during the early period and it's
22 compounding through time, then you probably need
23 to start close to the river. We do know that from
24 the tagging studies that have been done that there
25 is a prolonged period of use of the estuarine
26 environment between the mouth of the river and the
27 first POST array at the top of Texada Island. So
28 they do use that for a fair period of time. So
29 you clearly have to do some investigation in there
30 and then I think there is a natural division that
31 you need to study the northern portion of the
32 Strait of Georgia at that time. And then you
33 probably have to look at Johnstone Strait pretty
34 much as a whole, just because it's such an
35 incredibly difficult environment to work in. So
36 you could measure before and then basically after.

37 Q Right. You alluded to the -- I think yesterday,
38 as well as just recently, to the health issue and
39 you referenced a paper by Dr. Kristi Miller from
40 DFO that was, I think, recently published in the
41 scientific journal *Science* and in which she
42 hypothesized that there was a genomic signature
43 that was linked to pre-spawn mortality and in-
44 river mortality and some sort of a virus-like
45 disease that was in the fish. Have you been
46 following that?

47 DR. RIDDELL: Yes.

1 Q And would that be something worthwhile for this
2 commission to investigate and to look into?

3 DR. RIDDELL: Oh, absolutely. We've been looking at
4 this for awhile. I've been following it,
5 naturally, because Kristi was in my division
6 before I left the department and as my background
7 is genetics, we spent quite a bit of time talking
8 about this, although I'm not sure I even
9 understand genetics any more, the way it's
10 evolved.

11 I think when you find something that -- the
12 really, really startling thing with Kristi's work
13 is the use of these genomic arrays. So I think if
14 you look at the websites, you can see 16,000 cells
15 on basically something about the size of a slide
16 that you would have used in university. And in
17 Kristi's work what she was finding is that fish
18 that were described as healthy had no pattern on
19 the array, as if there was largely green and
20 things, the appropriate genes were active and not
21 active at the right time. Fish that were
22 unhealthy had this incredibly distinct signature
23 where about half of the array was actually turned
24 off inappropriately, and so that's where we
25 immediately started looking at, you know, what
26 could possibly be going on where you've got such a
27 striking difference between fish all returning in
28 the same year.

29 Now, the other thing that enabled us to
30 really tie this down, of course, is that using
31 DNA, you can identify where you expect these fish
32 to go, so you knew the population of origin and
33 then with radio tagging, you could follow these
34 fish through the system and determine the fish
35 that you knew where it was going and you knew its
36 genotypic signature, the healthy/unhealthy thing,
37 you could equate it to the fate of the radio tag
38 that you had put on that fish. And so it's a
39 really good example of putting all of the tools we
40 have together to try and really improve our
41 understanding. It's a very, very nice piece of
42 work.

43 Q To lend support to your theory that Georgia Strait
44 would be the place to examine, I would suggest to
45 you that the Harrison Lake -- or, sorry, the
46 Harrison River sample might lend some support for
47 that, because unlike some of the other declines

1 that we saw in the first part of this decade, up
2 until 2009, we saw that the Harrison River stocks
3 were actually -- or the Harrison River CUs were
4 increasing.

5 DR. RIDDELL: Mm-hmm.

6 Q And they do not follow that same period of
7 migration out Georgia Strait, as I understand it.
8 They actually follow a more southerly route out to
9 the ocean through -- mostly through the Strait of
10 Juan de Fuca and then up the West Coast of
11 Vancouver Island. Would you agree with my
12 principle that that tends to lend support to your
13 hypothesis that we should be examining the Strait
14 of Georgia?

15 DR. RIDDELL: Yes, I do. I would add that not only do
16 they use the strait longer, they go out to sea at
17 a very different time. So they are not really
18 seen in samples, and as I just said, we can
19 recognize all of the populations with DNA sampling
20 now, so when you do sampling on the Strait of
21 Georgia, the sockeye, in July you do not see
22 Harrison sockeye. When you start your sampling in
23 September, 90-plus percent of your samples are
24 Harrison sockeye. Now, that population is not so
25 large that it should overwhelm everything else, so
26 that is not the reason. So what's really happened
27 is the vast majority of the other Fraser sockeye
28 have now left the Strait of Georgia and you're
29 really seeing Harrison River utilization of the
30 strait. And they do very, very well. They grow
31 very rapidly in -- so they're in there in August
32 through September. There have been cruises in
33 November when they're still there. Now the
34 abundance is starting to drop and they're more
35 widely distributed.

36 The only thing I'd caution on is I don't
37 think the evidence for them all going south or not
38 going north is all that strong yet because of the
39 concerns you have on tagging these fish. If you
40 could get large enough fish in the strait in
41 September, you could probably put POST tags on and
42 monitor some of the movement of the fish, but that
43 hasn't been done yet because many of the fish are
44 not large enough to tag.

45 So, I mean, I'm still a little bit mixed on
46 how strong the argument is that -- I think their
47 survivorship is that they're doing very well in

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PANEL NO. 16

Cross-exam by Mr. Leadem (cont'd) (CONSERV)

Cross-exam by Mr. Rosenbloom (GILLFSC)

1 the Strait of Georgia and that they're healthy
2 enough to survive either way they go. But you are
3 right, the prevailing thought now is that they go
4 out the south. The evidence for that is that
5 they're seen on the West Coast of Vancouver
6 Island. But there's not as intensive sampling in
7 the north to really prove that they go both ways.
8 So that's my concern at this point.

9 MR. LEADEM: All right. Thank you for that. Those are
10 my questions.

11 MS. BAKER: Thank you. The next questioner is Mr.
12 Rosenbloom.

13 MR. ROSENBLOOM: Yes. My name is Don Rosenbloom. I
14 appear on behalf of Area D Gillnet and Area B
15 Seiner.

16
17 CROSS-EXAMINATION BY MR. ROSENBLOOM:
18

19 Q I have a number of questions for both of you.
20 Firstly, Mr. Whitehouse, yesterday you testified
21 about the nursery lake assessment program and you
22 and I tried to speed this cross-examination up a
23 little bit and having had a chat just before your
24 testimony this morning, and if I can summarize
25 what I understand from you, so that it goes onto
26 the record. The nursery lake assessment program
27 is a part of a habitat assessment, you would call
28 it a habitat assessment but it's focused
29 exclusively on capacity of a lake system to, in
30 terms of the food source for fry that have
31 obviously come from the river system into the
32 nursery lake; is that correct to say?

33 MR. WHITEHOUSE: With one provision, not exclusively.
34 The primary focus is identifying the ability of a
35 lake to support sockeye and it examines a number
36 of parameters, biological, physical and chemical,
37 and including other components of the ecosystem in
38 the lake to understand the relationship between
39 those components and that lake's ability to
40 support sockeye.

41 Q Yes. And so obviously part of your work is
42 determining the capacity of a lake system to nurse
43 and nourish a stock, a sockeye stock; is that
44 correct?

45 MR. WHITEHOUSE: Yes.

46 Q And you would subscribe to the belief that there
47 obviously is a threshold in terms of capacity

February 3, 2011

1 wherein a -- the number of fry will reach over
2 capacity of the lake to feed and nourish that
3 stock?

4 MR. WHITEHOUSE: What is clearly demonstrable in the
5 work associated with evaluating the fresh water
6 rearing capacity in nursery lakes is that density
7 of sockeye fry or, in the case of lakes where
8 there are multiple species that target on the same
9 food resources, plankton-eating species, there's a
10 link between the densities that recruit into the
11 lake and the productive capacity of the system,
12 and there are ways to model looking at
13 environmental variables, what that capacity is.

14 Q Yes, sir. And one of the critical consequences of
15 what I'll call an over-capacity of stock in a lake
16 is that the -- those fry do not feed to the extent
17 of being the size that one would normally see in a
18 lake system, correct?

19 MR. WHITEHOUSE: One of the impacts of high density can
20 be depression in growth rate, so that at higher
21 densities you will see a reduced size of fry
22 produced.

23 Q And this is obviously trite, but the consequence
24 of that situation is that those fish have a lesser
25 survival rate than obviously fish that are of what
26 we'll call normal size?

27 MR. WHITEHOUSE: I --

28 Q Higher mortality.

29 MR. WHITEHOUSE: There is a conventional perspective
30 that fish size does relate to survival and that
31 the smaller you are, the lower your potential
32 survival rates are. But that, as Dr. Riddell
33 spoke earlier, there is work that needs to confirm
34 that across the life history stages, particularly
35 from the point where fish leave the lake to the
36 point that they make marine entry.

37 Q It kind of makes sense, doesn't it? I appreciate
38 you don't necessarily have scientific evidence of
39 it, but the fact is a smaller smolt is more
40 susceptible to predation than otherwise?

41 MR. WHITEHOUSE: I -- I don't think we can hold that as
42 being a completely broad, acceptable broad
43 statement. Size varies across years, year to year
44 amongst a wide range of species and you see
45 variable survival rates where small fish in one
46 year do as well as large fish in another. The key
47 is making the linkage between density and the

1 potential impacts. And you have to think a little
2 broader than simply size.

3 And one example of what I'm talking about
4 here would be the impact of very large spawning
5 populations arriving in a lake and delivering
6 nutrients to that system. So there can actually
7 be an impact of sockeye on subsequent generations.
8 They fertilize the lake with their carcasses in
9 some instances. So you have to really study the
10 nutrient budgets and the dynamics of the various
11 trophic web components to understand what the
12 ultimate impact to the rearing capacity in the
13 system is going to be.

14 Q Well, let's try to make this really simple. You
15 would agree with me that the optimum productivity
16 of a stock is dependent in part on the fry being
17 properly nourished in a lake in the nursery lake?

18 MR. WHITEHOUSE: Yes.

19 Q Yes.

20 MR. WHITEHOUSE: Yes.

21 Q And that being the case, obviously the carrying
22 capacity of the lake to provide that nourishment
23 to those fry is obviously relevant to those of you
24 that are looking at productivity issues.

25 MR. WHITEHOUSE: Yes, carrying capacity is important.

26 Q Thank you. Now, in speaking about the nursery
27 lake assessment program, I heard you to testify
28 yesterday - and please correct me if I
29 misrepresent your evidence - that currently there
30 are really three nursery lake assessment programs
31 going on or areas, I should say, where you are
32 carrying on these assessments; is that correct?

33 MR. WHITEHOUSE: That is correct. We've been able to
34 continue to deliver at the Shuswap system, at
35 Quesnel Lake and in the Chilko system.

36 Q And am I not correct in hearing from you that
37 prior to the 1985 critical year, for reasons we
38 all know in this room, there was a more extensive
39 program of nursery lake assessment?

40 MR. WHITEHOUSE: I would characterize the work that
41 went on in the old IPSFC days as being extensive,
42 providing broad synoptic overview of a large
43 number of lakes within the Fraser watershed. When
44 DFO assumed responsibility for those activities in
45 '86 there was another concerted effort on DFO's
46 behalf linked to the lake enrichment program to do
47 a very broad synoptic survey on most of the major

1 nurseries within the Fraser watershed. And then
2 since that time, since the approximately early
3 '90s, is when we saw a tailing off in the amount
4 of directed lake assessment, and focusing on key
5 primary nurseries like the three mentioned.

6 Q All right. And let's be blunt about it. Surely
7 from your perspective it is not favourable to
8 stock analysis that these programs have been more
9 limited in more recent time?

10 MR. WHITEHOUSE: I see these as important assessments.

11 Q And my question to you, sir, is can you explain to
12 this commission why there has been such a
13 diminishment of effort to carry out a more
14 extensive program on nursery lake assessment?

15 MR. WHITEHOUSE: I think we touched on a number of the
16 aspects of this yesterday associated with the
17 meeting obligations to the Pacific salmon, treaty
18 salmon, Fraser sockeye salmon assessment framework
19 where under fairly onerous budgetary constraints
20 we were in a position that finding ways to keep
21 all of the assessment components functionally
22 active, hard decisions had to be made given
23 reduced budgets what could be afforded, and these
24 lake assessments fell victim to that.

25 Q And that's a tragedy, isn't it, in terms of the
26 kind of focus that we have at this commission
27 today to try to explain things in terms of runs
28 and run size? First of all, I'm sorry, Mr. --

29 MR. WHITEHOUSE: Yeah. I think a tragedy is quite a
30 strong statement. I think that there is clearly
31 value added to the overall information available
32 to assess Fraser sockeye stocks, that the work
33 that has been able to be maintained has focused on
34 those areas where we had the highest priority
35 issues, understanding what was going on, where
36 density level impacts were coming into play. But
37 we have missed some opportunity to understand
38 what's going on on a broader base in the larger
39 suite of nursery systems within the Fraser.

40 I should state that there has been
41 considerable additional work outside of the Fraser
42 and it's an important -- on nursery lakes. It's
43 important to note that the department has, where
44 it has the opportunity, attempted to ensure that
45 an ecosystem-based approach to sockeye assessment
46 has been supportable to the extent possible.

47 Q Yes. Dr. Riddell wanted to say something.

1 DR. RIDDELL: Well, I think Timber touched on it. I
2 was just -- I think a tragedy is a bit of an
3 overstatement for the loss. We're talking about a
4 loss of one or two of the production lakes that
5 would really have many any difference at all. It
6 would be nice to survey many of the lakes and look
7 at the population dynamics in the lake, but to be
8 fair, I mean, we're talking about the loss in
9 Stuart Lake which I personally think we need to go
10 back and look at to determine how we recover that
11 lake. And secondly, we have Francoise Lake which
12 is actually not very productive.

13 So, I mean, the impact of the juvenile survey
14 is to ensure we could cover the others. I think
15 tragic overstates it. Is it preferable?
16 Absolutely.

17 But the other comment I was going to make and
18 Timber just sort of touched on this at the end,
19 but a different reason, under the IPSFC you did
20 have more broad coverage but more limited
21 information captured. Under the Government of
22 Canada, when they took over, I mean, you maintain
23 the Fall survey, so that we have the fry
24 enumeration so that we can look at survivorship in
25 the lakes. There's an entire research branch that
26 was added under Dr. John Stockner that for years
27 had been looking at what limits productivity in
28 sockeye lakes and that's a much, much more
29 detailed assessment of the limnology. I think I
30 went through this yesterday. You talk about the
31 base in morphology, the turnover rate in the lake
32 and that development along the shoreline,
33 contaminants and so on. So there was a much more
34 intensive study of some of the lakes. That's not
35 to cover off the loss of the fry data, but there
36 were two components in this limnological work.

37 Q Thank you. Throughout this hearing, we, of
38 course, hear about Cultus Lake repeatedly. My
39 question to you, Mr. Whitehouse, is why would
40 there not be a nursery lake assessment analysis
41 done for Cultus Lake in light of its
42 sensitivities?

43 MR. WHITEHOUSE: There has been a considerable amount
44 of habit-based evaluation and assessment that does
45 go on at Cultus, including opportunistic. We have
46 a particular benefit of having a research facility
47 sited on the shores or immediately at the outlet

1 of that lake, the Cultus Lake lab, so there is the
2 ability to do research related to habitat issues
3 within that system, including working on the fry
4 distribution studies and at very minimal or
5 marginal add-on cost. So associated with recovery
6 planning, the conservation team efforts that are
7 going on at Cultus Lake, there are extensive
8 habitat-based assessments in that system,
9 including evaluation of spawning habitat, the
10 impact of invasive aquatic weeds, the impact of
11 shoreline development on spawning habitat within
12 the system. These have been integral parts to a
13 very intensive evaluation of the potential impacts
14 of habitat degradation including effects of
15 predators and competitors within that system.

16 Q Well, I may be misleading you, but I was present
17 when your colleague, Ms. Stahl (sic), testified
18 before these proceedings and I hope I state her
19 evidence correctly that she testified that there
20 has not been a habitat status report done for
21 Cultus Lake to the best of her knowledge, and I
22 don't think anyone has challenged that in evidence
23 given subsequently. Do you agree with that
24 testimony? And wouldn't she be the one that would
25 be aware of it?

26 MR. WHITEHOUSE: I'm not --

27 Q Stalberg, I'm sorry.

28 MR. WHITEHOUSE: Oh.

29 Q I believe her name was Stalberg.

30 MR. WHITEHOUSE: Okay. She may be talking about a
31 formal habitat-based assessment that meets a
32 particular set of criteria. I think we have had a
33 status review of Cultus Lake that has run through
34 the CSAS process within the past year, evaluating
35 the restoration activities going on, including
36 making comment on habitat components and
37 uncertainty associated with the various recovery
38 strategies that we've talked there. So it may be
39 that Ms. Stalberg was talking about a different
40 type of report. There has been directed work
41 associated with evaluating habitat status and
42 recovery in Cultus.

43 Q Well, let me ask you this. Are you satisfied of
44 the habitat analysis work that has been done on
45 Cultus over let's say the lasts five to ten years?
46 Do you feel that it is providing you as managers
47 with sufficient information to deal with the

1 problems that you're facing down at that lake?

2 MR. WHITEHOUSE: I think the balance that's been struck
3 between the focus on research in the Cultus system
4 is a balance that trades off a number of the same
5 type of things that this commission is considering
6 on a much larger scale - where to invest
7 assessment activities, where to invest restoration
8 activities to maximize the longer-term
9 sustainability of a stock or CU.

10 So there has been directed work supported
11 through both direct DFO funding and species at
12 risk funding that has made a significant
13 contribution to our understanding of population
14 dynamics in that system. Dr. Riddell yesterday
15 mentioned the fact that Cultus is quite unique in
16 its history in that it is one of the stocks that
17 was foundational in terms of the formation of our
18 understanding around Fraser sockeye and a lot of
19 the initial sockeye research going back to the
20 days of Forrester and Ricker. So there's been a
21 great deal of study within that system and
22 evaluation of mechanisms that control productivity
23 there.

24 Q And even though you have not done a nursery lake
25 assessment program for Cultus, you believe that
26 you're playing with a full pack of cards in terms
27 of doing your management of that sensitive issue?

28 MR. WHITEHOUSE: I think that there has been enough of
29 the components associated with the nursery lake
30 evaluation, the fry assessments, those do go on,
31 summer and Fall fry assessments, the trawl and
32 acoustic programs are delivered as I mentioned,
33 opportunistically; because of the situation of the
34 lab on that lake that we are getting strong
35 signals with respect to fry survival trends in
36 that system.

37 Q Dr. Riddell wanted to say something?

38 DR. RIDDELL: Well, I think you're touching on a point
39 that is probably a bit of a frustration for staff,
40 and I can't comment on the last couple of years,
41 of course, because I haven't been directly
42 involved any more. But before leaving, we had
43 very aggressive program to try and maximize
44 survivorship in the lake and you're likely aware
45 of extensive work with Area E Gillnet and
46 developing methods for removing squawfish, pike
47 minnow we call them, and that's been a very, very

1 successful program in maximizing survival of
2 smolts. There have been --

3 Q That program was paid for by industry and not by
4 DFO; is that not correct?

5 DR. RIDDELL: Well, they contributed substantially to
6 it in developing the technology and then bringing
7 the boat it. We paid for the staff and hiring
8 people to work on the crew, so there were joint
9 shared costs.

10 Q Thank you.

11 DR. RIDDELL: The species at risk also -- fund also
12 contributed. But I think the comment I made about
13 the frustration level is that one of the habitat
14 effects, of course, is milfoil. Milfoil has been
15 a very serious problem to control anywhere that
16 it's got established and we do believe that it's
17 having an effect on spawning areas. It's probably
18 contributing to growth of pike minnow in the
19 system. And the other is, of course, the
20 extensive development around margins of the lake
21 and what that's doing in terms of changes in water
22 flow and that, so there are habitat issues
23 associated with it, but they are all part of the
24 recovery program and they are part of the
25 research.

26 Q When you speak, Mr. Whitehouse, of the fact there
27 are three lakes that you are focused on with
28 nursery lake assessment at this point in time,
29 would you agree with me that small lakes and the
30 analysis of -- and assessment of those lakes are
31 now as critical as the big stock lakes for reasons
32 of the whole direction to the CUs and the Wild
33 Salmon Policy and the fact that the life and
34 productivity of stock in the small lakes will now
35 have a huge consequence to harvest and escapement?

36 MR. WHITEHOUSE: I would agree that understanding the
37 population dynamics and the carrying capacity and
38 the relative loading of fish towards those
39 ceilings of carrying capacity is very important to
40 understand in terms of sustainability and
41 understanding future production dynamics.

42 Q And you appreciate, sir, under the direction that
43 the WSP takes us, that the health of stock in some
44 of the small CUs can be critical to the harvest
45 rate of my clients out in the marine environment
46 obviously?

47 MR. WHITEHOUSE: Absolutely.

1 Q And therefore, you would agree with me, sir, that
2 it would clearly be in the interest of the
3 commercial fishery that DFO did nursery lake
4 assessment not only in these three large lakes
5 with large stock, but indeed with a very small
6 areas, the CUs with small stock, because they can
7 be totally consequential to the harvest of my
8 clients?

9 MR. WHITEHOUSE: It's quite clear, there's clear
10 examples today, Cultus Lake as a small stock
11 within a very large complex can have significant
12 implications and there is no doubt value in
13 understanding the production dynamics associated
14 with the populations in small lakes.

15 Q And therefore, you would agree with me that it is
16 critical, you didn't like the word I used,
17 "tragic", but it is critical that DFO start
18 appreciating, through their funding superiors,
19 treasury board, that the work has to be done in
20 stock nursery lake assessment of small systems in
21 light of the whole CU concept?

22 MR. WHITEHOUSE: In light of the CU concept, I take no
23 argument with the importance of the work. The CU
24 concept to me does not elevate the information in
25 terms of a priority. The CU is a way -- just
26 simply a construct in the way of looking at things
27 here. So the need is clearly to understand
28 population dynamics.

29 Q And the point I'm making is with the adoption of
30 the WSP and its implementation, it will become
31 more and more critical that there be nursery lake
32 assessment, not only of these three large lakes we
33 spoke of but of the smaller systems because there
34 are such consequences if those small stock do not
35 survive to your satisfaction?

36 MR. WHITEHOUSE: Understanding if nursery lake capacity
37 issues are, in fact, the production limiting step
38 would be important to understanding how we deal
39 with very small stocks and their declining
40 productivity if, for example, it were related to
41 conservation --

42 DR. RIDDELL: Can I clarify possibly --

43 MR. WHITEHOUSE: Sure.

44 DR. RIDDELL: -- for you? Anything that's small
45 compared to these large production stock is at
46 some risk, just because of random error and when
47 you execute a fishery possibly. But your point is

1 fundamentally correct, that understanding the
2 dynamics of the small populations could become a
3 significant limiting factor under Wild Salmon
4 Policy because although CUs may be a construct,
5 the policy clearly states that you are not allowed
6 to take a CU to extinction through actions of
7 management. So there will be an accountability
8 that you have to protect the CUs in the Fraser
9 complex.

10 Now, the other thing I would add though, the
11 idea that something is small and therefore
12 unproductive is not true and this is actually an
13 example that I use with students. In ecosystems
14 that maintain their habitat, so if these lakes are
15 simply now barren for whatever reason, they don't
16 have as many sockeye, the productivity of the
17 lake, the rate of juvenile production per spawner
18 can be quite high. I mean, it's true even in the
19 Adams, when you get a small stock, you get higher
20 productivity. Well, in lakes that are small in
21 number because of the population for a number of
22 reasons, the productivity in the lake may be very
23 high. Right? The rate of sustainable fishing is
24 a function of the productivity rate, right?

25 So these -- I'm agreeing with you from sort
26 of an opposite direction in the sense that you
27 could unduly restrict fishing opportunities
28 because you think something is small and therefore
29 unproductive. It is small, but it should be quite
30 productive.

31 Q Yes. I didn't mean to imply that, if any of my
32 questions --

33 DR. RIDDELL: No, but it's a common --

34 Q -- suggested that.

35 DR. RIDDELL: Yeah.

36 Q But what they are suggesting is that as we make
37 this transition into a WSP implementation, there
38 has to be hand in hand with that transition some
39 recognition by DFO that there has to be more money
40 put into the assessment at the nursery lake
41 program because small lakes suddenly gain in
42 importance, which otherwise they may not have; do
43 you not agree with that? It's simple -- simply my
44 position, my suggestion.

45 MR. WHITEHOUSE: I agree that it is important that we
46 consider small lake assessments and the potential
47 issues of productivity in the context of overall

1 fisheries management, that it is an important
2 consideration and that --

3 Q Particularly because of the WSP, would you not
4 agree?

5 MR. WHITEHOUSE: I think that the conservation
6 obligations that arise under WSP with respect to
7 CUs do heighten the importance of that
8 information.

9 Q Thank you.

10 THE COMMISSIONER: Mr. Rosenbloom, could I just -- I
11 just want to raise something if you could -- I'll
12 leave it with you, sir, to decide whether you want
13 to follow up, but just so you know, I have this
14 question in my mind and you can pursue it or not,
15 it's up to you. We've been talking about spawning
16 and lakes. Sockeye also spawn in streams and
17 rivers, as well, I understand. And so do your
18 questions pertaining to habitat assessment, are
19 you only directing those to nursery lakes? The
20 other -- are you excluding all of the other areas
21 where these small stocks may be spawning?

22 The other query I have is you mentioned
23 Cultus Lake which I understand has a hatchery
24 operation there and whether that distinguishes it
25 from other nursery lakes that may not have
26 hatchery operations associated with it or in a
27 nearby location.

28 MR. ROSENBLoom:

29 Q Well, let me adopt the commissioner's questions
30 and deal with the latter firstly. Does the fact
31 that Cultus has a special program as mentioned by
32 the commissioner, does that in any way change the
33 focus of DFO in terms of habitat nursery -- lake
34 assessment?

35 MR. WHITEHOUSE: The enhancement program which is a
36 conservation-based enhancement program designed to
37 supplement production from wild spawning within
38 the lake is -- it's important that we assess both
39 the survival of the fry released into the system.
40 There is a couple of different enhancement
41 strategies that are used.

42 Some life history might help here. There are
43 releases into the system as fry, so that's in the
44 year in which they hatch. In addition, some of
45 the fish are grown up to an older stage to that
46 one-year age and released the next Spring into the
47 system. They all receive distinctive marks, so

1 that we can understand where they originate from,
2 what release strategies. Enabling us to track the
3 survival, knowing how many are released and the
4 fact that they pass out through the fence at
5 Cultus Lake, at the Sweltzer Creek fence, and
6 they're all enumerated in the smolt program that
7 we talked about yesterday allows us to see which
8 are the successful enhancement components. It's a
9 very important point from a conservation and
10 recovery planning perspective for this stock,
11 understanding which are successful hatchery
12 strategies, because we really don't have a lot of
13 experience in enhancing in a conservation-based
14 focus within the Fraser. It's really one of the
15 first times.

16 So these assessments are important. We can
17 see these marks applied to hatchery origin fish
18 and understand if the lake is producing wild fish
19 or hatchery fish and whether there's differential
20 survival rates between the two when we see them
21 next passing out through the fence. So a number
22 of the pieces that we've talked about in terms of
23 the assessment program come into play in
24 evaluating the importance of hatcheries. There is
25 not a hatchery on Cultus system, so these fish are
26 taken, the eggs are taken and they're satellited
27 out to two particular facilities, one in the
28 Fraser Valley and one on Vancouver Island.

29 Q Thank you. And let's take the commissioner's
30 former question, which is that you and I have been
31 exchanging -- in terms of the nursery lake
32 assessment program and that is exclusively,
33 obviously, a lake analysis, a lake habitat
34 analysis and not at the spawning grounds; is that
35 correct?

36 MR. WHITEHOUSE: Yes. Could I --

37 Q But appreciating that, and I think what flows from
38 that in terms of the commissioner's question might
39 be would you not also agree with me that with our
40 movement or transition towards implementation of
41 the WSP, it is critical that there be extensive
42 habitat analysis both at the nursery lake area but
43 also on the spawning grounds for the same reasons?

44 MR. WHITEHOUSE: Can I tackle a bit more clarification
45 with respect to what I heard in terms of the
46 question? When we're talking about nursery lakes,
47 we're talking about a place where juvenile sockeye

1 rear. There was a question with respect to
2 whether fry originate from spawning within the
3 lake or from spawning within rivers. The -- for
4 the vast majority of sockeye stocks throughout the
5 Fraser watershed, river spawning, river or creek
6 spawning is the predominant mode. But there are
7 systems where there are large numbers of lake
8 spawners. We call those --

9 Q Right.

10 MR. WHITEHOUSE: -- beach spawners. The -- so there's
11 a distinction there. When we're talking about the
12 nursery habitat, it can -- the nursery lake
13 habitat assessments, this involves the nursery
14 that is common to all fry originating from either
15 beach spawning areas or from river spawning areas.
16 As their life history results in them spending one
17 year in a lake prior to leaving for the ocean, the
18 lake is an important nursery. That's where they
19 do their growing.

20 Q Right.

21 MR. WHITEHOUSE: They don't spend any time in their
22 natal streams beyond the time when they emerge
23 from the gravel and migrate immediately downstream
24 to those lakes.

25 Q But surely there is some importance in doing
26 habitat study of the rearing -- excuse me, of the
27 spawning area and the water system that takes
28 those fry down to the nursery lake?

29 MR. WHITEHOUSE: Yeah. I was going there. I think
30 it's important to understand those are essential
31 pieces of habitat. Incubation habitat, the
32 spawning gravels represent the seed source on an
33 ongoing annual basis. Productive, healthy
34 spawning habitat is crucial to productive, healthy
35 sockeye stocks.

36 Q Yes. I don't know if the commissioner has
37 questions that arise out of your response to my
38 questioning, but thank you.

39 THE COMMISSIONER: Thank you very much.

40 MR. ROSENBLUM:

41 Q I want to move to another area. We heard from you
42 yesterday about the tagging of fish and their
43 migration down to the marine environment. First
44 question I have for you, both of you, in respect
45 to that matter, is is there a lesser survival for
46 fish originating at a greater distance from the
47 marine environment as opposed to those that, for

1 example, would come out of Harrison or Cultus, for
2 that matter? Is there any information in respect
3 to that question?

4 DR. RIDDELL: Well, the information is very limited.
5 There will be a very different mortality schedule
6 when you talk about Harrison because Harrison move
7 through the river as fry. This is the unique
8 nature of Harrison River fish.

9 Q Right.

10 DR. RIDDELL: They leave the river as fry. They use
11 the lower river and estuary to grow through the
12 phase that other lake sockeye spend in the
13 freshwater lakes.

14 Q Right. Let's forget Harrison.

15 DR. RIDDELL: Let's forget Harrison.

16 Q Right.

17 DR. RIDDELL: The information --

18 Q I'd like to forget Cultus too, I might add.

19 DR. RIDDELL: Well, I had comments on Cultus, but I'll
20 leave it. It's very likely that there will be a
21 relationship between distance up-river and the
22 survivorship to the mouth. In other large systems
23 that have been studied, that definitely is true -
24 things like the Columbia - but they're not a very
25 good model for undisturbed rivers. I mean, we
26 clearly don't have the dams they have to
27 negotiate.

28 Q Yes.

29 DR. RIDDELL: But there really is very, very little
30 information on that at all.

31 Q All right.

32 DR. RIDDELL: The point really is that they -- and
33 Timber brought this up a couple of times. It's
34 amazingly compressed, the time that the animals
35 use the migration period down the river, right?
36 So whereas we talk about fishing going on from
37 fish returning in June right through into the end
38 of September, the smolts that move downstream
39 probably move down in a month and maybe only up to
40 six weeks. And they move very quickly.

41 Q They do not loiter anywhere in the river system
42 and do their loitering once they get out into the
43 Strait of Georgia; is that fair to say?

44 DR. RIDDELL: Well, they can't do a lot of loitering.
45 Do they hold in some areas? That's quite possible
46 and we don't know that yet, because there will be
47 large mixing basins where the big tributaries come

1 in.

2 Q All right. Now, yesterday I think, Dr. Riddell,
3 you spoke about your surprise that with the
4 tagging program you determined that there was only
5 a 25 percent survival rate to the mouth of the
6 Fraser from... Originating where? I forget?

7 DR. RIDDELL: Mouth of Chilko Lake.

8 Q Chilko Lake. First question I have for you in
9 regards to that astonishing figure, statistic.
10 Has there been work done to determine whether the
11 embedding of a chip into a fish in itself may
12 affect its life -- its lifespan?

13 DR. RIDDELL: Yeah. Yeah, there's been extensive work
14 on that. Just the development of the technology
15 itself for years David Welch and Kintama have been
16 working on surgical methodologies, measuring
17 stress on the fish and how long they survive. We
18 did exactly the same thing with the Chilko study.
19 The 200 fish that were tagged, we had another 200
20 fish that had what we called dummy tags inserted
21 in the exact same weight and size and they were
22 retained. They were actually also driven from
23 Chilko Lake to UBC and monitored for their growth.
24 None of the fish that we held died.

25 But that doesn't disprove the concern that
26 there's a tag effect in the natural environment,
27 and this is a lingering concern. The only way
28 that we have been able to really convince
29 ourselves -- we could do two things to test it:
30 one is to use different tags. You could use what
31 are called micro-radio tags, a different tagging
32 technology that doesn't go surgically and so there
33 are ways that you can test that concern, but
34 that's always a concern when you tag animals and
35 alter their behaviour like that. What happens to
36 it in nature?

37 Q Well, the fact that there's surgical intervention
38 for the purpose of embedding a tag in itself
39 surely doesn't -- isn't favourable to life
40 expectancy.

41 DR. RIDDELL: No. When you hold these animals, there
42 is almost no -- well, there is no mortality that
43 we have seen yet on this, so to say that the -- I
44 mean, would we really discard the fact that there
45 could be substantial issues in the river that
46 we're not even acknowledging? I don't put a lot
47 of weight that the absolute value is going to be

- 1 25 percent 'cause as I've described, it is very
2 much a pilot study. All right? We have not
3 encouraged people to use this as a measure of
4 downstream survival of Fraser sockeye. But I am
5 concerned that we didn't see maybe 50 percent or
6 higher survivorship. We saw the fish tagged over
7 a couple of weeks. They all passed in a limited
8 period of time. They seemed to stay together, so,
9 I mean, I think the people that worked on the
10 program were really not prepared to disregard that
11 there could be a significant in-river mortality.
12 We are not proposing that all fish have a 75
13 percent mortality rate.
- 14 Q No. And, in fact, with such a high mortality
15 rate, if it did apply across the board to most of
16 the stock, wouldn't there be visual observation
17 with carcass identification --
- 18 DR. RIDDELL: No.
- 19 Q -- throughout the river? No? Why?
- 20 DR. RIDDELL: Well, I mean, we've lost two million,
21 four million adult sockeye salmon in the river.
22 Have you ever seen four million carcasses floating
23 on the Fraser River?
- 24 Q Well --
- 25 DR. RIDDELL: You can lose enormous numbers of animals
26 in these large river systems. I wouldn't expect
27 to see large numbers of smolts. The predators
28 will pick them up extremely rapidly. I mean, I
29 think your point is very valid. The researchers,
30 myself and others, certainly have concern what the
31 effect is on the behaviour of the animal with a
32 tag, particularly going down through a very steep
33 canyon and we are looking at potential ways of
34 testing that. For example, could we actually move
35 the fish to an area to release them below the
36 canyon? Let's see if there's an immediate jump in
37 survivorship that way. But these are all very
38 indirect, right?
- 39 Q We are going to hear more about tagging, I
40 believe, when Dr. Karl English comes forward and I
41 understand his focus has been very much the in-
42 migration of fish and the tagging program, as
43 opposed to the out-migration which you were
44 talking about. Are we, in Canada, and in
45 particular in the West Coast of Canada, cutting
46 edge on this area of science or are the Americans,
47 for example, south of us including the Columbia

1 basin, more if I can put it this way sophisticated
2 and advanced in applying the new science that is
3 afforded to you with the tagging system?

4 DR. RIDDELL: Well, obviously they're different
5 environments. In Canada in terms of the
6 application of the new tagging technologies, I
7 would say that many of our people are on the
8 leading edge. But there are obviously different
9 challenges in the Columbia basin. I think
10 yesterday I referred to the dams and the PIT tags
11 and the receivers. This is an amazing technology
12 where you put a little glass tag inside a fish.
13 It's very small. You put it in with a needle.
14 And then they build mats that detect this tag.
15 Now, the tag is passive and so as the tag goes
16 over the arrays, they're charged and they
17 immediately discharge so you can identify the
18 animal.

19 We don't have that technology utilized and
20 that sort of thing. You could apply it in some
21 special cases, but not much for going down through
22 the Fraser.

23 But many of our people that are working on
24 the sonic tag, this is the passive one that we put
25 in surgically, and the radio tagging that Dr. --
26 well, Mr. English will talk to you about, many of
27 our people are definitely leading edge in this
28 work.

29 Q So the message to the commissioner is that we are
30 not falling behind in terms of this area of
31 science?

32 DR. RIDDELL: No, I wouldn't say that. Not at all.

33 Q Okay. Thank you. Now, I think, Mr. Whitehouse,
34 you did want to say something or maybe I
35 misunderstood your --

36 MR. WHITEHOUSE: I just wanted to validate your concern
37 with respect to tagging impacts. Any study, and
38 that includes any of the studies that we do in the
39 terminal areas associated with tagging, key
40 concern is representativeness of tag application.
41 How well does the tag animal represent - and Dr.
42 Riddell spoke about this, but how well does it
43 represent the population that whole -- that has
44 to. Whenever we're critically thinking about
45 tagging programs, it's very important that we ask
46 that question and put the necessary experimental
47 pieces in place to the extent that we can to

1 identify whether there are factors associated with
2 tagging like immediate mortality and the valuation
3 that the program, working on the acoustic tagging
4 for smolts, did to at least answer as many
5 questions regarding representativeness as we can.

6 Q Thank you. The next area of my cross-examination
7 is an area very critical to my client's interest
8 and it relates to evidence that has been tendered
9 both by you as a panel and by previous panels, and
10 that was the decision of DFO in, I believe, 2004
11 to move the threshold for stock enumeration at the
12 spawning site from 25,000 to 75,000 fish. And I
13 need not obviously explain what that program is
14 about as we've heard that evidence.

15 My question to you, and it's on the same
16 theme as some of the questions I've asked you
17 previously, in the context of the WSP and the
18 transition towards implementation of WSP where
19 there's more and more significance to the small
20 stock -- the small stocks in the CUs, is it not,
21 sir, counter-intuitive to have DFO around the
22 period of the announcement of the policy in 2005
23 for WSP to change that threshold from 25,000 up to
24 75,000? Isn't it counter-intuitive to the fact
25 that more and more the small stocks are, indeed,
26 going to be critical to management of the resource
27 and indeed to my clients' harvest?

28 MR. WHITEHOUSE: The short answer is no.

29 Q Why?

30 MR. WHITEHOUSE: I think it's quite -- not complex, but
31 we have to link this to the assessment framework
32 and the requirements for information that are used
33 to manage Fraser sockeye.

34 When we look at the -- I want to clarify and
35 make sure why the issue of the 25 to 75,000 may be
36 a consideration and elevate in terms of concern
37 for those who are interested in what we're doing
38 in terms of enumeration and why. The primary
39 issue associated with the switch is that we will
40 have less accurate -- now, it's a bit of a
41 misnomer, isn't it, 25,000 high precision between
42 25 to 75,000. The key is there's a concern that
43 we'll have less accurate estimates for two or
44 three populations on a yearly basis. So two or
45 three populations that may be 50 to 75,000 fish in
46 a return of perhaps two million.

47 The key is are we making the necessary steps

1 to undertake the calibration work necessary to
2 understand the relationship between the previous
3 enumeration methods which involve visual counting
4 and high precision estimation techniques which
5 would have involved those marker capture or fence
6 counts. And we are making progress on proceeding
7 with understanding those calibration relationships
8 and it's actually an interesting point that Dr.
9 Riddell pointed out in the document that we
10 reviewed yesterday.

11 The comment in that document was that visual
12 surveys tend to underestimate abundance. And the
13 reality of that statement is we can accept the
14 visual surveys tend to underestimate abundance.
15 What we don't do is simply accept that that is the
16 estimate of abundance. We go through a process
17 where we generate a population estimate based on
18 those surveys. That involves the application of
19 expansion factors which take into account the
20 difference between a high precision and a low
21 precision method. What that does is adjust the
22 information associated with the new technique to a
23 standard that tells us we are accounting for some
24 of the potential bias underestimation associated
25 with visual techniques.

26 The key thing that people need to understand
27 with respect to the move between 25 and 75 from
28 the perspective of survey design and population
29 sizes within the watershed is that when we make
30 the move, the application of the factor that we
31 use right now is four small populations. They use
32 small habitat. There's a very discrete set of
33 criteria that link to those surveys. And the 1.8
34 factor that we talked about yesterday, the
35 expansion factor, is designed specifically for
36 those populations.

37 As we move to populations that can be in the
38 25 to 75,000 range, you actually bring in another
39 subset of habitat within the Fraser, larger
40 systems. And the question that needs to be asked
41 and we have to answer is are the expansion
42 calibration factors that we use for small streams
43 appropriate to apply to these populations that
44 have now moved in the 25 to 75,000 range? And the
45 question is we are evaluating that through the
46 calibration program. The key message is the
47 signal in terms of abundance using low precision

1 methodologies for populations, whether they're 25
2 -- under 25,000 or 75,000, we still obtain the
3 necessary signal to understand trends in abundance
4 associated with spawning patterns. And that is
5 satisfactory to meet our needs under WSP, to
6 understand the production patterns within the
7 watershed.

8 Q (Indiscernible - microphone not on) -- I'm sorry.
9 To apply high precision as opposed to low
10 precision methods, you're going to get greater
11 accuracy, are you not?

12 MR. WHITEHOUSE: You will improve your accuracy. If
13 your calibration program is thorough enough,
14 though, you will get commensurate accuracy through
15 a calibrated visual survey.

16 Q But if you're going to improve your precision,
17 your analysis, by applying high precision and
18 appreciating the consequences of the possibility
19 of a stock going below the lower benchmark, is it
20 not in the interest of everyone in the industry
21 that high precision be applied to stock
22 enumeration and analysis for the small stocks?

23 MR. WHITEHOUSE: No, I wouldn't agree with that.

24 Q You wouldn't agree with that, even though I
25 believe you are at least joining me in suggesting
26 that high precision is a more favourable analysis
27 and more accurate analysis of stock enumeration
28 than to apply the low precision method?

29 MR. WHITEHOUSE: We can --

30 Q Just before you -- Dr. Riddell, yes -- sorry,
31 answer it.

32 MR. WHITEHOUSE: There is no doubt that if we had the
33 flexibility from a budgeting perspective to
34 implement high precision programs everywhere, we
35 would be unable to afford a sustainable assessment
36 on 200-plus stocks within the watershed. We're
37 talking -- you have to keep in context that we're
38 talking about perhaps two or three populations in
39 a given year, and as I mentioned that when you see
40 abundances reach the 50 to 75,000 fish range, they
41 quickly move out of that in the sockeye world,
42 Fraser sockeye world, and become a component of
43 those populations that would be assessed with high
44 precision methodologies.

45 So it's -- we're -- I think we're really
46 drilling into an issue that is overstating the
47 importance of population assessment on two to four

1 spawning sites a year.

2 Q So you speak of affordability of doing high
3 precision on the entire watershed system. I
4 appreciate that. Why at least is there not a
5 priority to do high precision stock enumeration
6 for those stocks that are imperilled, those stocks
7 that may reach that lower benchmark? Couldn't you
8 limit your program to at least give high precision
9 analysis to those stock because of the
10 consequences of misreading the situation and
11 leading to harvest limits and closures?

12 MR. WHITEHOUSE: No. I think -- I think you may be
13 confusing the signal that we're getting.
14 Actually, the largest uncertainty associated with
15 the smaller stocks that we're talking about is
16 catch accounting. The much stronger --

17 Q Sorry? Is what?

18 MR. WHITEHOUSE: Catch accounting.

19 Q Mm-hmm.

20 MR. WHITEHOUSE: They're very small abundance in large
21 catch, the ability to detect, so in reconstructing
22 abundance, probably the greatest certainty that we
23 had, even though we're using low precision methods
24 across a number of these small stocks, is the
25 population trend abundance that we get from
26 spawning ground assessments using low precision
27 estimates.

28 So it's -- I'm not making the same leap or
29 agreeing with the extension that you made there in
30 terms of the argument.

31 Q Thank you. Dr. Riddell?

32 DR. RIDDELL: Yeah, well I think Timber has got to
33 maybe the crux of the discussion here. I don't
34 think there's anything logically the way you
35 phrase the question "wouldn't it be better", well,
36 of course it would be better if we had good
37 information everywhere. If we had the money to do
38 it, we would have done it. Right? And clearly,
39 Timber is answering from the perspective of his
40 current situation. He doesn't have the money. If
41 it is only three or four systems that are a
42 limiting factor to fisheries then, yes, there is
43 an argument to be made for improving the
44 information quality on the escapement, because
45 ultimately that will be your measure of the
46 conservation status of the stock. All right.

47 Now, the issue here is one of -- under the

1 Wild Salmon Policy if you have a situation where
2 you think that a population is below the lower
3 benchmark, then the department is required to
4 respond and do that. Right? So this will be a
5 financial pressure in the future, because if its
6 below that, then they have to develop a recovery
7 plan and then surely they'll want to measure the
8 success in recovery.

9 Right. Now, Timber is implying that most of
10 the stocks below the 75 -- 25 to 75 are recover
11 above the 75. Well, it's quite possible,
12 actually, that some sockeye lakes are quite happy
13 in the 25 to 50,000 range. Right? So they may
14 never get out of that. But you can develop the
15 lower benchmark with the methodology that you're
16 thinking about. If you're using a visual survey
17 and calibration standards then you set the buffer,
18 which is implicit in the benchmark, larger. So
19 you set your goal so that you don't get yourself
20 into that red zone. So you could build this in.
21 You don't necessarily have to go to an entire mark
22 recapture. But you can go to more defensible and
23 more structured surveys that you have good
24 confidence in and you particularly want to be able
25 to ensure that you measure any trend occurring.
26 If you have a trend that's declining that you want
27 to be able to separate that from is it consistent
28 with other stocks that might be associated with
29 marine survival? Is it something going on in the
30 fishery? So you do have to be able to account for
31 these small stocks, and the Wild Salmon Policy
32 requires that.

33 So as much as right now we don't have the
34 money, the department may simply have to do it
35 because that will be required in assessing the
36 recovery.

37 Q And speaking of money, we talked yesterday or you
38 talked yesterday, both of you, about funding
39 issues with DFO and I believe, Dr. Riddell, I was
40 actually out of the room for a few minutes when
41 you testified about the budgetary restraints, the
42 five percent reduction, and as I have had it
43 reported - we don't have a transcript yet - you
44 spoke of how that five percent reduction hits the
45 operating expenses of the budget and not the
46 salary portion of the budget and therefore, the
47 five percent's really a more significant

1 percentage than five percent because it's applied
2 solely to the operating expense; is that correct?

3 DR. RIDDELL: Yes. The conversation was one of -- and
4 this does vary depending on how the reduction is
5 defined, but if you have a five percent on total
6 budget, that will include salaries. Typically you
7 will also have restrictions on what you can take
8 the reductions in and it frequently does not
9 include salary. But if you have a five percent
10 off total budget, it can easily equate to a 15
11 percent of operating funds.

12 Q Right. And you having been with DFO for so many
13 years and informing us of the consequences of five
14 percent really being maybe 15 percent, that is
15 incredibly significant to DFO's mandate to manage
16 the fishery in British Columbia, particularly in
17 the context of implementing WSP; would you not
18 agree?

19 DR. RIDDELL: Well, it's not quite that simple, because
20 you get the five percent off the department and
21 it's up to the department then on how they
22 allocate their -- the reductions through their
23 branches and activities, right? If it's applied
24 equally everywhere, then yes, it's a confounding
25 effect and -- but, for example, the specific
26 Salmon Treaty, if you weren't in the room, that's
27 a special allocation that is not subject to the
28 current five percent, for example.

29 Q Yes.

30 DR. RIDDELL: Right? And so you can have various ways
31 that these reductions are applied. The difficulty
32 in salmon stock assessments throughout British
33 Columbia through my time was the regularity of the
34 reductions and we were only able to sustain our
35 program because there were special allocations
36 frequently to meet certain agreements with the
37 United States or some other issue that came along.
38 But there's no question that over time, we have
39 had to reduce the number of projects just to meet
40 the budget reductions.

41 Q And if it is the choice of DFO to give priority to
42 the sockeye programs, it obviously is at the
43 expense of the other stocks, the other species of
44 salmon that are not receiving the attention they
45 should and I think both of you have generally
46 testified to that yesterday; is that fair to say?

47 DR. RIDDELL: Absolutely. That's definitely what we

1 were in during my tenure as Division Head that you
2 knew that you were going to fund the Fraser
3 sockeye as a first priority. You looked at them
4 carefully to make sure that they were justifiable
5 cost, but after that you had to pay for Fraser
6 sockeye and then you had the residual money for
7 everything else in the province.

8 Q And as the other programs with the other species
9 suffer, it obviously has huge consequence to my
10 clients' interest in terms of harvest because
11 they're harvesting not only sockeye.

12 DR. RIDDELL: Well, not necessarily directly, but it
13 can, yes. I mean, the example we discussed
14 yesterday was Coho assessment in the Fraser.

15 Q Yes.

16 DR. RIDDELL: Right. So that's one where there is
17 obviously a risk of a direct limiting factor in
18 the fisheries and so we would try to sustain money
19 in that because you know that it could be a
20 limiting factor. But you can see that it becomes
21 sort of a game of dominoes, right? You're looking
22 for the next limiting factor down the list and you
23 keep going down. But you're right, it can
24 definitely do that at some point.

25 Q And would you join me in agreeing that we really
26 are facing a crisis in funding of DFO when DFO is
27 facing down these five percent reductions. We've
28 had testimony already from Deputy Minister
29 Dansereau early on in these proceedings in October
30 that she's facing another five percent budgetary
31 cut. Does this not lead to a crisis in terms of
32 DFO carrying out its mandate, not only in respect
33 exclusively to sockeye, but to all of its other
34 programs with other species?

35 DR. RIDDELL: To be perfectly honest, I'm not really
36 the person to comment on that. I know from my
37 experience that if there's been five percent off
38 total budget for the past two years that I have
39 not been in DFO any more, if you had further
40 reductions from where we were when I left, then
41 you're definitely dropping significant number of
42 programs around B.C. in stock assessment. So I'd
43 already written documents suggesting that we're
44 getting down below a critical assessment level.

45 Q So --

46 DR. RIDDELL: I call it core assessment responsibility
47 you have to meet.

1 Q That speaks to crisis, doesn't it?

2 DR. RIDDELL: Yeah, I guess -- how you define crisis.
3 But, I mean, it -- no question that -- I said
4 yesterday in another -- or discussion about the
5 value that I place on long-term monitoring. Stock
6 assessment is long-term monitoring. I mean, we do
7 it because there is an annual need for advice for
8 managers and management. Fundamentally though
9 you're talking about the long-term monitoring of
10 Canada's natural resources and I see that that's a
11 core responsibility of our department and we put a
12 lot of effort into.

13 Q I wonder whether you also, Mr. Whitehouse, want to
14 make comment. I appreciate you still are with DFO
15 but do you have any comment to make in response to
16 my question about crisis?

17 MR. WHITEHOUSE: I would agree with Brian. We are
18 reaching a critical tipping point in terms of the
19 ability, particularly in the assessment world.
20 We're reaching a critical tipping point in terms
21 of being able to provide the necessary monitoring,
22 particularly outside of the Fraser. I think this
23 is an important distinction that is worth making
24 for this commission, that maintaining Fraser
25 sockeye assessment has come at a high cost and
26 that there are not many additional pieces that can
27 fall off without getting to the point where the
28 word "crisis" could come into play.

29 Q This Royal commission is obviously focused on the
30 Fraser sockeye, but you would agree with me, sir,
31 the public interest is more than simply the Fraser
32 River sockeye and there are huge consequences to
33 budgetary restraint on the entire program of DFO?

34 MR. WHITEHOUSE: Certainly more than just Fraser
35 sockeye needs to be considered in terms of public
36 interest. Consequences are large, yes.

37 MR. ROSENBLOOM: Mr. Commissioner, I see it's 11:15 or
38 so. I believe I might be ten, 15 minutes left,
39 which isn't making Ms. Baker very happy. Probably
40 not making the commission happy, but I have
41 approximately 15 minutes, I think. I'm in your
42 hands.

43 MS. BAKER: It would be nice if we could finish Mr.
44 Rosenbloom before we took the break, if that's
45 possible, but it's up to --

46 MR. ROSENBLOOM: Happy to.

47 MS. BAKER: If that's -- if we could break at 11:30

1 perhaps and make Mr. Rosenbloom get as quickly
2 through his questions as he could, that would be
3 great.

4 MR. ROSENBLOOM: Happy to do that.

5 THE COMMISSIONER: I just -- and I'm going to
6 complicate it but I just wanted to ask quickly,
7 the mark recapture program that falls within the
8 lower profile rather than the higher profile or
9 accuracy area, I'm not completely clear about the
10 mark recapture program. You've mentioned it
11 several times.

12 MR. WHITEHOUSE: Mark --

13 THE COMMISSIONER: In different contexts. I just want
14 to make sure I understand it.

15 MR. WHITEHOUSE: Thank you, Mr. Commissioner. There's
16 a distinction that I need to make. First of all,
17 mark recapture is an enumeration technique. It
18 actually falls into the high precision suite of
19 tools that we use. It involves tagging fish, as
20 they approach the spawning grounds releasing them
21 and allowing them to mix back in with the general
22 population to generate an estimate with subsequent
23 sampling.

24 MR. ROSENBLOOM:

25 Q Yesterday an exhibit was put before you, Exhibit
26 number 385, and I don't think it's necessary to
27 put it on the screen. This was Mr. Saito's letter
28 to the two commissioners of the Pacific Salmon
29 Commission in regards to the concern of the Fraser
30 River Panel over stock enumeration back in
31 '02/'03. My question to you is -- you, Mr.
32 Whitehouse, I believe yesterday you were asked
33 whether you know of other written communication
34 from the Fraser River Panel to the commission
35 regarding concerns after 2003 and I believe you
36 said no. Are you testifying that there has not
37 been any form of communication, either orally or
38 in writing, from the panel expressing concern
39 about stock enumeration after 2003?

40 MR. WHITEHOUSE: No, that's not what I'm testifying to
41 at all.

42 Q Okay.

43 MR. WHITEHOUSE: In fact, the response would have been
44 could I identify specific examples like that
45 letter, no. I am well aware that in the interval
46 between 2002 and present there have been numerous
47 occasions on which the Fraser River Panel has

1 expressed concern with respect to budgetary
2 impacts at various stages during the planning
3 process each year.

4 Q And has that expression been communicated to you
5 by document or by documents?

6 MR. WHITEHOUSE: Directly to me, no. It would have --
7 it would flow through a different route, but it's
8 safe to say at some point I would see those
9 concerns expressed.

10 Q So you are aware that there has been written
11 communication from the panel or through the
12 Pacific Salmon Commission to DFO expressing
13 concern about the quality or quantity of stock
14 enumeration subsequent to 2003?

15 MR. WHITEHOUSE: I'm aware of repeated communication.

16 Q Yes. And are you aware whether that communication
17 - I haven't seen that documentation. Maybe it
18 exists in the body of whatever we have now,
19 500,000 documents on Ringtail. Has that
20 communication suggested that DFO is in non-
21 compliance with the international treaty
22 obligations of this country with the U.S. by
23 failing a proper standard of stock enumeration?

24 MR. WHITEHOUSE: Important to make a distinction here.
25 They're normally responding to proposed assessment
26 plans. That may be shaping up. They're iterative
27 through a season. As we talked about, there's a
28 preliminary budgeting stage and an impact
29 statement like the one we saw yesterday. That
30 would be a May timeline. And then subsequent to
31 those impact statements, there are generally
32 budget adjustments and they are largely exercises
33 to find ways to fund pressures that Fraser sockeye
34 represent. Brian spoke about this.

35 In a number of cases the response comes from
36 the panel very early in the year expressing
37 concerns that if the program profile as currently
38 identified proceeds there will be significant
39 deficiencies. And as a result with the exception
40 of three years that we talked about, we have found
41 a way to fund the full suite of Fraser River
42 sockeye spawning ground assessments on an annual
43 basis.

44 Q So we're back to rectifying the deficiencies and
45 satisfying the panel and the commission at the
46 expense of other programs of DFO, because you're
47 unable to get -- you can't secure further funding

1 from Ottawa for it?

2 MR. WHITEHOUSE: Well --

3 Q Correct?

4 MR. WHITEHOUSE: Well, not necessarily.

5 Q Well, first of all, for the record, correct?

6 MR. WHITEHOUSE: What happens is for the record we make
7 adjustments to the budgets based on reductions
8 proposed and then division head, RD of Science in
9 the senior executive within the region, having
10 been made aware of gaps in the program, then find
11 funds to address that.

12 Q And those funds are within the operating budget of
13 DFO, the existing operating budget?

14 MR. WHITEHOUSE: I don't know the source of those.

15 Q I'm sorry, Dr. Riddell?

16 DR. RIDDELL: Well, I'm sorry for butting in like that.
17 But the reason for qualifying is that once we get
18 into a situation where the budget is allocated,
19 it's very possible that at something of an
20 international level that the resources could be
21 easily found in Ottawa in DFO or they could be
22 found in Ottawa more generally. They would not
23 necessarily require us to resort to cancelling
24 programs in mid-summer or something like that. I
25 never did that in my time. I think the -- your
26 question the way you phrased it about has Canada
27 been in writing accused of not meeting the
28 requirements of the treaty, I think it's honest to
29 say that that sort of statement between
30 governments would be (a) seldom made, and if made
31 would be in writing at an international level, not
32 something that we would typically see at the
33 working level on the West Coast. We might hear
34 about it and be required to sort of respond, you
35 know, how we're compensating, but I don't think
36 it's too surprising that we wouldn't have seen
37 something in writing that would say something of
38 that nature.

39 Q Well, Dr. Riddell, you're now with your
40 foundation. Does your foundation take the
41 position that stock enumeration as currently
42 carried out by DFO does meet international
43 obligation?

44 DR. RIDDELL: I can honestly say I don't think anybody
45 in our foundation has actually discussed that. As
46 a Canadian commissioner, I certainly have a
47 concern about where the funding is trending for

1 stock assessment in the Fraser.

2 Q Thank you. Moving on, if I may, one of my last
3 areas of examination relates to your testimony,
4 Dr. Riddell, given yesterday where we really got
5 to the essence of the mandate of this inquiry by
6 asking ourselves can we explain away, for example,
7 2009 run from 2010. And you particularly focused
8 on the lack of marine assessment and what I think
9 you called the early marine assessment, I assume
10 to be the Strait of Georgia and maybe Johnstone
11 Strait. I want to focus for just a few minutes in
12 respect to your testimony in that regard.

13 Firstly, can you explain why this assessment,
14 the marine assessment, has not been carried out up
15 to this point in time? What's the explanation?
16 DR. RIDDELL: Well, that was an argument I had in house
17 for several years because we're talking about
18 Fraser sockeye now, but you could equally be
19 concerned at looking at the change in recreational
20 and commercial fishing for Chinook and Coho salmon
21 since the mid-'80s, where conservatively we'll
22 have lost about 1.5 million fish a year. Right?
23 That's a huge reduction. What we have seen
24 through the hatcheries that there's been a
25 significant drop in marine survival. The more
26 we've learned indicates that that marine survival
27 is likely being determined in the early phases of
28 when these animals go to sea.

29 And why has the department not responded with
30 an intensive investigation of that ecosystem? I
31 cannot give you a good answer. I can say, though,
32 that must be -- it would be five or six years ago
33 we did implement a limited program called the
34 ecological research initiative and that was in the
35 Strait of Georgia. It was to be designed as a
36 much larger program but it was limited to about
37 \$300,000 a year for five years.

38 But there are a number of organizations very
39 interested in examining the ecosystem in the
40 Strait of Georgia now in terms of there's
41 obviously been huge changes. One of the most
42 notable for the public is the growth of the seal
43 population and the impact of that. But when you
44 really start to investigate it, one of the things
45 we know almost nothing about are the -- is the
46 fish communities of the small pelagic fishes. We
47 talk about ground fish and we talk about some

1 shellfishes and we talk about salmon. We very
2 seldom talk about the animals that are probably
3 the food base for many of these species. So
4 there's a lot of concern. I don't have a good
5 answer why.

6 Q All right. And as the commissioner deliberates on
7 his report at the end of the day and if he chose
8 to try to influence Ottawa to put more focus on
9 the inner marine environment and assessment, do
10 you have any sense of the kind of cost that the
11 government would face in having a robust program
12 of marine investigation?

13 DR. RIDDELL: Well, I do actually, because at the
14 request of a private donor two years ago I put
15 together an ecosystem-based study of the Strait of
16 Georgia to answer the specific question about the
17 loss of Chinook and Coho salmon. And that
18 program, after extensive consultation with our
19 universities and government labs, came out to be
20 \$10.5 million over five years.

21 You know, it sounds like a big number, but in
22 my personal assessment, \$2 million a year with the
23 potential return of an area that is so important
24 to British Columbia and Canada is almost trivial.
25 But you've got to go and find it.

26 Q You didn't get your money?

27 DR. RIDDELL: No. I think there was too much science
28 apparently and unfortunately, that donor decided
29 -- did not follow through. The Salmon Foundation,
30 though, has made a commitment that we will proceed
31 to try a campaign to raise those funds and we're
32 actually meeting -- I will be meeting with two
33 U.S. government groups when I'm down in Portland.

34 Q What about DFO?

35 DR. RIDDELL: I think DFO will contribute if we can
36 find some of the funds. I think right now that
37 \$10 million commitment over time would be fairly
38 large. I think that when the groups actually see
39 that there is some private funding for this, that
40 we will get government involved, but we've got to
41 go a ways. But it is designed now to be a very
42 intensive study for two years to test many of the
43 ideas that people have and then establish an
44 active recovery for Chinook and Coho while
45 conducting -- there are 14 specific projects to
46 test people's ideas of what's going on in the
47 strait.

1 Q Why, Dr. Riddell, is your mindset that these kind
2 of programs should be privately funded as opposed
3 to exclusively government funded? Isn't this in
4 the public interest that the Government of Canada
5 pay for these kind of critical studies?

6 DR. RIDDELL: I don't think it's fair to say it was my
7 mindset. I responded to a request by individuals
8 that had the wealth to do this. We took it very
9 seriously and wrote what I think is a very
10 professional proposal and the individual decided
11 it wasn't quite what he wanted and decided not to.
12 Now who funds it now, I think it's a
13 government/private support, corporate support; any
14 way that we could fund it is equally as important.

15 Q But don't you agree that primarily it should be
16 the fiscal responsibility of the Government of
17 Canada to carry out these kind of studies?

18 DR. RIDDELL: I mean, obviously I think that there is a
19 "yes" to this, but the reality of fundraising and
20 I am learning this because of my recent two years,
21 there are many, many government priorities that
22 we're fighting against in that. And if we can do
23 it jointly, we're more likely to make some
24 progress, basically.

25 MR. ROSENBLOOM: I'm pleased to say that completes my
26 questioning. I thank you for answering my
27 questions.

28 MS. BAKER: Thank you. Mr. Commissioner, if you would
29 like to take the break now, this would probably be
30 a good time. The next -- the next and final
31 questioner for these witnesses is Brenda Gaertner
32 or perhaps it's Leah Pence, I'm not sure, but that
33 team.

34 THE REGISTRAR: Hearing will now recess for 15 minutes.
35

36 (PROCEEDINGS ADJOURNED FOR MORNING RECESS)

37 (PROCEEDINGS RECONVENED AT 11:49 A.M.)
38

39 THE REGISTRAR: Order. The hearing is now resumed.

40 MS. GAERTNER: Good morning, Mr. Commissioner, it's
41 Brenda Gaertner for the First Nations Coalition,
42 and with me, Leah Pence.

43 Gentlemen, I'm going to begin by talking
44 about some broader questions around information
45 needs and then turn to food, social and ceremonial
46 information needs, and then some options for
47 information collection, and then, finally, with

1 some questions around potential recommendations.

2

3

CROSS-EXAMINATION BY MS. GAERTNER:

4

5

Q I'm going to first start, Mr. Whitehouse, if I
6 heard you correctly yesterday, it's my
7 understanding that DFO's management objectives
8 drive the information needs that you use to
9 determine priorities for stock assessment; is that
10 a fair summary?

10

11

MR. WHITEHOUSE: Yes.

12

13

Q And would you agree with me that in the recent
14 years DFO's management objectives have been
15 evolving, so in the past those management
16 objectives were primarily to provide for
17 information to feed the international treaty
18 obligations and, in particular, establishing
19 commercial TAC and focusing on the strong runs,
20 but now those objectives are broadening to include
21 such things as we've talked about the Wild Salmon
22 Policy, so those management objective are actually
23 changing and have been changing over the last
24 while; would you agree with me on that?

20

21

22

23

24

MR. WHITEHOUSE: There is change, yes, in management
25 objectives.

25

26

27

Q And would you also agree that in addition to the
28 Wild Salmon Policy, the management objectives that
29 you're needing to balance include license
30 retirements and programs like PICFI, in which DFO
31 is beginning to pursue commercial fisheries in-
32 river? You're aware of the PICFI program and the
33 goal of pursuing commercial in-river fisheries?

28

29

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33

MR. WHITEHOUSE: Yes, I am.

34

35

Q Would you also agree with me that DFO has a policy
36 on selective fishing and that that's an increasing
37 management objective?

35

36

37

MR. WHITEHOUSE: Yes.

38

39

Q Would you also agree with me that it's clear that
40 DFO has obligations around First Nations FSC
41 requirements and that's a growing management
42 objective, including providing priority for FSC
43 fisheries?

39

40

41

42

MR. WHITEHOUSE: FSC are priority issues, yes.

43

44

Q And you will agree with me that meeting those FSC
45 priorities, particularly in low abundance years,
46 can be challenging?

44

45

46

MR. WHITEHOUSE: Correct.

47

1 Q How have these emerging management objectives and
2 these changes changed your approach to the type of
3 information that you would like to be gathering or
4 you feel you should be gathering for stock
5 assessment purposes?

6 MR. WHITEHOUSE: I think the construct, in terms of
7 information requirements, have been responsive to
8 the challenges faced in identifying the gaps
9 associated with a number of issues, late run
10 mortality, in-river mortality, et cetera, that
11 have represented significant change to
12 understanding dynamics of stocks as the system
13 changes away from some of the fundamental
14 assumptions.

15 So by that I mean we've added pieces on to
16 address gaps in information to try and provide
17 further certainty with respect to reconstruction
18 of abundance on an annual basis.

19 Q Can you give me examples of the kind of things
20 you've added on? My observation of the evidence
21 over the last days is you're suffering from budget
22 cuts, so what's been added?

23 MR. WHITEHOUSE: When we think in total, with respect
24 to the in-season run management, we have
25 verification components that have been added into
26 the in-season run strength estimation, so the
27 Qualark system has been a piece that has assisted
28 in validating the abundance of fish returning to
29 the river at Mission.

30 There has been the implementation of radio
31 and acoustic tagging programs in both marine and
32 freshwater areas, tags applied to specific target
33 groups, evolving through time as we understand the
34 dynamics associated with run timing and mortality
35 in-river to improve understanding of the
36 likelihood of needing escapement objectives based
37 on targets set for Mission.

38 There has been, also, additional work
39 associated with the add-on of the Fraser River
40 Environmental Watch Program, which is involved in
41 in-season management to provide estimates of
42 potential loss rates due to mortality or
43 environmental conditions -- mortality related to
44 environmental conditions within the river, again,
45 with the purpose of attempting to support the
46 meeting of escapement objectives in terms of fish
47 arriving on spawning grounds.

1 Q Are any of those efforts actually affecting in-
2 season management decisions?

3 MR. WHITEHOUSE: Yes, indeed.

4 Q Could you give me an example of that?

5 MR. WHITEHOUSE: The Environmental Watch Program
6 develops a factor that varies for run timing
7 groups through the year, called the Management
8 Adjustment. It is a procedure whereby survival is
9 monitored -- or not monitored, but modelled based
10 on environmental conditions, to provide a leading
11 estimate of the potential loss rates to be
12 expected based on environmental conditions so that
13 additional fish can be escaped into the system to
14 ensure that if there are loss rates that spawning
15 objectives will be achieved. So that would be one
16 example.

17 Q Okay. Mr. Commissioner has heard a bit about
18 management objectives, and we'll hear more about
19 those -- or management adjustments --

20 MR. WHITEHOUSE: Adjustments.

21 Q -- so Dr. Riddell, is there anything you'd like to
22 add to this discussion about how information could
23 be collected to better address the various
24 management adjustments that DFO has on their
25 plate?

26 DR. RIDDELL: The one thing that we haven't touched on
27 is that for the last few years we have been
28 working with - "we", and it's started again within
29 DFO and then subsequently, and Mr. Al Cass is
30 involved, and a number of other players - working
31 with Simon Fraser University to develop what we
32 call an in-river management model, and the
33 intention of this model is specifically to try and
34 look at delivery of spawning escapement
35 objectives, or First Nations objectives in some
36 areas of the basin, and using all the information
37 we're acquiring on the environmental conditions
38 and the mortality of the fish moving upriver with
39 the radio tagging, how quickly do they move, are
40 there areas in the river that they'd hold, and
41 basically what we're trying to do is build a risk
42 management model that would reconstruct the fish
43 entering the Fraser River and how well do we think
44 they're going to survive to get up the river.

45 This is still very much developmental, but
46 it's a step beyond many of the comments that
47 Timber made about things that have been added. He

1 didn't touch on some of the external research on
2 late run Fraser sockeye mortality funded through
3 the Pacific Salmon Commission and through the
4 Pacific Salmon Foundation.

5 So that's probably the most outstanding
6 additional piece that I would think of coming to
7 mind.

8 THE COMMISSIONER: Sorry, who is developing that? I
9 didn't hear you, Doctor, I'm sorry.

10 DR. RIDDELL: The model's being developed at Simon
11 Fraser University through a sort of small, if you
12 want, coordinating committee, involving people
13 like Scott Hinch, Karl English, myself, Mike
14 Staley. Those are probably the major players.

15 MS. GAERTNER:

16 Q And why isn't that being done by DFO? Is that
17 primarily a budgeting issue?

18 DR. RIDDELL: No, I wouldn't say that that was the
19 primary reason at the time. The primary reason
20 was that the people that we spoke with we felt had
21 the capacity to build this quickly at the time.
22 That doesn't sound like a very good decision, at
23 this point, because it hasn't been done as quickly
24 as we wanted, but we did need to go to people with
25 strong modelling capability. We have people like
26 that in the department, but they were already
27 committed to particular activities.

28 Q And so that work was the result of meetings that
29 were held a couple of years ago; is that correct?

30 DR. RIDDELL: There was one workshop on this particular
31 one, but it was not about the actual development
32 of the model. They wanted to add additional
33 elements to the modelling, particularly social
34 economic considerations. The outcome of the
35 workshop was one that, as we have probably seen
36 very clearly, now, adding additional things to the
37 model and adding complexities to the model was
38 just -- it was too soon, because we simply didn't
39 have the physical model built to really add
40 anything onto.

41 Q Perhaps I'll just stay with this topic, in
42 particular, increasing the understanding of what's
43 happening in-river and the different pressures
44 that are associated with that. Given the recent
45 years of increasing in-river or en route mortality
46 and increasing challenges with water temperature
47 and water flow, what methods are being considered

1 to be used to inform stock assessment for
2 returning sockeye upriver of Qualark? And in
3 answering that question, I would like you to
4 particularly speak on the challenges associated
5 with runs of low abundance, if you're relying on
6 radio tagging, and those circumstances.

7 MR. WHITEHOUSE: I think the key pieces that we're
8 talking about relate back to two components that I
9 mentioned earlier; the environmental watch program
10 and the development of models that link the
11 conditions within the watershed to specific
12 migratory success patterns.

13 So this is an important piece and it applies
14 throughout the entire Fraser Watershed, it
15 provides estimates for stock groups based on their
16 entry timing and the conditions prevalent within
17 the river during the period which they will be
18 resident and migrating in the river. That's one
19 piece.

20 The second piece I think that's important to
21 point out is the telemetry work, and it needs a
22 little bit of explanation, because there is levels
23 of resolution that are quite important in the way
24 the sampling design is structured with respect to
25 the tagging program. What this program involves,
26 in terms of a set of monitoring networks, is the
27 placement of receivers at very important intervals
28 along the migratory route in the main stem of both
29 the Fraser and Thompson Rivers. And as tagged
30 fish move through the system, we're able to
31 estimate areas in which we see losses of sockeye
32 due to the environmental conditions. It may be a
33 cumulative impact of associated encounters with
34 nets and environmental conditions, but the key is
35 that we are able to narrow down our understanding
36 of where loss rates are. We also get information
37 based on the relative vulnerability of particular
38 stocks based on the DNA that is collected from
39 those fish at the time of tagging.

40 So what happens with this program is we
41 release a batch of fish with radio tags and we
42 distribute them through their arrival timing, and
43 we've done that in both marine areas and in
44 freshwater. I believe that marine area tag
45 application, for example, Johnstone Straits or
46 Juan de Fuca, is preferable, because then we get a
47 signal of fish arriving in the river and their

1 survivorship curves as they pass frequent
2 stations. And these stations, there can be up to
3 20 of them in a given years, so that we can break
4 survival rates throughout the main stem.

5 This information is important, as it
6 identifies areas where we may expect loss of fish
7 based on a pattern of environmental conditions
8 developing in a given year, and it allows us to
9 then apply and begin to develop a model that has
10 predictive capacity for multiple years, based on
11 patterns associated with flow and water
12 temperature.

13 So the integration of those parts are very
14 important in understanding the dynamic of fish
15 migration into the watershed.

16 Q Dr. Riddell?

17 DR. RIDDELL: I think Timber's touched on most of the
18 points. I think to put this together you need to
19 have the components that we've talked about in
20 previous meetings here. Qualark is essential,
21 where you get a good count at the bottom of the
22 canyon. We have the radio taggings. We have to
23 know the tags going by. You have to have the
24 environmental watch so we can use the
25 environmental conditions to predict what the
26 expected loss rate in the river might be. And
27 then we have to have good catch accounting so we
28 can keep track of the tags as they're possibly
29 being removed from the river system. And then you
30 need this modelling framework to put all this
31 information back together.

32 And the model is obviously, as people say, is
33 a representation, but if we can predict the return
34 of fish, and particularly using the radio tags to
35 test how these animals are moving up the river,
36 then we can really start to build some confidence
37 that we understand what the loss is of Fraser
38 sockeye and how we can deliver them to particular
39 populations.

40 Your particular question about small stocks,
41 tagging is a problem for small stocks, because the
42 likelihood of grabbing one of the very small
43 populations at random in a very large population
44 is very, very low. In most cases, you probably
45 will not put a radio tag on a very, very small
46 population. And so the model, then, allows you to
47 also -- you have to then assign -- we talked about

1 indicators yesterday, so you have to assign the
2 very small stocks and some ratio to a bigger
3 population that will likely have tags and can be
4 monitored, and then you would have to infer what
5 you observed in the large stock and that it's the
6 same for the smaller.

7 It's definitely more risky, because you don't
8 have a direct monitoring for it, but that's one of
9 the fundamental reasons by describing this model
10 as a risk assessment model, because then you can
11 build these uncertainties into the modelling
12 framework. And because we're talking about risk
13 and it has human costs, because they have to
14 determine, you know, how risk averse or risk prone
15 do you want to be in delivery, we would establish
16 this model and then take it out to the community
17 groups to discuss how you would apply it in season
18 and what are these risk levels that you want to
19 achieve.

20 Q Thank you. Many of my clients who participate on
21 listening in on the Fraser Panel calls, you know,
22 they hear test fishery reports from the marine and
23 then they hear the numbers past Mission, and then
24 they hear the Qualark -- hopefully over time
25 they're going to hear Qualark more and more, but
26 the question they often -- or an observation they
27 often have is that information upriver from
28 Qualark gets pretty anecdotal or qualitative in
29 nature.

30 Would you agree that it might be useful or
31 helpful to develop a series of networks of
32 sampling platforms in the Fraser River that would
33 provide more direct information that could be used
34 in-season?

35 MR. WHITEHOUSE: I think there's conceptual value added
36 to that approach, but it really needs to be
37 structured in terms of what management objectives
38 are. Right now, the management system is building
39 the capacity to accommodate achieving escapement
40 objectives plus net upstream fishery objectives
41 through the escapement management at the Mission
42 site with the various enhancements that we're
43 talking about.

44 The biggest question that comes to mind, from
45 my perspective, when we talk about in-season
46 infrastructure above the canyon, for example, is
47 how would it really come into play in terms of

1 meaningful engagement of management decision-
2 making?

3 And the reason I raise this is because it
4 largely reflects the fact that decisions are made
5 based on Mission/Qualark escapement. Management
6 decisions are made based on escapement patterns
7 and allowances allocations for various fisheries
8 objectives above those points, including
9 accommodating things like loss rates.

10 And a lot of the fisheries that are operating
11 above there are already having impacts such that
12 the value added in adding additional assessment
13 capacity above those points becomes questionable
14 in terms of providing useful in-season management
15 perspective.

16 Q Would it not also help you in assessing health of
17 the salmon?

18 MR. WHITEHOUSE: Sampling platforms definitely have
19 value. I think there's something that's being
20 overlooked, though, and that is that there are
21 extensive fisheries operating throughout most of
22 the Fraser above Qualark, and these represent
23 readily accessible opportunities in terms of both
24 run timing estimation, not run timing, run size,
25 indications of run strength, and as well as very
26 constant feedback, through monitoring programs, of
27 fish health.

28 So there are pieces in place, now, that
29 support these fairly effectively.

30 Q Okay. Dr. Riddell?

31 DR. RIDDELL: I agree with essentially everything that
32 Timber has added. There's no question you can
33 get, you know, collect samples and assess fish
34 health is useful. Many times there's a
35 significant lag in looking at fish health and how
36 you associate that back to in-season decisions
37 that are made fairly quickly.

38 For a number of years we've talked about this
39 integrated stock assessment platform throughout
40 the Fraser basin. I still think that that's a
41 good way to be thinking about this. But what we
42 have learned in working in the lower river and
43 applying the tags that we then follow, and I think
44 we talked about this during hydroacoustics,
45 there's very clearly a cut-off of when we should
46 handle fish in freshwater and apply these tags.

47 If we can tag fish at about 18 degrees

1 Celsius and lower, then we have very good
2 survival. If we just were tagging about 18 and a
3 half, then we were losing substantially more fish,
4 and the impact of that is that you then have a
5 compounding or confounding of what's the fate of
6 that tag; was it removed in some fishery or did it
7 die naturally in the river? And you can't really
8 attribute the cause of the loss of that radio tag.

9 So I think the real value in the system, now,
10 is putting the radio tags on where you can get
11 large numbers with good survival and then use the
12 in-river programs as the recovery platforms where
13 you still get your mark recapture. You get the
14 marked fish to unmarked ratios and then you can
15 sample for fish health.

16 But tagging in-river is looking like it's
17 less and less likely because of the confounding
18 factors.

19 Q A number of my clients are quite interested in the
20 introduction of fish wheels and the use of fish
21 wheels as a supplement to stock assessment, and as
22 you know, there was and has been a fish wheel
23 operating at Siska for a number of years. I
24 wonder if you could comment on the usefulness of
25 fish wheels and either at Siska or others as a
26 stock assessment platform?

27 MR. WHITEHOUSE: We've had opportunity to evaluate in a
28 number of instances and locations throughout the
29 river the utility of fish wheels in terms of their
30 ability to support sampling activities. One of
31 the things that's becoming quite clear, and it was
32 quite clear early on, is that fish wheels within
33 the Fraser have a more limited utility than they
34 do in other systems where there is substantially
35 higher turbidity.

36 One of the issues is that we're consistently
37 seeing issues and concerns with respect to
38 representativeness in terms of the sampling that
39 we can achieve. This includes evaluations in the
40 main stem of the river down in the Mission area.
41 There has been more success associated with
42 consistent and catch abundance in the Fraser
43 canyon area associated with the Siska fish wheel
44 operation as a potential representative sampling
45 tool.

46 However, when we get above there, the catch
47 data, again, seems to be quite spotty and suggests

1 that the sockeye are able to fairly well avoid the
2 gear and thus there's some bias associated with
3 the sampling that occurs within it. Extensive
4 evaluations in the Thompson have shown that
5 there's essentially low value in proceeding with
6 evaluations of fish wheels there.

7 Fairly equivocal results coming out of the
8 middle/upper Fraser in terms of its ability to
9 catch fish in sufficient numbers to represent much
10 in the way of meaningful platform for sampling.

11 So they held promise. I think from the
12 overall contribution that they are able to make in
13 an ongoing way, our expectations have been
14 substantially tempered recently, given
15 performance.

16 Q Dr. Riddell?

17 DR. RIDDELL: Well, I think Timber's comment about the
18 incremental value of wherever you place any tool
19 in the river is the key point again. And as I
20 say, now we have the concern about if the
21 temperature is above about 18 and a half, then we
22 don't want to be applying more tags and stressing
23 the animal, because we know that we're going to
24 lose a significant portion. I mean, frequently we
25 were losing 50 percent of that, and so it is a
26 significant problem.

27 But if the fish wheel was to work in a canyon
28 area with very opaque water, they can be a
29 wonderful sampling platform in the sense that they
30 catch fish at a very regular rate and so you can
31 get them in good quality and so on. So, I mean,
32 as a fishing tool, they might be appropriate, but
33 I think it's really a matter of when you start
34 talking about building a stock assessment
35 framework throughout the basin, then we need to
36 really think about where we put incremental
37 programs that really provides some additional
38 information for people conducting management in-
39 season.

40 Q Perhaps you've answered this generally, but I'd
41 like to ask you specifically: The Northern
42 Shuswap Tribal Council, as you know, has proposed
43 fish wheels as a sampling platform for the measure
44 of health and abundance coming through the NSTC
45 member community territories, and they have not
46 yet been able to manage to secure support from DFO
47 for these efforts. Why is that, and is that

1 linked to the answer you raised earlier; have you
2 concluded it's not of much value?

3 MR. WHITEHOUSE: It's not so much that it's not of
4 value. It comes down to the benefit associated
5 with implementing that program. Where would that
6 information fit into? How would you use in-season
7 run estimation abundance at a point in the area
8 where this program is operated when most of the
9 fisheries decision-making has occurred well
10 downstream of that point? There are not much in
11 the way of regulatory options to effect management
12 change with a monitoring site that far above major
13 fisheries.

14 Q So Mr. Whitehouse, I wonder if we could -- Mr.
15 Lunn, if we could go to Exhibit 381? I'd like to
16 pick up on that comment in a slightly different
17 way. And it raises concerns that I observed when
18 I reviewed Exhibit 381, which is your 2004 and
19 2005 Salmon Stock Assessment Plan.

20 I didn't find, in any of this document, any
21 objectives around ensuring the priority of FSC
22 fisheries as part of your stock assessment, and
23 I'm wondering if you could review that. I see, on
24 page 1, Objective 4, you want to improve capacity
25 and opportunities for First Nations in that
26 assessment plan, and I can turn to the various
27 pages to help you review it, but I was quite
28 surprised and I'd like to give you an opportunity
29 to comment on why it is that FSC priorities are
30 not part of your priorities in stock assessment.

31 And, in particular, if you could go to page 2
32 of 57, the next page, and if you go to sockeye, I
33 see that the PST and the international obligations
34 in the management of domestic fisheries are there,
35 but there is no mention whatsoever of First
36 Nations obligations or the priority of those;
37 would you agree with me on that?

38 MR. WHITEHOUSE: Without a detailed review of the
39 document, I cannot agree with you. I'd have to go
40 through this extensively.

41 Q Well, the pages on sockeye, that's the one page.
42 The next one is right next to it, page 3 of 57.

43 MR. WHITEHOUSE: I think I'll take a slightly different
44 approach to responding to you here.

45 Q Okay.

46 MR. WHITEHOUSE: The key is assessment components
47 within this document as a framework for providing

1 information. The relative impact of harvest comes
2 into play at a general level; are stocks exploited
3 in a high, moderate or low manner, and
4 irrespective of what the source of harvest is. So
5 if there are high expected harvest rates, the
6 assessment elements respond to that by providing
7 higher resolution. If there are low expected
8 harvest rates, it's not important to an assessment
9 framework who the harvesters are in order to shape
10 that.

11 Q All right. Well, maybe I'll just add -- Dr.
12 Riddell, did you want to answer that now, or if I
13 could, I just want to ask one more question of Mr.
14 Whitehorse.

15 We started, this morning, or earlier today,
16 talking about the various management objectives
17 that you're trying to balance, and you just
18 mentioned, again, that the fish wheels aren't that
19 useful or necessary in your stock assessments
20 because most of the fishing has already occurred,
21 or the large fishing will have occurred. I'm
22 assuming you're talking about the fisheries in the
23 marine. If you're not --

24 MR. WHITEHOUSE: That's an incorrect assumption.

25 Q Or in the lower Fraser.

26 MR. WHITEHOUSE: Yes.

27 Q All right. So if you were -- a management
28 objective was to move commercial fisheries or some
29 of the fisheries upriver, and if you were actually
30 trying to ensure FSC priorities for the upriver
31 First Nations, a management objective and a
32 usefulness could be found in fish wheels; is that
33 correct? Or in other selective fisheries upriver
34 that can harvest large amounts of fish, provide
35 sampling, provide health abundance, do all of
36 those things; would you agree with me on that?

37 MR. WHITEHOUSE: I'm not sure that I make the same
38 extension that you do. The infrastructure, in
39 terms of in-season run strength abundance and the
40 tools in the lower river, with the management
41 adjustments and the understanding of potential
42 survival rates, and the management objectives of
43 meeting an allocation, for use of a different
44 word, for FSC requirements, so FSC becomes a part
45 of escapement objectives at Mission, these account
46 for the need to move fish upstream, and if the
47 objective is to move more fish upstream, Mission

1 will simply provide the ability to document that
2 we've done that.

3 With the other tools in place, the
4 environmental watch program, the tagging programs,
5 models to adjust for management adjustments, the
6 necessary pieces are in place to support
7 additional fish, and because we have resolution to
8 stock or CU levels based on estimates at Mission.

9 So I would describe it as a nice-to-do, but
10 not a need-to-do, if we were going to organize
11 things that way.

12 Q Is there anything you'd like to add, Dr. Riddell?

13 DR. RIDDELL: Well, I mean, I'm glad that Timber
14 brought up the point about incorporating it in the
15 escapement objective past Mission, so there is
16 always an allowance made for the Interior
17 fisheries and that it's built into, by the run
18 timing groups, what is the management escapement
19 goal to pass Mission, right? And so in that
20 context, we do take that into account.

21 In this document, where I would agree that
22 Timber made the comment that a dead fish is a dead
23 fish, basically, and that we are -- always
24 discuss, and I think I mentioned this yesterday in
25 terms of prioritizing programs, the importance of
26 a program to delivery of a First Nations agreement
27 or a food fishery location. But we really do
28 consider that to be one of the domestic fisheries
29 in the sense that we don't differentiate that.

30 If the delivery requirement changes
31 substantially through time, then I expect that
32 there is a point where we would have to make, very
33 similar to previous discussions about the Wild
34 Salmon Policy, we may well have to adjust how the
35 department estimates in-season and where the fish
36 actually are to conduct in-river fisheries.

37 Q Okay. When I turn to that one I get to the
38 recommendations. I'll move on from this exhibit.
39 One more question about FSC, and I know you've
40 picked up on this in a couple of different ways,
41 but my clients, for example, those in Haida Gwaii
42 and those on the Vancouver Island, are also
43 concerned with the ever increasing Fraser centric
44 nature of DFO's stock assessments. Would you
45 agree that the increasing Fraser centric nature of
46 these informations and these programs are being
47 balanced against providing the necessary

1 information or having the necessary program
2 dollars to attend to the salmon that are returning
3 to spawn in either Haida Gwaii or in some of the
4 Vancouver Island streams and that creates extra
5 pressure?

6 DR. RIDDELL: Well, I think we've addressed that
7 several times. Yes, there's no question that as
8 the budgets are reduced through time and the
9 priority placed on Fraser sockeye will put
10 additional pressure on, well, I'd even include
11 Fraser non sockeye stocks and non Fraser stocks.

12 Now, in terms of impact on specific
13 fisheries, you really have to look at that on a
14 specific basis.

15 Q All right. I have a couple more areas to cover.
16 One is, Mr. Commissioner has heard a little bit,
17 and we'll hear more about the importance, from a
18 First Nations perspective, on using traditional
19 ecological knowledge as part of the balance to the
20 scientific information. I haven't yet seen in the
21 assessment plans or anything else, how is
22 traditional ecological knowledge presently used,
23 or how could we improve on that when determining
24 what needs to be assessed and where?

25 MR. WHITEHOUSE: That is a difficult question to
26 respond to. I don't have a good answer for you.
27 We've struggled with defining what and how
28 traditional ecological knowledge might be obtained
29 to feed into systems. I think it is clearly an
30 area that we have identified as needing additional
31 work and a recognition that there is value to
32 considering traditional ecological knowledge. But
33 from my perspective, it's something that we
34 clearly need to do additional work on in order to
35 make anything meaningful in terms of progress.

36 Q Dr. Riddell?

37 DR. RIDDELL: Well, unfortunately, I have to agree. I
38 mean, we've talked about it extensively through my
39 time with the department, and it's always one that
40 we've struggled to determine exactly how we would
41 build in, in my, what I would say is limited
42 understanding or experience with traditional
43 knowledge, I find it informative on an ecosystem
44 basis. Now, it's quite possible that people
45 within the Fraser would have good insights into
46 what we're calling the Environmental Watch
47 Program, so they may have something to contribute,

1 in what's the severity of the conditions, or where
2 you're losing fish along the Fraser.

3 That sort of information would be very useful
4 to incorporate in the discussion like we had in
5 the in-river management modelling, to use it to
6 sort of verify whether it meets people's
7 expectations.

8 But we've talked about this at great lengths
9 through the years and we've never really made a
10 great deal of progress in how to incorporate it,
11 to be honest.

12 THE COMMISSIONER: Ms. Gaertner, can I just ask --

13 MS. GAERTNER: Yes.

14 THE COMMISSIONER: -- and I've probably heard this and
15 I apologize to ask you to repeat it, but the
16 Environmental Watch Program, I take it, is
17 exclusively operated by the DFO?

18 MR. WHITEHOUSE: Yes, it is. Yeah.

19 THE COMMISSIONER: And in the context of Ms. Gaertner's
20 question, is that what you were addressing in
21 terms of incorporating TEK, or are you talking
22 about something else?

23 DR. RIDDELL: Well, I think the question was more
24 general than that, but I wouldn't limit the
25 incorporation of TEK into the environmental watch.
26 The environmental watch is very much a physical
27 measurement of flow and temperatures and a
28 modelling program. It actually starts with an
29 array through the Fraser, that you've heard from
30 David Patterson. The modelling involves a 10-day
31 forecast of environmental condition on the river,
32 and that's conducted at the Institute of Ocean
33 Sciences, and then fed back to the Fraser Panel at
34 the Pacific Salmon Commission.

35 MS. GAERTNER:

36 Q Okay. Turning to another area, which is
37 collaborative work with First Nations in the
38 implementation of your stock assessment plans,
39 again, I can refer you to Exhibit 381, I think you
40 got it yesterday, there's one of your objectives
41 is to work more closely to identify opportunities
42 with First Nations.

43 Mr. Whitehouse, you spoke, yesterday, about
44 the complexities with sockeye spawning enumeration
45 and capacity issues around First Nations, and if I
46 heard your evidence correctly, you also spoke that
47 it was in your opinion it was difficult to carve

1 off any pieces of sockeye enumeration -- spawning
2 enumeration assessments for First Nations.

3 Could you speak a little bit more about that?

4 I understand there are various parts of sockeye
5 enumeration; there's the visual surveys, there's
6 the operating of fences, and it's also my
7 understanding that there is some capacity already
8 in place in some of these areas to do some of
9 those parts. So I'd like you to help me
10 understand why it is that some of that couldn't be
11 carved out and better working relationships
12 developed with people like the Northern Shuswap
13 Tribal Council with respect to sockeye
14 enumeration?

15 MR. WHITEHOUSE: I think, first, it's important to
16 acknowledge that there are a large number of
17 collaborative efforts going on with First Nations
18 throughout the watershed, that there has been
19 directed activity on DFO's part to support the
20 development of capacity within First Nations
21 groups through the Aboriginal Fisheries Strategy,
22 and this has been a major partner in terms of
23 sockeye assessment -- I will extend that to salmon
24 assessment within the Fraser since '92.

25 We have to recognize that throughout the
26 watershed there are substantially different
27 capacities amongst groups to participate. Some
28 groups have made substantial progress in that
29 period and have biological staff in-house that can
30 provide the necessary oversight in terms of
31 program delivery. I would stress that stock
32 assessment is easy to characterize as counting
33 fish, but it is a science discipline, and it's
34 important that there is the ability within
35 organizations who are undertaking this work to
36 support a science-based organization.

37 There has been significant progress made and
38 some groups have in-house biologists, have
39 technical staff that work on stock assessment
40 activities and are participating quite fully in a
41 number of stock assessment activities, including
42 sockeye assessment.

43 For others, there are significant challenges
44 in reaching these objectives in getting technical
45 and biological staff on strength. The challenges
46 come from a number of different sources. Some of
47 them relate to simply having an opportunity to do

1 enough of this work to actually be able to retain
2 staff year after year. In a number of cases,
3 we're talking about fairly limited opportunities
4 in terms of duration of work annually; six to
5 eight weeks, if we're simply dealing with field
6 work.

7 And really, what's important, if we're going
8 to make progress, is to get an extension of the
9 work that First Nations are involved with to the
10 analytical, the data side, and this is where
11 they're going to develop the capacity to make
12 linkages, and I speak about complexity to make
13 linkages on aspects of fish behaviour and the
14 implications of study design to changes in fish
15 behaviour, to changes in study design as they
16 impact the quality of estimates delivered. These
17 are all very important things, from a science
18 perspective, to be able to maintain rigour on in
19 terms of delivery.

20 I know that there are a number of instances
21 where First Nations would like to have much
22 greater participation. They're running up against
23 capacity issues and being able to find and retain
24 people who have the technical background to
25 participate. So I think we really need to work at
26 a number of different levels in order to be able
27 to help develop those.

28 There's been instability with respect to the
29 organizations that have resulted in strength,
30 waxing and waning over the period '92 to 2000, and
31 where we do see groups having real ability to
32 participate is where they've developed this in-
33 house biology and technical capacity.

34 So I think that's an important component.

35 Q Dr. Riddell, is there anything you'd like to add
36 to that?

37 DR. RIDDELL: I don't know that I can, really. I think
38 Timber has a much more specific and direct
39 understanding of the conditions. I shouldn't
40 really comment.

41 THE COMMISSIONER: Ms. Gaertner, I note the time.

42 THE REGISTRAR: The hearing will now adjourn until 2:00
43 p.m.

44
45 (PROCEEDINGS ADJOURNED FOR NOON RECESS)
46 (PROCEEDINGS RECONVENED)
47

1 THE REGISTRAR: The hearing is now resumed.

2

3 CROSS-EXAMINATION BY MS. GAERTNER, continuing:

4

5 Q Gentlemen, there's just one other area that I
6 wanted to cover before we get to some questions
7 and recommendations. And we briefly spoke about
8 capacity and the capacity challenges and the
9 benefits associated with that. Would you also
10 agree with me that communication is something
11 that's increasingly a demand on the stock
12 assessment group and, in particular, I'd like you
13 to comment on one of the things that Mr.
14 Commissioner has heard and will continue to hear
15 is the challenges associated with distrust between
16 First Nations and DFO historically, and the
17 necessities in moving forward in more
18 collaborative ways. And we spoke briefly this
19 morning about management objectives and the need
20 to see change and the complexities associated with
21 that. Could you tell me whether your budgets have
22 included, and what your challenges associated
23 might be around increased communications with
24 First Nations on your goals and approaches to
25 stock assessment and all of that, and where we
26 could benefit from new and improved ways of doing
27 things?

28 MR. WHITEHOUSE: Yes, I think the key, and you've hit
29 an important point with respect to communications,
30 the key is that there are a number of existing
31 processes in place, particularly aligned with the
32 resource management sector as a formal
33 representative of DFO's interests, communications
34 as a point of contact for First Nations groups.
35 They organize a number of bilateral meetings in
36 terms of planning on an annual basis.

37 Stock assessment does feed into those
38 meetings, but I would never disagree with someone
39 who said that we couldn't use work to improve
40 communications. I think we can always work to
41 improve in those areas. So there are processes in
42 place and I think those processes can undoubtedly
43 be strengthened to improve the level of discussion
44 between groups and to hopefully build on the trust
45 that has been established.

46 Q I'll just use an example of this. The DNA
47 sampling that's done from in-river FSC fisheries

1 or otherwise in-season, are the results of that
2 DNA done in-season and, if so, are they
3 communicated to First Nations; to your knowledge?

4 MR. WHITEHOUSE: We'd have to get the people who deal
5 with that data. That isn't a source of
6 information that I deal with regularly so I don't
7 know who is processing that or who would be
8 receiving the information and on what timelines.

9 Q All right. I'm just going to turn briefly to --
10 my goal on your next set of questions is to see if
11 we can get a little bit more specific about where
12 we might go on recommendations around stock
13 assessment. We've heard clearly that you need to
14 maintain your base budget and your base stock
15 assessment data and that there's room for
16 improvement. Dr. Riddell, yesterday, you spoke
17 about a transition plan and I'm going to suggest
18 that perhaps what might be useful is a multi-year
19 plan, including the modelling work that you
20 mentioned today, including any transition steps
21 that would increase the type and location of stock
22 assessment data to deal with these changing
23 management objectives. Do you think that would be
24 a useful next step?

25 DR. RIDDELL: Yes, I'm trying to recall exactly how I
26 used "transition," but it's not a bad term for the
27 whole process because if we are looking to have a
28 more integrated program, involve more groups so we
29 can deliver the program with available funds and
30 capacity, and a transition period of developing it
31 and testing it and then proceeding is a good idea.

32 Q And would you agree that it would also be very
33 useful to develop that plan collaboratively with
34 First Nations so that they can ensure that their
35 interests and responsibilities are properly
36 addressed and that they can collaboratively work
37 with the Department to implement those plans?

38 DR. RIDDELL: Well, I would, but I wouldn't just limit
39 it to First Nations because I think, as I said a
40 couple of times, there are the universities in the
41 interior now that want to be more involved in a
42 training capacity and a professional capacity, and
43 they bring another level of resourcing to those
44 particular areas. So I think it really should be
45 a multi-sector discussion.

46 Q Mr. Whitehouse, do you have anything to add to
47 that?

1 MR. WHITEHOUSE: I think I limit my remarks to the
2 aspects with which stock assessment relates.
3 You're speaking in a much bigger context in terms
4 of overall management objectives. That really is
5 dealt with by the management resourcing side of
6 this. So I agree with the concept of increased
7 and improved collaboration where that makes sense,
8 including within stock assessment based
9 activities.

10 Q Actually, I wasn't speaking generally, I was
11 speaking about stock assessment. Given the
12 increased management objectives and the changing
13 management objectives that we spoke about earlier,
14 there is a need to develop a transition and a new
15 plan to deal with all the various management
16 objectives and the information that might be
17 necessary, you'd agree with me on that?

18 MR. WHITEHOUSE: In part, yes.

19 Q And from Dr. Riddell, and I think Mr. Whitehouse,
20 your information yesterday, that plan is going to
21 have to deal with both identifying for significant
22 capital investments over term and commitments for
23 multi-year funding for operational purposes, and
24 that that would be a necessary and useful thing
25 for ensuring that the data collection is in place
26 and available over time; is that correct?

27 DR. RIDDELL: Well, the capital investment very much
28 depends on the methods applied, but I think in the
29 long term, for repeatability and for efficiency of
30 delivery, the capital investment is certainly
31 something that would be worth looking at up front.

32 I have no concern about what you're saying
33 about the multiple involvement. I think we have
34 to keep a broader picture on the available
35 resources. There are a number of organizations
36 involved throughout the Fraser that have access to
37 particular funds, it's just a matter of making
38 sure that anything that we put in place has
39 longevity and that even in the volunteer programs
40 I work with now, providing them a program for five
41 years and then not having continuance of that can
42 cause problems and breaking of the information
43 flow and inconsistencies on how the data's
44 collected. So we just want to ensure that we have
45 a long-term program.

46 Q All right. And then just picking up from my
47 earlier comments, that multi-year plan and that

1 implementation of that would necessarily include a
2 communication strategy that would ensure reporting
3 back and increased flexibility over time in how
4 we're implementing that program; is that correct?

5 DR. RIDDELL: Well, I think to keep everyone involved,
6 you need to have that information flow and if it
7 is truly integrated, I think that that would
8 evolve very quickly.

9 Q I just had one brief comment -- question for you,
10 Dr. Riddell, in closing. You mentioned yesterday
11 that you have been, and it's clear you are taking
12 efforts to access and raise funds to complement
13 the funds of the Department of Fisheries and
14 Oceans, or Canada, but you mentioned restrictions
15 on your abilities to do that. And are those
16 restrictions DFO, or Government of Canada
17 restrictions? And if so, what are they and is
18 there ways that we should be looking at improving
19 abilities to collaborate?

20 DR. RIDDELL: Well, it's a limitation on how funds are
21 raised, and it is a government, not DFO, it's a
22 federal government limitation through the **User Fee**
23 **Act**. And you know, it's not a strict limitation
24 on what you can raise, it's a limitation on the
25 processes involved that are accountable. But
26 whenever we query government about what the
27 standard for consultation are, and how do you meet
28 these standards, we actually don't get any reply
29 whatsoever. And so it is a frustration, we want
30 to talk to the public, but I don't really want to
31 go out generally raising people's expectations if
32 we can't deliver so what I need to have is some
33 goalposts that we can work towards that we can
34 meet these expectation and raise the funds that we
35 all need.

36 MS. GAERTNER: Thank you. Those are my questions, Mr.
37 Commissioner.

38 THE COMMISSIONER: Mr. Whitehouse, I wonder if I could
39 just ask you, I understand that the escapement
40 figure that the PSC works with comes from DFO. Is
41 stock assessment the main data centre for
42 providing that escapement figure?

43 MR. WHITEHOUSE: Yes, that's correct.

44 THE COMMISSIONER: Okay. And is anyone else, any other
45 department, or any other personnel involved in
46 providing that figure?

47 MR. WHITEHOUSE: Because the nature of the program

1 delivery is collaborative, there are a number of
2 groups that feed information into the stock
3 assessment program.

4 THE COMMISSIONER:

5 MR. WHITEHOUSE: So there are probably at least seven
6 other groups, primarily First Nations, that are
7 involved in project delivery at some level --

8 THE COMMISSIONER: Okay.

9 MR. WHITEHOUSE: -- that do contribute to the program
10 delivery.

11 THE COMMISSIONER: Okay. Thank you.

12 MS. BAKER: Thank you, Mr. Commissioner. I understand
13 that Mr. Dickson has one question.

14

15 CROSS-EXAMINATION BY MR. DICKSON:

16

17 Q Yes, it's Tim Dickson for the Sto:lo Tribal
18 Council and Cheam Indian Band. Dr. Riddell, I
19 just have one question for you. Earlier today,
20 Mr. Rosenbloom made a comment that the funds that
21 were raised for the Cultus sockeye recovery work
22 were provided by industry, and my understanding of
23 the origin of those funds is a little bit
24 different and I want to just quickly ask you
25 whether you share my understanding. I understand
26 that the money came from the sale of 100,000
27 sockeye and that the catch and sale of those fish
28 came about because of an agreement between the
29 Commercial Salmon Advisory Board and the Sto:lo,
30 who are my clients.

31 DR. RIDDELL: Mm-hmm.

32 Q And they agreed that 100,000 sockeye could be
33 caught. In circumstances where DFO felt that
34 Cultus sockeye needed to be protected and so would
35 set a low exploitation rate, and so the notion was
36 that 100,000 sockeye could be caught and sold, by
37 industry, and they would take out their costs from
38 the proceeds and then the remaining proceeds would
39 be put to Cultus recovery work. And that work is
40 -- well, the funds are being held by the Salmon
41 Table Society, which is largely operated by
42 certain Sto:lo members. Is that generally your
43 understanding?

44 DR. RIDDELL: I recall this sale, but I don't know that
45 I ever understood or knew about the sort of
46 particular uses of the fund.

47 Q Mm-hmm?

1 DR. RIDDELL: So I mean, at our working level, we did
2 have local First Nation peoples involved in the
3 program. We had the Cultus Lake lab people that
4 were under my supervision. People at Simon Fraser
5 from DFO. We definitely had the Area E
6 Gillnetters developing the technology for the net
7 and for the boat, and we had money coming from the
8 **SARA, Species at Risk** funds for Cultus Lake
9 sockeye. But I don't think I knew the sort of
10 background of how the money was distributed. I
11 did know about the sale and subsequent
12 discussions, and of the salmon dialogue table
13 you're talking about.

14 Q Right. And you're aware that the Salmon Table
15 Society is conducting some of this recovery work
16 on Cultus Lake?

17 DR. RIDDELL: Yes, now. Yeah.

18 Q Thank you. Those are my questions.

19 MS. BAKER: Thank you. Mr. Commissioner, I think we
20 can conclude these witnesses now. Thank you very
21 much. Unless there's questions arising from the
22 bench?

23 THE COMMISSIONER: Yes. No, I don't know how many
24 times I've thanked Dr. Riddell, but it's never too
25 much, Dr. Riddell. Thank you again for making
26 yourself available for this panel, and to you, Mr.
27 Whitehouse, thank you very much for being part of
28 this panel for the last couple of days. Much
29 appreciated. Thank you.

30 MS. BAKER: Thank you.

31 THE COMMISSIONER: We're moving to another --

32 MS. BAKER: Yes, we're moving to another witness, also
33 dealing with stock assessment, but his name is
34 Gord Sterritt.

35 THE COMMISSIONER: Okay.

36 MS. BAKER: Just go ahead and have a seat. Thank you.
37 Thank you. If the witness could be sworn, please.

38
39 GORD STERRITT, affirmed.

40
41 THE REGISTRAR: Would you state your name, please?

42 MS. BAKER: I'm sorry, before -- he needs to turn his
43 mike on.

44 MR. STERRITT: Oh.

45 THE REGISTRAR: Would you state your name, please?

46 MR. STERRITT: Gordon Neil Sterritt.

47 THE REGISTRAR: Thank you.

61
Gord Sterritt
In chief by Ms. Baker

1 MS. BAKER: Does he need to actually take the oath with
2 the mike on? He might --
3 THE REGISTRAR: Did you get that?
4 THE RECORDER: Oh, yes, I got it.
5 MS. BAKER: Okay, thanks. Thank you. Thank you very
6 much for coming down, Mr. Sterritt, and thank you
7 for waiting patiently in the gallery for the last
8 two days.
9

10 EXAMINATION IN CHIEF BY MS. BAKER:

11
12 Q Mr. Sterritt, you're Fisheries Natural Resource
13 Manager with the Northern Shuswap Tribal Council;
14 is that correct?

15 A That is correct.

16 Q And you have been involved in wildlife and
17 resource matters since '96, when you were a
18 technician with the Strategic Watershed Analysis
19 Team in Hazelton?

20 A That's correct.

21 Q And then you worked with the Gitksan Watershed
22 Authority as a technical biologist from '99 to
23 2005?

24 A Correct.

25 Q And you've been with the Northern Shuswap Tribal
26 Council as a Fisheries Natural Resource Manager
27 since 2005; is that right?

28 A That is correct.

29 Q Thank you. And you administer the Northern
30 Shuswap Aboriginal Fisheries Strategy Agreement
31 with DFO and the programs that are run under that
32 agreement?

33 A I do.

34 Q And I think I'll just get right into -- oh, sorry,
35 yes, your CV, I'm sorry, is at Tab 12 of the
36 binder of materials for stock assessment before
37 you and it's now on the screen. Is that the CV
38 you provided?

39 A That is correct.

40 Q Thank you.

41 MS. BAKER: I'd like to have that marked, please, as
42 the next exhibit.

43 THE REGISTRAR: Exhibit number 389.

44
45 EXHIBIT 389: *Curriculum vitae* of Gord
46 Sterritt
47

February 3, 2011

1 MS. BAKER:

2 Q All right. I just start off at the top, asking if
3 the Northern Shuswap Tribal Council is involved in
4 stock assessment of Fraser River sockeye in its
5 traditional territories?

6 A I would say that no, the Northern Shuswap Tribal
7 Council is not involved in stock assessment as we
8 see our involvement. We do have some efforts
9 towards that, but it's not the involvement that we
10 would like to see.

11 Q Have you done any work to determine or to assess
12 in-season abundance or health indicators for fish
13 in the territory?

14 A Yes, we have.

15 Q And I understand that there was a demonstration
16 commercial fishery in 2005 and 2006 in the
17 traditional territory; is that correct?

18 A Correct.

19 Q And that demonstration fishery provided the
20 impetus to move into some of the abundance and
21 health indicator programs that you're running
22 today; is that right?

23 A That's correct.

24 Q Okay. Did you do a feasibility study or
25 assessment for stock assessment once that
26 commercial pilot had concluded? I guess, sir, I'm
27 sort of leading it to how did you move from the
28 commercial pilot into the in-season abundance and
29 health indicator program you're running now?

30 A Well, we had an opportunity to test the
31 feasibility of a commercial fishery on the Quesnel
32 River in 2005, and we were -- in-season, we found
33 that we did not have the information that we were
34 looking for in order to inform that fishery. So
35 it could be a longer story than that, but, I mean,
36 that's the gist of it. And so what we did was we
37 thought that -- knowing that there was gaps in-
38 river of what the fish were doing as they moved up
39 river, we started to put together a proposal and
40 look at doing stock assessment, as we see it, with
41 the fish wheel project in the upper river area.

42 Q And where exactly is this fish wheel, like where
43 is the traditional territory located, in a general
44 sense, and where is this project located in that
45 territory?

46 A Well, the Northern territory extends from what we
47 call Deadman Creek to the south and Marguerite

- 1 Ferry site, between Williams Lake and Quesnel, on
2 the Fraser River, to the north. And so
3 essentially, the fish wheel project that we have
4 is in the southern part of the territory, and that
5 it's below the Chilko River, it's below the
6 Quesnel River, which are tributaries, so it's
7 essentially in the southern part, before a lot of
8 the fisheries start in the upper river.
- 9 Q Okay. And what is a fish wheel? Can you describe
10 that for the Commissioner?
- 11 A The fish wheel is an apparatus that -- I mean,
12 it's floating in the river, it's got pontoons,
13 it's got several baskets on it. You lower the
14 baskets into the river. They're powered by the
15 water. And they scoop up fish as they're
16 migrating through the system and deliver them to
17 live boxes on the sides of the pontoons and allow
18 us to -- as a live capture technique.
- 19 Q Okay. And with this ability to capture the live
20 fish, what do you do with those fish once you've
21 caught them? What are you looking for and what do
22 you do with them?
- 23 A Well, since we've implemented the fish wheel, our
24 In-season Abundance and Health Indicator Project
25 since 2007, or 2008, 2010 would have been the
26 third year, we've been measuring the health of the
27 fish as they move up river. The first year is a
28 feasibility, and the second year, as well, but
29 what we've been doing is measuring the health by
30 collecting data on the marks that they receive,
31 what kind of condition they're in, are they
32 lethargic, are they healthy, and is there -- what
33 kind of -- like, again, like I said, what kind of
34 marks are on the fish. Are they from different
35 fisheries, are they natural caused, and
36 information like that.
- 37 Q So when you talk about the marks on the fish,
38 you're looking for scarring or interruptions --
- 39 A Yeah.
- 40 Q -- on the surface of the fish, you're not looking
41 for, like, the Mark Recapture Program kind of
42 marks that we heard about from Mr. Whitehouse; is
43 that right?
- 44 A No, we're looking for scarring and gashes, and
45 different disease if we can do that.
- 46 Q Okay. And once that data's been collected, what's
47 the purpose of the data collection, what is it

1 used for?

2 A Well, we're hoping to -- I mean, what we're trying
3 to do is inform our fisheries and as well as --
4 which I mean by our fisheries, I mean food, social
5 and ceremonial, and as well as policy direction to
6 move fisheries inland so commercial fisheries that
7 could be moving in-river. And so we're hoping
8 that, I mean, with the information that we're
9 collecting, that we would be able to inform those
10 fisheries of potential impacts that they may be
11 seeing.

12 Q Who receives the data that you collect?

13 A Right now, the data that we have, I mean, we put
14 out reports. The Fraser Salmon Watershed Program
15 has received those reports. We use it for our
16 personal for the Northern Shuswap purposes and we
17 also put out data to other up-river groups for
18 their information.

19 Q Does it go to Department of Fisheries and Oceans?

20 A We have provided some report to the Department of
21 Fisheries and Oceans.

22 Q And who funds this project? Is it funded by the
23 Northern Shuswap, or is it funded by contributions
24 from other sources?

25 A Currently, the initial phases of this project has
26 been funded by the Fraser Salmon Watershed
27 Program.

28 Q And is this program part of a wider project being
29 pursued by different First Nations in-river to
30 establish a network of projects, assessment
31 projects in the in-river environment?

32 A This was the intention of the project, was we --
33 we've had discussion. There's been wider
34 discussion about having a network of projects to
35 monitor the fish as they move through the system.
36 Currently, most of the assessment projects are
37 below or include Mission. And so in 2005, sort of
38 answering some of the missing fish issues and not
39 knowing what's going on in-river, First Nations
40 got together with some DFO and NGO people and we
41 discussed the ability to put together a network of
42 these assessment platforms that could possibly
43 verify and feed into the Mission Assessment.

44 Q You mention that you do give, or you have given
45 some of the information to the Department of
46 Fisheries and Oceans. To your knowledge, has the
47 Department or the Fraser River Panel used that

1 information provided for decision making in-season
2 for fisheries in-season?
3 A No, they haven't.
4 Q And is the program still going on?
5 A Up to 2010, the program was still in place.
6 Q And do you have funding to continue it?
7 A We're currently awaiting funding results and it's
8 a little bit early yet.
9 Q Okay. You were in the gallery when Mr. Whitehouse
10 was talking about the Quesnel DIDSON program
11 that's been developed. Do you remember hearing
12 that evidence?
13 A Yes.
14 Q Yes, I do.
15 Q Okay. Did you find that to be a successful
16 program? Well, first of all, did your
17 organization participate in that program?
18 A Yes, we did.
19 Q And was it a successful program?
20 A I think it was a successful program. I think it
21 -- I mean, it promoted some collaboration. I'm
22 not entirely sure that we've done all the work yet
23 to determine whether it's a successful stock
24 assessment platform. Two years of work there, it
25 was mostly feasibility, but as far as our
26 participation with the Upper Fraser Fisheries
27 Conservation Alliance and DFO three-way
28 partnership in this project, there were some
29 positives coming out of that.
30 Q And was there anything else that you feel the
31 Commissioner needs to know about it that wasn't
32 covered by Mr. Whitehouse?
33 A I can't recall at this time, no.
34 Q Okay. You recall we took Mr. Whitehouse to an
35 email that you sent to him and others, and that's
36 been marked as Exhibit 387, and it's going to be
37 pulled up on the screen, there, for you to have a
38 look at. Okay. This document says, in the second
39 paragraph -- and first, before I get into this
40 document, you have various correspondence with the
41 Department on the issues we're going to talk about
42 over the years, and this is an example of one of
43 the letters or the emails that you've written to
44 the Department. So I just wanted to confirm, you
45 have obviously written more than this one that
46 we're going to have a look at; is that fair?
47 A Yeah.

- 1 Q Okay. Second paragraph, you just review the fact
2 that the Northern Shuswap Tribal Council has been
3 trying to become involved in stock assessment
4 activities in the traditional territories for a
5 number of years. What are you referring to there?
- 6 A Well, I guess we're referring to the consultation
7 that we expect DFO to come to us and discuss their
8 activities within the traditional territories of
9 the Northern Shuswap. And we've been expressing
10 our desire to become involved, and also wanting to
11 know what's going on. We're out doing some work
12 in the traditional territories and we've got DFO
13 STAD personnel working out in the traditional
14 territories, as well. And we believe that we need
15 to collaborate and cooperate and discuss the
16 activities that will be occurring pre-season, and
17 as well as post season. And so that's what that
18 was referring to and the -- it's been continually
19 expressed to have STAD come and talk to us
20 regarding their activities, their planned
21 activities in our territories.
- 22 Q And when you're talking about STAD, you're talking
23 about Stock Assessment Division, right?
- 24 A Stock Assessment Division BCI.
- 25 Q B.C. Interior?
- 26 A B.C. Interior. Sorry.
- 27 Q At least we don't have to say "British Columbia,"
28 we know that much, at least.
- 29 A Yeah, B.C. -- British Columbia Interior.
- 30 Q Okay. Thank you. Does the Northern Shuswap
31 Tribal Council have the capacity to do some of the
32 work that you would like to do in terms of stock
33 assessment?
- 34 A I believe we do have the capacity to do some of
35 the work that we would like to do. We realize
36 that we don't have the capacity to do all the
37 work. Some of it's pretty high level and but we
38 think there's some grassroots activities that we
39 can become involved in and work collaboratively
40 with the Department to do that.
- 41 Q Do you think that if the Northern Shuswap Tribal
42 Council had a larger role in Fraser River sockeye
43 stock assessment, that it could be done on a more
44 cost-effective manner than what is currently being
45 done? Like, do you think there's some benefit,
46 some cost savings in having the tribal council
47 involved?

67
Gord Sterritt
In chief by Ms. Baker
Cross-exam by Ms. Pence (FNC)

1 A I say given our location and vicinity to the areas
2 that we would be involved in, that we are
3 definitely in the position to maybe reduce the
4 costs, or at least minimize some of the costs that
5 are associated with that.

6 Q What was the outcome of this email that we're
7 looking at here, Exhibit 387? Did you have
8 discussions with Timber Whitehouse or others in
9 the Department?

10 A We had a discussion with Timber Whitehouse, or I
11 had a discussion with Timber Whitehouse regarding
12 some of this and some of the discussion revolved
13 around maybe planning a strategy where we could
14 become involved, and that's about as far as its
15 gone to date.

16 Q All right. So was there any -- is there any
17 information that we should know between 2009, when
18 this was written, and today? Did anything happen
19 over 2010?

20 A Other than a meeting with several resource
21 managers regarding the same issues, there's no
22 other -- we expressed the same issue, we expressed
23 the same desire, we expressed our concerns and it
24 continues.

25 Q Has an implementation strategy been developed?

26 A No.

27 MS. BAKER: Mr. Commissioner, those are my questions.
28 I know that Ms. Pence has questions for Mr.
29 Sterritt on behalf of their client group and will
30 probably cover some of the areas I've touched on
31 just briefly, but I think she's going to come back
32 and cover them in a bit more detail so unless you
33 have questions arising, I think I'll turn it over
34 to Ms. Pence.
35

36 CROSS-EXAMINATION BY MS. PENCE:
37

38 Q Mr. Sterritt, just so that the Commissioner has a
39 bit more of a sense of what the Northern Shuswap
40 Tribal Council is, could you --

41 MS. PENCE: Sorry, Leah Pence, counsel for the First
42 Nations Coalition. With me is Ms. Gaertner.

43 Q Mr. Sterritt, as I was saying, just so that the
44 Commissioner has a sense of who you are and who
45 you represent, could you please just tell him who
46 are the members of the Northern Shuswap Tribal
47 Council?

February 3, 2011

- 1 A The Northern Shuswap Tribal Council is a support
2 agency for the communities of Williams Lake Indian
3 Band, Soda Creek Indian Band and Canim Lake Indian
4 Band, and the Dog Creek/Canoe Creek Indian Band.
- 5 MS. PENCE: I wonder if Mr. Lunn could actually please
6 pull up Exhibit 340 and go to page 7.
- 7 Q Because I'd also like you to give the Commissioner
8 a sense of the stocks and CUs that both travel
9 through this territory and that spawn in this
10 territory so he understands what particular fish
11 you're looking at. So there's a list there of
12 various CUs. If you could tell us which of those
13 CUs pass through and which spawn in your
14 territory.
- 15 A So the CUs that pass through the territory are the
16 Stuart CU, which would be the Early and Lates,
17 Takla/Tumbler, Bowron, the Francois, Edena
18 (phonetic), Taseko, Chilko, both Earlys and
19 Summers. And then the Takla/Tumbler Summers,
20 McKinley, Quesnel, the Fraser, again, the Francois
21 and --
- 22 Q So it that --
- 23 A Yeah, that's essentially -- so that will be
24 essentially all the groups that pass through.
- 25 Q And that's probably about a dozen, or so, of the
26 32 CUs there, is that --
- 27 A About.
- 28 Q About that? Okay. Thank you.
- 29 A And as far as spawning, we've got the Bowron and
30 the Quesnel, Horsefly, and McKinley stocks that
31 spawn within the territories.
- 32 Q Thanks. And which of these CUs would you say are
33 of most concern in terms of abundance levels for
34 you and for the Northern Shuswap Tribal Council?
- 35 A To rephrase it, I would say that all the stocks
36 are of concern --
- 37 Q Mm-hmm?
- 38 A -- to the Northern Shuswap, the people. They rely
39 on all those stocks for their food fishery and
40 social and ceremonial purposes.
- 41 Q Ms. Baker asked you about the Northern Shuswap In-
42 season Salmon Abundance and Health Indicator
43 Program and I'm just going to refer to that
44 shorthand as the Fish Wheel Program. Can you tell
45 the Commissioner exactly where that's located? Am
46 I right in understanding it's on Churn Creek?
- 47 A Churn Creek's location, it's the vicinity of it.

1 It's actually upstream of Churn Creek and about a
2 kilometre, which is -- I mean, it's below the
3 Chilko, it's above Churn Creek.

4 Q And of the CUs that are on this list, which CUs
5 would you be monitoring through that fish wheel?

6 A Right now, all of those CUs, except for the Early
7 Stuart.

8 Q Mr. Sterritt, in your own words, how can the fish
9 wheel be useful as a tool for in-season
10 management?

11 A Well, I think it -- I mean, I think it's useful in
12 that it fills in a gap. We have FSC fisheries
13 where we do collect data in some parts of the
14 watershed and within our area, but we don't -- we
15 can't rely necessarily on that data that is
16 collected in-season. It was indicated by Timber
17 Whitehouse earlier that maybe it gets -- it's more
18 of a post-season information base that fills in
19 the blanks for escapement. So what we're trying
20 to do is we're hoping to fill in the gaps and
21 inform our fisheries, as well as other fisheries
22 from other First Nations and commercial
23 opportunities within the river, that is a new
24 direction for the Department, that that's where we
25 see the information, the usefulness of that fish
26 wheel. Filling in the gaps above Mission, above
27 the canyon and trying to address some missing fish
28 issues.

29 So am I understanding you right that it would
30 be filling in the gaps past Mission, and then
31 assisting the fisheries, most of them being
32 currently First Nations fisheries north of where
33 you're located in the Upper Fraser area?

34 A Correct.

35 Q In-season so that they have a better sense of what
36 to expect when they're conducting their own
37 fisheries?

38 A Correct.

39 Q And can you just speak a little bit to how this
40 specifically ties to some of the DFO policies? I
41 know you mentioned some policy objectives loosely.
42 Can you be a little more specific into which ones
43 you're referring to?

44 A That would be PICFI and -- essentially, it was
45 PICFI.

46 Q And that's Pacific --

47 A Yeah, Pacific Integrated Commercial Fishing

1 Initiative. Can I just go back to where else we
2 would fill in the gap --

3 Q Please.

4 A -- as far as that project? We find that when
5 we're doing fisheries up in the upper river, that
6 we're getting the fish. A lot of it depended --
7 the food fisheries depend on the abundance of fish
8 being there. If the abundance isn't there, we
9 don't have the people -- actually, the effort
10 taking place within the food fishery that we would
11 need in order to inform maybe some of the issues
12 that could be arising from the in-season migration
13 of the sockeye. And so that's -- I mean, that's
14 part of what we'd want to be filling in. The
15 other part is we've been in positions where, and
16 the 2005 commercial fishery is an example, where
17 we were on the river, getting ready to do this
18 demonstration fishery, and the fish that were
19 predicted past Mission were not coming past
20 Mission, or were not arriving on the spawning
21 grounds. And so there's a bit of a blank, or I
22 guess we see it as a bit of an early warning
23 system that we can inform. So through Mission --
24 sorry, through Mission, because of Mission, there
25 was commercial fisheries initiated. And we
26 weren't seeing the fish showing up and so we
27 started expressing our concerns that those fish
28 weren't showing up and that Mission wasn't as
29 correct as thought to be for that season. And, I
30 mean, Qualark's probably addressing those issues,
31 but we thought that as far as informing our in-
32 season fisheries upriver that this would fill in
33 that gap.

34 Q So do you see the fish wheels or other types of
35 stock assessment programs you may develop as part
36 of that connection, part of Mission, Qualark, and
37 then moving up as a way to measure what's
38 happening to the fish as they move upriver?

39 A Yeah. I mean, I think it's all part of making
40 sure that the fish we're expecting are making it
41 back to the spawning grounds.

42 Q Yesterday and then a little bit today, Mr.
43 Whitehouse suggested that the fish wheel that
44 you're operating through Northern Shuswap Tribal
45 Council is not a stock assessment tool per se, but
46 rather, simply an evaluation of in-season
47 conditions. I'm wondering what your response is

- 1 to that and how you might expand on that.
2 A Well, if you put it in context with the spawning
3 escapement, it's not a spawner escapement tool,
4 but it is a measure of -- it is an assessment of
5 the stock as they're moving upriver. And so I see
6 -- I guess I'd have to disagree with that comment.
7 Q The other thing that we heard from Mr. Whitehouse
8 is he described the fish wheel as well meaning,
9 and I'm not sure that I'm getting his exact words,
10 but I think the sentiment was that it was well
11 meaning, but noted that when he was talking to
12 resource managers regarding its utility, it wasn't
13 particularly well positioned to provide the kind
14 of advice that DFO managers might need in-season.
15 Can you comment on that?
16 A I'm not aware of any -- I don't know that it's not
17 well positioned. We feel that it's very well
18 positioned to inform fisheries, and a prime
19 example was last season, we were on a conference
20 call with DFO and other First Nations and we were
21 asking, we wanted to know how the stocks were as
22 they migrated through our area, what's going on
23 and there was no real answer. And it's
24 information that we need so that we can let people
25 know when they can go fishing, when they can
26 expect to meet their food requirements. And
27 asking that question, and I don't believe it was
28 just me, I think there were other groups that were
29 asking the same question, but I mean, we feel that
30 we're in a position with such -- with that
31 assessment apparatus, or other, that we can
32 provide that information that's required. So I
33 don't know if that's --
34 Q That's helpful, thanks. What steps is the
35 Northern Shuswap Tribal Council taking to have the
36 data from the fish wheel analyzed and kind of
37 taken to the next stage in terms of being a stock
38 assessment tool?
39 A Well, we're looking at the data, we've got three
40 years of data now and we're looking at -- we're
41 actually currently preparing it to present to a
42 biometrician to have him analyze it for gaps and
43 make recommendations, and seeing how it fits into
44 this overall stock assessment.
45 Q Picking up on something that Dr. Riddell was
46 speaking about this morning, he mentioned an in-
47 river management model that's being developed, I

- 1 understand, through some researchers and students
2 at SFU. Have you been involved in those
3 discussions? Are you aware of that work?
- 4 A I believe it's a model that Sean Cox and a few of
5 his students from SFU have been developing over
6 the years. And I was involved in, probably, an
7 initial workshop, I'm not certain what year it
8 was, and I have seen a presentation on it in the
9 past couple of years. And there has been some
10 talk about -- I mean, they're putting this model
11 together, but they've got a -- from what I can
12 remember, that they need to be able to do some
13 verification on it. And so part of it is having
14 some of these platforms within the watershed and
15 different assessment methods to verify some of the
16 modelling work that has been going on, that the
17 students have been working on.
- 18 Q So do you see an opportunity for First Nations to
19 be involved in some of this modelling work, like
20 you're saying, in terms of verification or in
21 other ways?
- 22 A Yeah, with the assessment platforms that we've got
23 in place. Yeah.
- 24 Q Continuing on the topic of kind of collaborative
25 work that's ongoing, has the NSTC been involved in
26 other collaborative work with other organizations,
27 not SFU, perhaps?
- 28 A Well, we collaborate with other First Nations and
29 Upper Fraser Fisheries Conservation Alliance --
- 30 Q Mm-hmm?
- 31 A And the FRAFS and Lower River First Nations and
32 whatnot. We also have -- are in the process of
33 collaborating with the University of Northern B.C.
34 with the freshwater ecology research that Dr.
35 Riddell was talking about, and we're hosting a
36 think tank at the end of this month towards
37 freshwater ecology research that will involve
38 academia and scientists and whatnot in our area,
39 alongside -- in partnership with the UNBC and
40 we'll bring in Thompson River University and --
- 41 Q So what are you really going to be discussing at
42 freshwater ecological research? For somebody
43 who's not a scientist, like me, what kind of
44 topics will you be discussing there?
- 45 A Well, actually, it's brainstorming about research
46 areas that we can develop to better understand the
47 fish that are returning to the freshwater areas

1 within -- but using the Quesnel watershed. And I
2 mean, it could expand outside the Quesnel
3 watershed, but the focus right now, because it's
4 the Quesnel River Research Centre, and it's a bit
5 of a hatchery and -- but there's a large area, and
6 Coho and sockeye, and pink and Chinook that return
7 to the area, that it will be an ideal area for us
8 to concentrate on at first.

9 Q Thank you. I want to ask you some questions about
10 what your vision or definition of building
11 capacity is. When you speak about a desire to
12 build capacity for members of the NSTC in terms of
13 stock assessment, are you meaning having your
14 members be part of DFO's crews who are doing some
15 of the stock assessment work, or are you talking
16 about something different?

17 A Well, I'm talking about something different. I'm
18 talking about building the Northern Shuswap
19 capacity to be able to co-manage with DFO. And
20 over the past -- over the years at certain times,
21 we've had members of the Northern Shuswap working
22 alongside or working with DFO, under the DFO
23 umbrella to build -- to do an enumeration of
24 activities within the watershed. And I guess part
25 of the goal that we see, and I think DFO probably
26 sees it, too, is that we've got -- so we're
27 building that experience and then hopefully that
28 we would move that experience to the Northern
29 Shuswap so that we can have that co-management
30 arrangement and work alongside each other with the
31 experience that we've gained.

32 Q And is Northern Shuswap in a position right now to
33 start getting a foot in and getting this capacity
34 building beyond just what's happening with the
35 fish wheel?

36 A I believe there's areas within the stock
37 assessment, sockeye stock assessment within the
38 watershed that we can access and work with DFO on.

39 Q We've also heard that Fraser sockeye assessment is
40 quite complex. That's something that Mr.
41 Whitehouse spoke about. What's your take on this
42 complexity and the current capacity that you have
43 to be involved in such a complex undertaking?

44 A I can understand the complexity that he's speaking
45 towards, and the integration of the different
46 programs that -- let's just focus on the Quesnel
47 watershed, where they have mark recapture programs

1 and moving on -- and also different programs in
2 concert with those.

3 I think that I'm not entirely sure that they
4 have to -- if we're working closely together and
5 we're doing some of the more grassroots work,
6 visual surveys and whatnot, that I just -- I think
7 there's an opportunity for us to work alongside of
8 DFO in that capacity. I never suggested that we
9 completely take over or assume full
10 responsibility, and I guess the goal is to co-
11 manage the resource and be able to provide the
12 information to the people that we represent and
13 other First Nations and be able to argue the case
14 for the fish. And so I can understand -- getting
15 back, I can understand the complexity. I don't
16 understand the reasoning behind it, I guess, is
17 what -- I think we can participate and I think we
18 can work alongside each other on that.

19 MS. PENCE: Mr. Lunn, could you please pull up Exhibit
20 381 for me?

21 Q Mr. Sterritt, I'm just going to have you take a
22 look at the Salmon Stock Assessment Plan from
23 '04/05, it's a document that's been before the
24 Commissioner a number of times today. Sorry, I
25 should have given you a heads up. You'll see on
26 page 1, on the right-hand side, I believe it's
27 objective 4, so these are the objectives from the
28 Salmon Stock Assessment Plan and objective 4 says:

29
30 To provide improved capacity and opportunity
31 for First Nations.
32

33 And the bullet says:

34
35 Improving capacity and providing opportunity
36 for First Nations in a period of budget
37 reductions and heightened expectations while
38 complying with government financial and
39 workforce regulations remains a significant
40 challenge.
41

42 I wonder if I could ask you to comment just on how
43 well DFO has done in your last five, six years, or
44 so, working with Northern Shuswap in meeting that
45 fourth objective in terms of stock assessment
46 programs, that objective of providing improved
47 capacity and opportunity for First Nations?

1 A I guess for the -- I mean, as far as the simpler
2 programs are concerned, Chinook and Coho, I think
3 DFO has met that objective fairly well. And that
4 was expressed by Mr. Whitehouse. I think that as
5 far as sockeye enumeration is concerned and
6 building our capacity and providing more
7 opportunity, I don't think we've met that quite so
8 well in our area.

9 Q Thanks. My last question for you, Mr. Sterritt,
10 is whether you think DFO is willing to embrace the
11 co-management of stock assessment for sockeye?

12 A I guess in theory, I think there -- I mean,
13 they're willing to embrace. I mean, it's been
14 expressed. I just don't see it actually
15 practically happening. So at this point, no, I
16 guess, would be the answer.

17 MS. PENCE: Thank you. Subject to any other questions
18 from the Commissioner, those are my questions.

19 THE COMMISSIONER: I do have a question for you, sir.
20 I think you were in the room earlier when the
21 panel was asked about traditional ecological
22 knowledge, or traditional aboriginal knowledge and
23 how that might be factored into stock assessment
24 programs. Do you have any views on that?

25 A Well, it's -- I think it's something that First
26 Nations have been wrestling with, as well, to
27 bring in the knowledge that they've gained over
28 hundreds or thousands of years, and it's a
29 science. I mean, it's like science, it's an
30 accumulation of information over time. And I
31 guess to make it work, First Nations have this
32 information. DFO or any -- or the Department,
33 anyways, would -- I think, to make it work, there
34 needs to be a true collaborative management
35 relationship. It's information that is very dear
36 to First Nations and I think -- and there's
37 valuable information there. And I think the best
38 way to make it work is that we can't just hand it
39 over. It's our -- like, it's considered First
40 Nations information and I think a collaborative
41 management relationship would go a long ways to
42 making that work.

43 MS. BAKER: Thank you. I don't think anybody else had
44 questions, but I'll just canvass the room.

45 Canada? No. And John Rosenbloom? No.

46 MR. MacAULAY: Mr. Commissioner, no questions from the
47 Government of Canada.

1 MS. PENCE: Mr. Dickson?

2 MR. DICKSON: Tim Dickson for the Sto:lo Tribal
3 Council.

4

5 CROSS-EXAMINATION BY MR. DICKSON:

6

7 Q I just wondered if you had anything to expand on
8 on the Commissioner's question there. I heard you
9 saying that knowledge is dear to First Nations and
10 a collaborative management approach would be the
11 best means of allowing for it to be shared, and do
12 you have anything further to add to that? That
13 was an interesting perspective for us to hear.

14 A Well, I think you, the Commissioner, you are
15 probably more looking at how the information can
16 be melded or combined to complement each other
17 and, I mean, I think there is large parts of the
18 information that that could work, and I guess I
19 just see the immediate need for collaborative
20 management to -- or a co-management relationship
21 to make that work. And as far as using the
22 information, I wouldn't want to start discussing
23 that right now. Thanks.

24 MR. DICKSON: Very well. Thank you.

25 MS. BAKER: Thank you, Mr. Commissioner, then I think
26 we can thank Mr. Sterritt for his time here today
27 and maybe take the break and come back at 10 after
28 3:00 and see if we can finish the other panel
29 which we have coming back for cross-examination.

30 THE COMMISSIONER: All right. Do we know that we can
31 do that, Ms. Baker?

32 MS. BAKER: They're here. Well, I would like to see
33 what use we can make of the time and see if we can
34 get through them, yes. I'm hoping we can.
35 Whether we can, or not, I don't know, but I do
36 want to definitely start with them and try and get
37 it done.

38 THE COMMISSIONER: All right. Thank you.

39 THE REGISTRAR: The hearing will now recess till 3:10.

40

41 (PROCEEDINGS ADJOURNED FOR AFTERNOON RECESS)

42 (PROCEEDINGS RECONVENED)

43

44 THE REGISTRAR: The hearing is now resumed.

45 MS. BAKER: Thank you, Mr. Commissioner. We're happy
46 to welcome back Mr. Kristianson, Mr. Saito and Mr.
47 Matthew. This was the decision-making panel that

1 we started with the other day. We're now entering
2 cross-examination and the first counsel to begin
3 that will be Leah Pence again.

4 MS. PENCE: Leah Pence for the First Nations Coalition.
5 And with me is Ms. Gaertner. Mr. Lunn, if you
6 could please again pull up Exhibit 340?

7
8 PAT MATTHEW, resumed.

9
10 WAYNE SAITO, resumed.

11
12 CROSS-EXAMINATION BY MS. PENCE:

13
14 Q And please go to page 7. I recognize this is a
15 panel but I will be directing my questions to Mr.
16 Matthew on the panel. If others have anything to
17 add, by all means, add, but they will be focused
18 for the most part on First Nations views on the
19 IHPC and other processes. Mr. Matthew, I asked
20 this of Mr. Sterritt and I wonder if I could ask
21 it of you as well. If you could give the
22 Commissioner some background in terms of what the
23 Secwepemc Fisheries Commission is and the types of
24 the fish that are in your territories, perhaps
25 using this table as a guide.

26 MR. MATTHEW: Well, the Secwepemc Fisheries Commission
27 is, I guess, a department underneath the Shuswap
28 Nation Tribal Council, a Native organization,
29 which is made up of nine Secwepemc communities
30 within the Thompson/Shuswap Basin near Kamloops.
31 So yeah, the main sort of watershed that we're in
32 is the Thompson Basis of which there's the Shuswap
33 system, as well as the North Thompson. But going
34 down the list there, in terms of conservation
35 units, there's Kamloops Early Summer, Shuswap Lake
36 Complex, number 9, number 24, Shuswap Complex-
37 Lates and number 29, Kamloops Lates. I don't know
38 if I missed any there. I don't have my glasses
39 either.

40 Q Thank you.

41 MR. MATTHEW: I can read them. I'm kidding. Sorry.

42 Q Thank you.

43 THE COMMISSIONER: I was going to lend you mine.

44 Q Thanks for that context. I'm going to jump back
45 in time a little bit, back to the discussion we
46 were having on Tuesday. Ms. Baker was asking you
47 some questions about First Nations at the Fraser

1 River Panel. And we discussed that there's two
2 First Nations representatives there right now:
3 Marcel Shepert from the Upper and Grand Chief Ken
4 Malloway from the Lower Fraser. And my question
5 to you is, what mechanisms are there for those two
6 First Nations representatives on the Fraser Panel
7 to be accountable to First Nations on the Fraser
8 River?

9 MR. MATTHEW: At this point, there are no mechanisms
10 that are understood by me. As far as I understand
11 it, they actually report to the minister or, I
12 guess, to DFO, and they speak on behalf of Canada
13 or DFO there. There's no clear accountability
14 back to any First Nation organization other than
15 they report back to the Fraser River Aboriginal
16 Fishery Secretariat has teleconference calls on
17 Thursdays every week on run sizes, escapements,
18 those types of sort of technical issues.

19 Q Thank you. In your view, how should these First
20 Nations members of the Panel be advised by and
21 mandated by First Nations on the Fraser?

22 MR. MATTHEW: Well, I guess the problem -- I don't know
23 if I mentioned the other day -- is I believe
24 there's sort of a procedural problem at the Fraser
25 Panel in that I don't believe there's been sort of
26 a reconciling of First Nations' interests in how
27 Canada deals with them at the Fraser Panel and --
28 or has there been any sort of consultation around
29 that. How does Canada reconcile our interests at
30 the table? I don't know the structure, whether
31 they vote or whether it's by consensus but I see
32 various gear sectors there representing their
33 harvest interests at the Panel and yet I only see
34 two First Nations there that don't represent First
35 Nations. They're there.

36 If there was a structure that would be
37 suitable in its current form, I would like
38 possibly he should see First Nations' sectors that
39 dip net and that spear and that run weirs or
40 gillnet from various sectors of the river that
41 represent those fisheries' interests just like the
42 others do, if it was in the current form. So to
43 me, I don't think the procedures are right there
44 to meet First Nations' interests. I think there
45 has to be sort of reconciling of that. And I
46 don't know how we would move in that direction.
47 But I guess a vision for First Nations is to have

1 some form of authority within that structure that
2 ensures First Nations' interests are met and
3 similar authority perhaps to what the U.S. tribes
4 have in Washington and on their side where the
5 U.S. cannot make a decision without first
6 consulting those First Nations about their
7 interests.

8 Q Okay. From your experience in sitting on some of
9 the Fraser Panel calls, not the Thursday calls,
10 which are the First Nations' calls, but the Friday
11 calls where you're just listening in on the line,
12 can you tell the Commissioner, from your
13 experience, how the Panel considers risk
14 management or precautionary measures in making
15 decisions about openings and closures?

16 MR. MATTHEW: To me, it's not clear how they do it,
17 what criteria they use to risk manage. I've only
18 listened in on a few calls but I can give one
19 example. And I think it might have been in 2009
20 where Mike Lapointe from the technical group
21 brought forward several options for establishing a
22 run size based on various forms of criteria. And
23 all of those run sizes that he brought forward
24 were less than 200,000 run size. So the pre-
25 season sort of rules or cut-off points where no
26 fishing could occur was for Early Summer, was
27 200,000 or greater.

28 And so if they accepted any one of those
29 options by Mike Lapointe, there shouldn't have
30 been any run size and therefore no TAC
31 established, or total allowable catch established,
32 for any fishery to go ahead. But I could be wrong
33 about this but there -- all of those options were
34 very conservative or they at least indicated
35 numbers below the cut off of 200,000 fish. But
36 Canada and U.S., as far as I can recall on the
37 call, simply both agreed on a run size based on a
38 pre-season forecast of 240,000, which enabled a
39 TAC to occur and, therefore, First Nation
40 fisheries were opened on the Fraser.

41 Within days, new test fishery information
42 came through and I believe throughout the whole
43 season, the run size never exceeded 200,000. So
44 in my mind, it wasn't clear to me how and why they
45 used the pre-season forecast to establish a run
46 size. And therefore, to me, that didn't seem to
47 be very precautionary when, in fact, your own

1 scientists gave you several other options that you
2 could have used.

3 Q Thanks. I'm going to move now to some questions
4 about the Integrated Harvest Planning Committee,
5 the IHPC. On Tuesday, you spoke a bit about some
6 of the representation issues at the IHPC, as far
7 First Nations go and I'm not going to re-canvass
8 all of those. But what I understood from that was
9 for the South Coast IHPC, you are attending on
10 behalf of the Secwepemc Fisheries Commission that
11 Marcel Shepert is there for the UFFCA, the Upper
12 Fraser Fisheries Conservation Alliance, and that
13 Don Hallis there for the Nuu-chah-nulth; is that
14 right?

15 MR. MATTHEW: That's correct.

16 Q And that in addition, Murray Ned has been
17 attending or has started to attend as an observer
18 from the Lower Fraser?

19 MR. MATTHEW: Yes.

20 Q Just so that the Commissioner understands, are you
21 and Marcel and Don political leaders or are you
22 attending there in your capacity as fisheries
23 technicians?

24 MR. MATTHEW: I guess in a technical capacity. I'm not
25 a political person.

26 Q And when you attend the IHPC, do you have a
27 mandate from the Shuswap Tribes to negotiate any
28 changes to the Integrated Fisheries Management
29 Plan, the IFMP, based on, you know, discussions
30 that you're having with the sectors at the IHPC?

31 MR. MATTHEW: I do not have a mandate to negotiate. My
32 role there has been to bring forward our
33 conservation and harvest interests to the table,
34 as I do with any other table that we attend to.
35 And so no, we don't have a mandate to negotiate.
36 And I'm really not clear whether any of the other
37 sectors have a mandate from their members to
38 negotiate either. I'm not clear about that.

39 Q So we've mentioned the three different First
40 Nations who are attending for the South Coast
41 IHPC. What, in your view, is the reason that more
42 First Nations aren't attending these meetings?

43 MR. MATTHEW: Well, I guess part of it could be
44 capacity in terms of having individuals to
45 actually have the experience and understanding to
46 actually attend and be of some value there. There
47 might be resourcing issues but I guess the overall

1 issue, I think, and that I've heard sort of
2 repeatedly is that First Nations want to deal with
3 Department of Fisheries and Oceans in a bilateral
4 sense and that this is not a bilateral meeting;
5 it's a third party interest meeting.

6 Q Just picking up on what you're talking about
7 bilateral, when you were speaking with Ms. Baker,
8 you talked about the need for a coordinated
9 approach. When you use that word "coordinated
10 approach", are you talking about a Tier 1 process
11 for the Fraser that would also then feed into
12 bilateral discussions?

13 MR. MATTHEW: I would hope that there would be a
14 coordinated approach on the Fraser. I guess the
15 problem that I see is that Department of Fisheries
16 and Oceans meets with each Nation or group of
17 Nations in the Fraser bilaterally. But they take
18 the information, such as ours, our concerns and
19 recommendations around conservation and harvest
20 and they take them into consideration. But unless
21 we're coordinated amongst First Nations, DFO
22 basically, and I don't blame them, they go away
23 and make decisions, balance the interests of ours
24 against others. So my, I guess, idea and others,
25 is that we need First Nations to coordinate, I
26 guess, our approach in terms of conservation and
27 harvest at a watershed-type level. And then
28 hopefully approach DFO in some fashion that, you
29 know, we can achieve at least some of our -- some
30 of our interests.

31 MS. PENCE: I wonder if Mr. Lunn could pull up, please,
32 I think it's at Tab 26 from the First Nations
33 Coalition documents. Or no, sorry, this was
34 actually Tab 7 from the Commission's documents.

35 Q Mr. Matthew, I wonder if this document might
36 assist a bit in some of the stuff we're talking
37 about. It's the Secwepemc Fisheries Commission's
38 Consultation and Engagement Matrix. And when
39 we're talking about the IHPC work and also
40 discussions about what might be involved for a
41 more coordinated approach, can you help -- well,
42 first, do you recognize this document?

43 MR. MATTHEW: Yes, I do.

44 Q And were you involved in creating this document?

45 MR. MATTHEW: Yes.

46 Q And can you give us just a brief overview of what
47 this document shows?

1 MR. MATTHEW: I guess it's part of our strategy-
2 building exercise in terms of trying to lay out at
3 what level do we represent ourselves in various
4 functions, represent our interests. And so we're
5 trying to use this sort of information to plan
6 which meetings to attend, where to put our best
7 interests and energy and resources. And so unless
8 we lay it out, we are not able to do that. So it
9 goes in various layers.

10 Of course, there's local issues and we
11 actually have Band Fisheries and committees and
12 chiefs and councils, Fraser-wide issues, the Upper
13 Columbia and broader issues, the Pacific region or
14 Canada and Pacific Salmon Treaty issues. So
15 there's various forms of requests for consultation
16 from us at various levels right from local right
17 to the Pacific Salmon Treaty. Example, DFO is
18 asking First Nations to consult about the Pacific
19 Salmon Treaty, the sockeye parts of it that are
20 being amended.

21 And so the other, along the top row, if
22 you're looking horizontally, it goes right from
23 our community members and a lot of First Nations
24 believe is where the authority lies is right at
25 the community membership right to the Nation area
26 or Nation that -- I guess the Shuswap Nation
27 Tribal Council, such as I work for, to bilateral
28 relationships with DFO. And then locally, with
29 DFO I should say, and then to what's called Tier 1
30 with other First Nations on the Fraser Watershed
31 and Tier 2, which is First Nations and DFO at a
32 larger watershed level or B.C.-wide level, and
33 then Tier 3, which is First Nations, DFO and
34 others of which the Integrated Harvest Planning
35 Committee is one of many of those that you see on
36 the list there. And so --

37 MS. PENCE: I'm just going to stop you for a quick
38 second, Mr. Matthew, and see if we could please
39 have this marked as the next exhibit.

40 THE REGISTRAR: Exhibit Number 390.

41
42 EXHIBIT 390: Secwepemc Fisheries Commission
43 - Consultation and Engagement Matrix
44

45 MS. PENCE:

46 Q So I understood that you said that the IHPC, which
47 is located on that far right column under Tier 3

1 is just one of the many Tier 3 processes in which
2 the SFC is involved; is that right?

3 MR. MATTHEW: That's true.

4 Q And another thing that you had spoken about on
5 Tuesday is that you said that there's an
6 assumption implicit in these third party or Tier 3
7 processes like the IHPC, that issues regarding
8 Aboriginal fishing rights have been dealt with
9 bilaterally with DFO and First Nations. Is this
10 assumption correct? Are these Tier 1 and
11 bilateral conversations occurring before we're
12 moving into Tier 3 processes?

13 MR. MATTHEW: They are at some levels. For instance,
14 the regional bilateral level between SFC and DFO
15 of which the B.C. Interior staff at Kamloops, DFO
16 staff and ourselves, meet bilaterally each year
17 pre and post-season. In terms of meeting at a
18 watershed level with DFO, those processes are just
19 being developed as we speak, I would say.

20 Q This is quite a daunting chart. Who from the SFC
21 is involved in these processes? Is this just your
22 job? These are the bullet-pointed meetings that
23 you're going to?

24 MR. MATTHEW: Well, I would say myself is one of the
25 primary ones that attends these. Some of them are
26 technical processes where we have a biologist and
27 a technician that attends to some of them. Some
28 of them, at the Fraser Watershed level, we have
29 First Nation political representatives from our
30 Tribal Council that attend and some community
31 members do attend some. But primarily it's our
32 Secwepemc Fisheries Commission staff that does
33 most of the attendance.

34 Q So primarily it's you who's attending most of
35 these?

36 MR. MATTHEW: Well, try.

37 Q In your opinion, are there too many engagement
38 processes out there right now? And let's ask that
39 just -- I realize that there's issues on this
40 chart for Upper Columbia as well, but just
41 focusing on Fraser and focusing on sockeye issues,
42 are there too many engagement processes to attend
43 to right now?

44 MR. MATTHEW: I would say for the capacity we have,
45 myself, a biologist and a technician and one
46 manager, for myself to attend to as much as needs
47 to be done, I don't think there is the capacity

1 there to do it. So I would say many of the
2 processes, there's repetitive information that is
3 presented to us by DFO in terms of technical pre-
4 season and post-season information. And at the
5 IHPC, at various levels, you see a lot of the same
6 data, a lot of the same people providing the same
7 information so, yeah, I think there's too many
8 processes going out there. There needs to be some
9 form of streamlining.

10 Q I want to go back to the capacity issue. Could
11 you give us a sense of how the capacity of the SFC
12 to attend these meetings? You spoke about
13 yourself and a biologist attending. How does you
14 capacity compare with the capacity of other First
15 Nations who may be invited to attend some of these
16 processes?

17 MR. MATTHEW: A few other First Nations have biologists
18 or are just now building them into their plans.
19 My role is actually to work within these
20 processes, consultation processes from various
21 levels back to our community and try to coordinate
22 the information and coordinate an effective
23 response back in consultation, I guess. We do
24 have a consultation protocol with Department of
25 Fisheries and Oceans that we try to follow at
26 least in the Interior. But for other First
27 Nations, I don't believe there's many people such
28 as myself that do the planning in between these
29 processes and their communities, which is actually
30 quite critical.

31 Q So in your opinion, when we're talking about
32 capacity, you're not only talking about technical
33 capacity and needing biologists, but also needing
34 communications-type people who can communicate
35 what's happening at these meetings back with
36 leadership? I don't know if I'm using the right
37 word. Correct me if I'm -- I should be referring
38 to different types of people that would be needed
39 to build this capacity.

40 MR. MATTHEW: Well, I think you need people that can
41 interpret some of the technical and management
42 information in the planning that's being put in
43 front of us back to our communities and try to
44 interpret to them what it might mean to them and
45 try to elicit some kind of response from them in
46 terms of how it might impact their fisheries or
47 their management aspirations or interests.

1 Q And in terms of financial capacity, where, in your
2 mind, should this be coming from? Should it be
3 AAROM? AFS? Other sources?

4 MR. MATTHEW: Well, we use AAROM and AFS. And I would
5 suggest that those are good sources to start with.
6 I don't know that there's enough funding like that
7 to cover off all the needs of all the First
8 Nations on the Fraser but those are the ones we
9 use. And I think the other parts of it are
10 looking at the technical requirements, I don't
11 really believe that we have enough technical
12 capacity for First Nations on the Fraser that can
13 look at the technical information and interpret it
14 for us.

15 MS. PENCE: Okay. Getting back more directly to the
16 IHPC, Mr. Lunn, could you please now pull up
17 document 26 on the First Nations Coalition list?

18 Q Mr. Matthew, what I'm hoping you'll be able to
19 speak to the Commissioner about is the type of
20 feedback that you, on behalf of the SFC, provide
21 at the IHPC process, the type of feedback you
22 provide on the IFMP specifically?

23 MS. PENCE: From the first FNC list. Okay. While
24 we're waiting for that maybe I'll just see if
25 there's a different area I can move to. I don't
26 know if I can ask you to do two things at once
27 then, Mr. Lunn. Perhaps we could look at Exhibit
28 342 while we're trying to find the other.

29 Q In the meantime, what we're looking at is the
30 Terms of Reference for the Integrated Salmon
31 Harvest Planning Committee. And I wonder if we
32 could just focus in on the mandate part. So Mr.
33 Matthew, it says that:

34
35 The IHPC is the primary contact for the
36 Department for cross sectoral communication
37 and advice and make recommendations on
38 operational decisions related to salmon
39 harvesting in the Pacific Region. The goal
40 of the IHPC will be to ensure fishing plans
41 are coordinated and integrated, identify
42 potential conflicts, and if there are
43 disputes, make recommendations for solutions
44 if possible.

45
46 How effective, in your opinion, is the IHPC in
47 meeting this goal of being a coordinated and

1 integrated approach to talking about fishing
2 plans?

3 MR. MATTHEW: I don't think that we're that effective
4 at it in terms of coordinating and integrating.
5 People are speaking to the Integrated Harvest
6 Management Plan while they're there and speaking
7 to the parts of it that relate to them. The
8 commercial and recreational sector and perhaps
9 ourselves, First Nations, are speaking to it in
10 terms of maybe issues but I think in total it's
11 more or less piecemeal. And I haven't really seen
12 that many conflicts in the IHPC for resolution or
13 disputes. In my mind, people are going there and
14 identifying concerns or interests related to their
15 own sector. And I wouldn't go as far as saying
16 lobbying DFO but putting those forward to advice to
17 DFO and DFO's taking that advice from the group
18 away and dealing with it as they will.

19 Q So would I be correct in characterizing what
20 you've said as that there's still a missing link
21 here in terms of understanding how all of these
22 different interests are coordinated into one plan?

23 MR. MATTHEW: I would say that. We, as a group, do not
24 all look at the IFMP and sign it off in terms of
25 all approving of it and then all agreeing to all
26 parts of it and sending it to the minister. For
27 the record, we don't do that. I might have missed
28 it. But anyways, I don't see that sort of
29 coordination happening there.

30 MS. PENCE: Thanks. I understand that document 26 is
31 here?

32 Q So this is a letter that's dated April 20th, 2009.
33 And it says:

34
35 Recommendations and Comments for the Pacific
36 Region Integrated Fisheries Management Plan
37 '09/'10.
38

39 And it's a letter that was drafted by you, is that
40 right, Mr. Matthew?

41 MR. MATTHEW: That's correct.

42 MS. PENCE: If I could have this please marked as the
43 next exhibit?

44 THE REGISTRAR: Exhibit 391.
45
46
47

1 EXHIBIT 391: Letter dated April 20, 2009,
2 from Secwepemc Fisheries Commission to Jeff
3 Grout
4

5 MS. PENCE:

6 Q And am I right in understanding that this is a
7 good example of the type of letter that you would
8 be sending on behalf of the SFC on an annual basis
9 to provide your feedback on the content of the
10 draft IFMP?

11 MR. MATTHEW: That's correct.

12 Q And if we could just scroll through a little bit.
13 And I'd like to ask you to highlight to the
14 Commissioner the types of issues that you bring
15 forward at the IHPC through this letter.

16 MR. MATTHEW: That part's mainly the background but
17 what we try to put forward are our communal
18 harvest targets that our communities are putting
19 together. And we go through a process with them
20 and we look at pre-season harvest forecasts for
21 sockeye and we look at outlooks for all the stocks
22 or all the species and we attempt to develop a
23 harvest target or harvest targets for those that
24 are conservative in nature and we express those in
25 the table there.

26 And we use these for negotiating our communal
27 licences with DFO but for the purposes of the
28 IHPC, we try to show that this is part of our
29 harvest planning process. So that's the harvest
30 target process. I haven't gone through it in
31 great detail with the IHPC but they do get a copy
32 of it. And I guess for each one of these parts,
33 we try to put together a recommendation regarding
34 our communal harvest targets. And I won't go
35 through them but that's part of it. We expect
36 that DFO will respond in full to each one of our
37 recommendations in writing, as per our
38 consultation protocol with them.

39 Q And do you get that kind of response?

40 MR. MATTHEW: We do get a response back in the pre-
41 season from DFO.

42 Q And do you see specifically where these
43 recommendations have been taken into account in
44 the IFMP, the final IFMP that goes to the
45 minister?

46 MR. MATTHEW: I would say we don't consistently get
47 specific responses. We get responses that DFO's

1 policy is designed to address our concerns or
2 their program is designed to address our concerns
3 or I would say, no, we don't get specific
4 responses for each one that's satisfactory to us,
5 I would say.

6 Q Thank you. And just as a follow up, I remember
7 from Tuesday you were saying that you hadn't seen
8 fishing plans from other sectors and Dr.
9 Kristianson suggested that perhaps the fishing
10 plans from, for example, the recreational sector
11 might be that that's already included in the draft
12 IFMP. Am I right to understand that you're not
13 seeing letters of this kind from the others who
14 are attending the IHPC?

15 MR. MATTHEW: Well, not that I could recall, no.

16 Q So I just have one last area of questions and then
17 I'll be sitting down. And this is on the Wild
18 Salmon Policy. Given that we're speaking about
19 pre-season processes like the IHPC and then moving
20 into in-season processes, Mr. Matthew, can you
21 explain to me from your perspective how the
22 objectives of the Wild Salmon Policy, and what I
23 mean by that is the conservation of the
24 biodiversity of various CUs, making sure that none
25 of them fall below the lower benchmarks into the
26 red zone, how is this objective of the WSP being
27 considered in these pre-seasons processes like the
28 IHPC and IFMP process and in-season?

29 MR. MATTHEW: At this point, it's not clear to me as
30 far as sockeye go. I imagine through the FRSSI
31 process that DFO is attempting to do that. But
32 the problem to me is it's really how will DFO
33 manage through commercial and in-river fisheries
34 harvest to meet those conservation objectives, as
35 stated in the Wild Salmon Policy. Further, the
36 biodiversity and the genetic objectives that are
37 equally important to First Nations is one part of
38 the problem. To me, that's not clear how they're
39 going to do that. They haven't really described
40 to First Nations much of that in the Wild Salmon
41 Policy dialogues they've had. They've had
42 dialogue sessions with us a couple of years ago.
43 We haven't really heard much more about it.

44 So to me, that's really the challenge for DFO
45 is how do they realign their management, their
46 data collection, you know, in the marine and in-
47 river fisheries to do that. And on top of that,

1 to not only meet those objectives but meet First
2 Nations objectives in those same areas. How do
3 they protect those stocks through marine,
4 commercial and in-river fisheries to meet a
5 conservation unit objective in a geographic area
6 like the Thompson of which we talked about
7 already? And so to me that's a challenge that's
8 out there. And I believe First Nations want to be
9 involved in that process and participate in some
10 sort of a coordinated fashion.

11 Q My last question for this panel and for you, Mr.
12 Matthew, is, what might we learn about sockeye
13 management from how the Coho are managed in-
14 season?

15 MR. MATTHEW: Well, what I've seen an attempt to do
16 with Interior Fraser Coho is -- of course,
17 Interior Fraser Coho are in a state of
18 conservation so one of the ideas or management
19 tacks that DFO has taken is to try to manage a
20 number of Coho into a geographic area, which is up
21 into the Upper Fraser. Above Hell's Gate is where
22 sort of the boundary is for Interior Fraser Coho.
23 They try to manage to about 30,000 or 25,000 Coho
24 up into or above Hell's Gate.

25 And if they manage to that level, that will
26 ensure that biological objectives or diversity
27 objectives are met for several of the streams
28 within the Upper Fraser areas. So what they are
29 attempting to do is ensure that of that 25,000
30 that the majority of the stocks or streams will
31 have a certain number of fish in them.

32 I believe it might be a thousand so that you
33 maintain genetic and biodiversity objectives for a
34 geographic area. And in my mind, for sockeye, I
35 think that's the challenge is how do you manage a
36 group of fish through all those fisheries back to
37 a geographic area to meet the objectives of
38 several CUs or groups of CUs within a watershed.
39 So to me, that's the challenge and they've
40 developed a bit of an idea how to do that with
41 Coho.

42 MS. PENCE: Those are my questions for this panel.

43 MS. BAKER: Thank you. The next counsel is Cliff
44 Prowse from the Province.

45 MR. PROWSE: Yes, so Mr. Commissioner, Cliff Prowse for
46 the Province. And my questioning will be directed
47 to Mr. Saito on the Integrated Salmon Dialogue

1 Forum to which reference was made the other day.

2
3 CROSS-EXAMINATION BY MR. PROWSE:

4
5 Q Mr. Saito, can you tell us in a nutshell how you
6 think in light of your own experience in many
7 forms of negotiation and other processes, how does
8 the Integrated Salmon Dialogue Forum relate to
9 that and why is it important? What is it that it
10 can attempt to accomplish?

11 MR. SAITO: Well, as you stated -- if I could just
12 check and see if my microphone is working. Is it
13 working properly? Thank you. No, I have a
14 microphone on my tie. I'm sorry, Mr. Prowse,
15 again? I got distracted there. The question you
16 had?

17 Q Just if you can tell the Commissioner why it's
18 important for him to understand the Integrated
19 Salmon Dialogue Forum and what you believe it can
20 accomplish.

21 MR. SAITO: Okay. I'm sorry. Thank you. Well, what I
22 believe the Integrated Salmon Dialogue Forum can
23 accomplish and can address is the policy issues,
24 the regional and perhaps longer-term issues that
25 include, for example, the environmental and
26 ecological and conservation issues that DFO is
27 charged to make decisions upon. But the value and
28 the importance of the Integrated Salmon Dialogue
29 Forum is that they could make these decisions
30 after all the parties had made every reasonable
31 effort to achieve a consensus rather than seeking
32 different input from individual sources and then
33 having to resort to the responsibility or the
34 action of being the ultimate decision-maker. By
35 virtue of making every attempt to hear from all
36 parties and develop a consensus and, hence, a
37 single output or a single product upon which the
38 minister might be asked to make a decision, is the
39 value and the virtue of the Integrated Salmon
40 Dialogue Forum.

41 Q And one of the questions that you were asked on
42 Tuesday had to do with the Victoria, I'll call it,
43 recommendation about a policy advisory committee.
44 So what do you say about the desirability of
45 having such a standing policy advisory committee?

46 MR. SAITO: Well, the importance of having a standing
47 advisory process like that is the ability of

1 issues to rise or to be raised to a process where
2 a fair hearing can be made with respect to, should
3 this particular issue be resolved and how it
4 should be resolved?

5 Q All right. And why having a standing committee?
6 What does that enable the policy advisory
7 committee to do that's not done now by DFO?

8 MR. SAITO: The ability is to ensure that the input or
9 the advice or the considerations take place in a
10 cross-sectoral or multi-sectoral process.

11 Q All right. Thank you. Now, Mr. Saito, the other
12 day --

13 MR. PROWSE: Mr. Lunn, could you please pull up the
14 document on Canada's list for this topic, Tab
15 Number 1?

16 Q Yes, Mr. Saito, the other day, you made reference
17 to what you considered to be the equivalent of the
18 terms of reference of the Integrated Salmon
19 Dialogue Forum. Is this the document to which you
20 were referring?

21 MR. SAITO: It is.

22 Q And you and the other participants between January
23 2007 through March and April of 2007 all signed
24 off on this document, did you?

25 MR. SAITO: There was a consensus to support this
26 document, yes.

27 MR. PROWSE: All right. Mr. Commissioner, might that
28 be the next exhibit?

29 THE REGISTRAR: Exhibit Number 392.

30
31 EXHIBIT 392: Framework for the Integrated
32 Salmon Dialogue Forum
33

34 MR. PROWSE:

35 Q Mr. Saito, in the brief time that I hope to spend
36 on this topic, I'm just going to highlight with
37 you a few of the pertinent parts of this document.
38 First of all, you referred the other day to Glenn
39 Sigurdson and Barry Stuart. They are two of the
40 persons sort of leading as facilitators of the
41 ISDF, are they?

42 MR. SAITO: They were and are.

43 Q And Mr. Sigurdson is a leading expert on complex
44 multi-party challenges whose work has been
45 acknowledged in the publication of the program
46 negotiation at Harvard Law School, "Public Dispute
47 Mediators and Profiles of 15 Distinguished

1 Careers"; is that right?

2 MR. SAITO: That's correct.

3 Q And he's also been involved as the president of
4 the Society of Professionals in Dispute
5 Resolution?

6 MR. SAITO: Yes.

7 Q And he's also worked in the Skeena Watershed, to
8 your knowledge?

9 MR. SAITO: Yes, he has.

10 Q And Mr. Stuart, amongst his other qualifications,
11 he was a judge in the Yukon, was he?

12 MR. SAITO: My understanding is that he was Chief
13 Justice of the Yukon.

14 Q And he also was a chief negotiator for the Yukon
15 Land Claims. He negotiated the Umbrella Lands
16 Claim Agreement that enabled 11 First Nations to
17 conclude their self-government and land claims
18 agreements; is that right?

19 MR. SAITO: To my understanding, yes.

20 Q Now, the forum --

21 MR. PROWSE: If you could turn to page 2, Mr. Lunn?

22 Q The forum, first of all, has a heading at the top
23 of page 2, "What is the Forum"? Do you see that,
24 Mr. Saito?

25 MR. SAITO: Yes, I do.

26 Q And highlighting it then, really, the words are
27 "collaborative" in Item (a):

28
29 ...in ways that respects the Wild Salmon
30 Policy and serves both people and salmon.
31

32 So that was one of the defining attributes that
33 everybody signed onto when they created the ISDF?

34 MR. SAITO: That's correct.

35 Q And the second is that:

36
37 Participants have agreed to make best efforts
38 to work through their respective processes,
39 agencies and organizations to give effect to
40 any consensus reached in the forum, and to
41 address any differences that emerge.
42

43 So that was agreed on early on?

44 MR. SAITO: Yes, it was.

45 Q And you, in particular, worked through on
46 something to do with the Monitoring and Compliance
47 Panel that we'll discuss a little bit later. But

1 that's an example of a successful process that did
2 these things; is that right?

3 MR. SAITO: That's one example, yes.

4 Q In terms of the goals of the forum, goal (d), also
5 on page 2, talks about:

6
7 Building collaborative relationships,
8 networks and partnerships through which
9 different sectors will have an opportunity to
10 express and advance concerns and interests,
11 and explore how they might best create mutual
12 value.

13
14 So that was one of the goals?

15 MR. SAITO: Yes.

16 Q And then item (f) talked about working at two
17 levels, a "high beam" and a "low beam". And can
18 you just highlight your understanding of those two
19 things?

20 MR. SAITO: Well, the high beam was code or a
21 description of attempting to work on or just have
22 discussions regarding the longer-term with the
23 broader public policy type of issues and the low
24 beam was to put into practice perhaps some of the
25 possible solutions that were or are an outcome of
26 those sorts of discussions.

27 Q All right. And I think I'll just note, but
28 without asking a question, that on page 3, there's
29 a reference to the considerations, one of which is
30 "certainty of access". And that was a reference
31 to attempts to deal with, amongst other things,
32 the question of a quota that Dr. Kristianson was
33 talking about the other day was that was one of
34 the considerations that was in mind; is that
35 right?

36 MR. SAITO: In my estimation, yes.

37 Q And then also on that page, there's a heading
38 "Credible Information". And that, as I understand
39 it, was key to the M&C panel in which you were
40 involved. Can you explain to the Commissioner why
41 credible information was important in that
42 context?

43 MR. SAITO: Well, very briefly, one of the concerns
44 that many of the participants to the process had
45 was the lack of confidence that parties had with
46 each other's numbers and other information
47 associated with each other's fisheries. So part

1 of the discussions, there's a fairly lengthy
2 history to the evolution of this but basically,
3 the bottom line here is that there was a universal
4 or a consensus that there was a concern with
5 respect to confidence in each other's information
6 and how that information is generated. And that
7 was seen to be a particularly key aspect and one
8 that perhaps the process could work on towards
9 some sort of logical conclusion.

10 Q On page 5, there's a reference to self-design as
11 being one of the principles that will inform and
12 guide the work of the forum, on the upper right-
13 hand side. Again, on the M&C panel, was that part
14 of the process that you used?

15 MR. SAITO: It was in the sense that the question was
16 asked and then we basically developed a process to
17 actually begin to start taking apart that question
18 and providing some sense with respect to the
19 answers.

20 Q And I understand that on January 18th and 19th of
21 this year, you went to a session led by the ISDF
22 on "Building Our Capacity to Work Better Together
23 - A Pilot Program in the Lower Fraser River". Did
24 you do that, sir?

25 MR. SAITO: I did.

26 Q And that again was facilitated by Mr. Sigurdson
27 and Mr. Stuart; is that correct?

28 MR. SAITO: That's right. In addition to other
29 additional colleagues as well.

30 Q Right. And that, in fact, has got a second
31 session that's coming up on the 15th and 16th of
32 February?

33 MR. SAITO: That's correct.

34 Q And all of that tried to talk about the
35 disciplines of self-design that are part of this
36 kind of a process; is that correct?

37 MR. SAITO: That's correct.

38 Q And with respect to connection to existing laws
39 and processes, that's dealt with on page 6 of the
40 framework document? "How Does it Relate to
41 Existing Processes" is the topic that's dealt
42 with?

43 MR. SAITO: That's correct.

44 Q And item (b) simply sets out that rights and
45 titles for First Nations are:
46
47 ...entirely separate and independent from the

1 Forum, but will be recognized and respected.

2

3 So that was agreed on by the participants,
4 including the First Nations' participants at that
5 forum and all of the participants, is that right,
6 as part of this framework consensus?

7 MR. SAITO: Yes, there was consensus.

8 Q And that has continued to be one of the precepts
9 and principles that has been followed?

10 MR. SAITO: Yes.

11 Q And at page 7, reference is made to "Who Should Be
12 Involved and How?" And at item (b), the
13 participating sectors are identified as the First
14 Nations, the Commercial Sector, the Recreational
15 Sector, the Department of Fisheries and Oceans,
16 the Province of British Columbia and the
17 Conservation Sector. And so all of those sectors
18 were participants in this document?

19 MR. SAITO: Yes, they were.

20 Q And there's continued to be different
21 representatives but different people from the
22 sectors have continued to participate throughout
23 until now; is that right?

24 MR. SAITO: Yes.

25 Q With respect to the M&C, Monitoring and Compliance
26 documents, called "Charting Our Course", you were
27 a participant in that panel that produced that
28 document?

29 MR. SAITO: Yes, I was. And I had a fair degree of
30 involvement in the actual construction of the
31 document as well.

32 Q And I understand that Peter Sakich, who will be
33 one of the people attending on the second half of
34 this panel, was also involved in that process?

35 MR. SAITO: Yes, he was. And he is the current chair
36 of a Monitoring and Compliance panel.

37 Q And from DFO, Colin Masson?

38 MR. SAITO: That's correct.

39 Q And from NGO, Craig Orr was involved in your
40 panel, was he?

41 MR. SAITO: Yes, Mr. Orr was the first chair of the
42 Monitoring and Compliance panel.

43 Q And I may pronounce the names wrong but from the
44 First Nations were Mark Duiven and Ken Malloway?

45 MR. SAITO: That's correct.

46 Q And they both were active participants in this
47 document?

1 MR. SAITO: Yes, they were.

2 Q And the panel chairs for this particular panel
3 were historically Craig Orr in 2009, Ken Malloway
4 December 2009 to March 2010, and then Peter Sakich
5 from April 2010 to March 2011?

6 MR. SAITO: That's correct.

7 Q And how would you summarize the importance of this
8 document?

9 MR. SAITO: I would summarize this document as a
10 tangible step towards addressing that issue that
11 was raised earlier with respect to the item of
12 credible information. And the participants, and I
13 might note that the recreational fishing sector is
14 also represented in this particular panel,
15 actively and effectively represented, have worked
16 together to develop a document that provides the
17 assessment of the state of fishery monitoring and
18 catch reporting in the Pacific Fisheries and some
19 suggestions and thoughts as to how progress might
20 be made towards addressing the lack of confidence
21 that the sector would have and First Nations might
22 have with respect to how information is gathered
23 and portrayed and communicated to each other.

24 Q And this document, "A Draft for Discussion", was
25 produced in October of 2010?

26 MR. SAITO: Yes, there were several drafts that were
27 circulated around, distributed and then it was
28 finalized in October of 2010.

29 Q And DFO produced a document in November of 2010
30 also dealing with -- there was an overlap between
31 the two documents?

32 MR. SAITO: There was a significant amount of overlap
33 between the two documents. The Monitoring and
34 Compliance panel published a document titled
35 "Fishery Monitoring in the Pacific Region -
36 Charting Our Course". And the Department of
37 Fisheries and Oceans produced a document titled
38 "Strategic Framework for Fishery Monitoring and
39 Catch Reporting in the Pacific Region" in December
40 -- or November, I should say, of 2010. There is a
41 significant amount of similarity and a lot of the
42 issues, the mission statements, the goals and
43 objectives and principles are mirrored in both
44 documents.

45 Q And did you and Mr. Sakich and Mr. Masson attend
46 at the IHPC in about the month of, as I understand
47 it, November of 2010?

1 MR. SAITO: If I recall correctly, it was November or
2 December. I can't remember the exact date but
3 yes, a presentation was made to the Integrated
4 Harvest Planning Committee to inform the committee
5 of the progress made towards his work.

6 Q And the IHPC, is it able to address policy issues?

7 MR. SAITO: In my opinion, the IHPC is not able to
8 address policy issues. It is not mandated to do
9 so.

10 MR. PROWSE: Mr. Commissioner, I've got my eye on the
11 time. I realize I'm over time. I would like to,
12 with the consent of the parties, perhaps we can
13 mark the Capacity Workshop documents later, either
14 at the beginning of the next session or some
15 convenient time. I think there's consent to that
16 by the other participants. And having done that,
17 I will conclude my examination. The suggestion is
18 we mark those now, Mr. Commissioner. Mr. Lunn,
19 those are the documents that were circulated by
20 Ms. Tam, were four modules. Those are them.

21 MR. LUNN: Do you want to mark each one?

22 MR. PROWSE: I suggest we just mark them as one exhibit
23 or whatever's mechanically appropriate.

24 THE REGISTRAR: Module 1 of that document will be 393.

25
26 EXHIBIT 393: Module 1

27
28 THE REGISTRAR: Module Number 2 will be 393-A.

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30 EXHIBIT 393-A: Module 2

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32 THE REGISTRAR: Module 3 will be 393-B.

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34 EXHIBIT 393-B: Module 3

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36 THE REGISTRAR: And Module 4 will be 393-C.

37
38 EXHIBIT 393-C: Module 4

39
40 MR. PROWSE: Thank you, Mr. Commissioner.

41 THE COMMISSIONER: Mr. Prowse, because I don't have all
42 these documents, the document you referred to as
43 the DFO document, is that one of these documents?
44 You referred to the --

45 MR. PROWSE: No, I haven't marked the two M&C documents
46 that have been referred to, Mr. Commissioner.

47 THE COMMISSIONER: But that's what you were referring

1 to. You were referring to a DFO November and
2 December --
3 MR. PROWSE: Yes, the document that Mr. Saito -- that
4 was presented with Mr. Saito, there were two
5 different documents, neither of which have been
6 marked. Perhaps what I'll do is I'll just read
7 the titles of the documents into the record and I
8 can sort that out with my friends. So the
9 document produced by the Integrated Salmon
10 Dialogue Forum is called "Fishery Monitoring in
11 the Pacific Region - Charting Our Course - A
12 Strategy for Improved Confidence and Support".
13 And this is a draft report for discussion October
14 2010.
15 Q So that's the document that you were involved in
16 with the ISDF, Mr. Saito?
17 MR. SAITO: With the Monitoring and Compliance panel,
18 yes.
19 MR. PROWSE: And the --
20 THE REGISTRAR: Did you wish that one marked?
21 MR. PROWSE: No, it hasn't been marked, Mr.
22 Commissioner. And I'll just identify the second
23 document for the record and then I'll talk to my
24 friends about getting them marked. The second
25 document is called "Strategic Framework for
26 Fishery Monitoring and Catch Reporting in the
27 Pacific Fisheries - Draft - A Discussion Paper -
28 Fisheries and Oceans Canada, Pacific Region,
29 Fisheries and Aquaculture Management November
30 2010".
31 Q Is that correct, Mr. Saito?
32 MR. SAITO: That is correct.
33 MR. PROWSE: All right.
34 THE COMMISSIONER: And the ones that you did mark, the
35 modules, the authors of the modules?
36 MR. PROWSE: I'm sorry.
37 Q The authors of those modules were Mr. Sigurdson,
38 Mr. Stuart and their companion, Ms. Jessica
39 Bratty, is that correct, Mr. Saito?
40 MR. SAITO: That's correct.
41 THE COMMISSIONER: Okay. Thank you.
42 MS. BAKER: Mr. Commissioner, we have still Mr.
43 Rosenbloom to cross-examine these witnesses so
44 we'll have to schedule a time to have them come
45 back but I can advise that Mr. Matthew will not be
46 required by Mr. Rosenbloom. So if we could excuse
47 him and thank him for his participation, I'd

1 appreciate that. And then we'll have to find some
2 time, unfortunately, for the other two to come
3 back.

4 THE COMMISSIONER: Thank you very much, Mr. Matthew. I
5 appreciate your assistance.

6 MR. MATTHEW: Thank you.

7 THE COMMISSIONER: Very well. Thank you, then.

8 THE REGISTRAR: The hearing is now adjourned for the
9 day and will resume at ten o'clock tomorrow (sic)
10 morning.

11
12 (PROCEEDINGS ADJOURNED TO FEBRUARY 7, 2011,
13 AT 10:00 A.M.)
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