

From: [Davis, Jennifer C FLNR:EX](#)
To: [Kerr-Upal, Manjit ENV:EX](#)
Cc: [McGuire, Jennifer ENV:EX](#); [Dale, Alec R ENV:EX](#)
Subject: Re: Minister DFO interview this am- my notes from the interview
Date: Wednesday, April 17, 2019 8:25:22 AM

Thank you I forwarded to Tom and Eric.

Sent from my iPhone

> On Apr 17, 2019, at 8:21 AM, Kerr-Upal, Manjit ENV:EX <Manjit.Kerr-Upal@gov.bc.ca> wrote:

>

- > - 1 of 13 runs of chinook not at risk, need for action
- > - broader than fisheries regulations (habitat, science, predation)
- > - fisheries restrictions are significant. Stocks will have largely left
- > - pushing back the date so SAR are not caught
- > - commercial fleets will be able to fish for other species (so some impact, and the industry is disappointed, he is a sympathetic to their needs as a former fishing guide, looking for ways to assist)
- > - "everyone understands that we need to get back to a position of sustainability"
- > - if we fish these stocks out of existence, no one benefits
- > - regarding consultations - habitat protection is key (modification of fisheries act and BCSHRIF)
- > - convening a stakeholder body on predation and other risks ... coming up over next couple of minds

>

> Sent from my iPhone

From: [Davis, Jennifer C FLNR:EX](#)
To: ["Reid, Rebecca"; Thomson, Andrew; Ethier, Tom FLNR:EX; McGuire, Jennifer ENV:EX; Kristianson, Eric PREM:EX](#)
Cc: [Morel, Philippe; Stewart, Julie; Mlinar, Shannon C FLNR:EX](#)
Subject: RE: Call re: Feedback on BC Action Plan (notes for discussion)
Date: Monday, May 27, 2019 3:19:52 PM
Attachments: [Provincial IFS Regulations Summary 3 slides.pptx](#)
[Discussion Items.docx](#)

To support this afternoon's call, I started with the list from Rebecca and added comments. I added in a couple additional points to make sure we are all collectively aware of them, even if we are not able to completely resolve them.

J

JENNIFER DAVIS

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-----Original Appointment-----

From: Reid, Rebecca [<mailto:Rebecca.Reid@dfo-mpo.gc.ca>]

Sent: Monday, May 27, 2019 12:09 PM

To: Reid, Rebecca; Morel, Philippe; Stewart, Julie; Thomson, Andrew; Ethier, Tom FLNR:EX; Davis, Jennifer C FLNR:EX

Subject: Call re: Feedback on BC Action Plan

When: Monday, May 27, 2019 4:30 PM-5:00 PM (UTC-08:00) Pacific Time (US & Canada).

Where: TC: 1-877-413-4790 ID: 8645157

Hello,

Rebecca Reid would like to schedule a discussion re: Feedback on BC Action Plan.

Please feel free to forward this invite to any participants not included.

Best,

Lauren McAuley

A/Scheduling Assistant to the Regional Director General

Fisheries and Oceans Canada/Pêches et Océans Canada

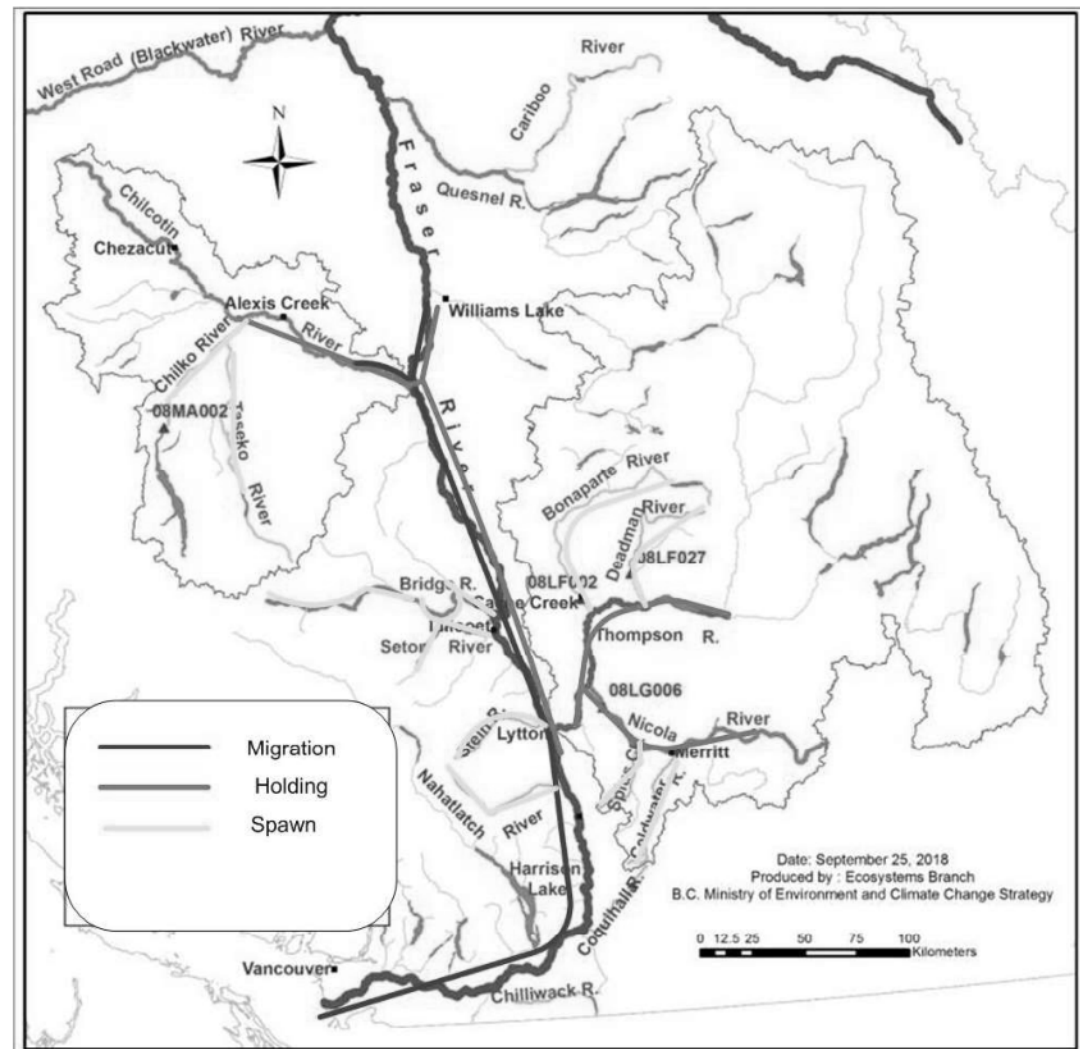
DFO.PAC_RDGExecScheduler-ExecCalendrierDGR_PAC.MPO@dfo-mpo.gc.ca | 604-666-6979 << Message: Feedback on BC action plan >>

Interior Fraser Steelhead Movement Windows

Year round; Provincial: No retention of wild steelhead.

Additional regulations based on movement-window and risk.

- Migration window (Sept-Dec)
- Holding window (Nov-April)
- Spawning window (Apr.-June)
- Rearing window (all year)



Summary of Angling Regulations

Provincial: Year-round:

- No retention of adult wild steelhead.
- Fraser Steelhead defined as any rainbow trout over 50 cm in IFS territory
- Barbless hooks, bait ban on rivers with IFS

Additional Regs by timing window below:

IFS Migrating	IFS Holding	IFS Spawning	IFS Rearing
<ul style="list-style-type: none"> • Barbless hooks, bait ban. • Must release fish over 50 cm. Closures in place on specific areas on Fraser main stem between Lillooet and Lytton where there is potential for angling to intercept steelhead. Oct 1- May 31 	<ul style="list-style-type: none"> • Thompson River closed to angling from Oct 1 through to May 31 • Chilko-closed to angling Nov 1- June 10 • Chilcotin-d/s Chilko closed to angling Oct 1- June 10; u/s Chilko closed Apr. 1 to June 30 • Nicola closed March 1-Sept 30; IFS not holding in Nicola in Jan.1-Feb.28 • Closures in place on specific areas on Fraser between Lillooett and Lytton where there is potential for angling to intercept steelhead. Oct 1- May 31 	<ul style="list-style-type: none"> • Closures to all recreational fishing. • Chilko-closed to fishing Nov 1-June 10. • Chilcotin-closed to fishing Oct 1- June 10. • Bonaparte and Deadman closed to fishing Jan 1-June 30 . • Nicola closed to fishing March 1 – Sept 30; Trout release Jan. 1-Feb.28 • Coldwater River closed to fishing Jan.1-Sep.30 • Spius Creek closed to fishing Jan.1-Sep.30 	<ul style="list-style-type: none"> • Chilko & Chilcotin-year round trout/steelhead no retention under 30 cm (Jan. 1 to Dec. 31). Then additional regs for holding and spawning kick in. • Thompson & IFS tribs smolt size (25-35 cm) and smaller trout/steelhead no retention (Jan. 1 to Dec. 31). Then additional regs for holding and spawning kick in.

Gap Analysis: All systems are closed to all angling during the spawning and holding periods.
Why isn't the migratory route closed to all angling as well?

	Risk Assessment	Cost/Benefit of a full recreational angling closure
Fall Spawning Migration	<p>Above Yale</p> <ul style="list-style-type: none"> Spot-areas where there is angling access are closed to angling. <p>Fraser Canyon</p> <ul style="list-style-type: none"> negligible fishing access <p>Fraser mainstem -</p> <ul style="list-style-type: none"> No IFS fishery. If an IFS is caught, it is illegal to retain. Barbless hooks and bait ban 	<p>Above Yale and Fraser Canyon –</p> <ul style="list-style-type: none"> no real cost or benefit because very few people are equipped to be on the river and access points already closed. <p>Fraser Mainstem:</p> <ul style="list-style-type: none"> Benefit: Closing all angling would provide incremental protection. If an IFS is accidentally caught, angling mortality is estimated at <2%. By comparison, commercial fisheries accidental catch mortality is 20-25%. Cost: Would remove the food fishing option for Metro Vancouver residents (significant). DFO Expectation: Would require closure of recreational salmon fishery (more salmon anglers than non-salmon anglers)
Fraser Sturgeon	<p>Negligible overlap with IFS (size of fish and location in the water column).</p>	<ul style="list-style-type: none"> Cost: Not excepting sturgeon would impact a high value fishery that is offsetting the loss of salmon recreational fishing. DFO Expectation: Would require DFO to shut down their tidal sturgeon fishery. Idea: Put best mgt practices into regulation; Consideration of a minimum hook size to ensure no size overlap with IFS (not expected to provide much incremental benefit because sturgeon anglers already target large fish and do not catch steelhead because of gear selectivity).
Spring Adult Migration	<p>Spring Migration window is during freshet with high/ dangerous waters and negligible angling activity.</p> <p>Precautionary protective measures already in place:</p> <ul style="list-style-type: none"> No retention of IFS Size limits to ensure small steelhead are not confused with large trout Bait and Gear limitations to minimize mortality on steelhead accidentally caught 	<p>Peak freshet/high water</p> <ul style="list-style-type: none"> (Negligible benefit) Very few people equipped to be on the river during high/dangerous water. <p>Outside of peak/dangerous waters,</p> <ul style="list-style-type: none"> (slight benefit). Removes all risk of accidental mortality through angling. Angling mortality is estimated at <2%. By comparison, commercial fisheries accidental catch mortality is 20-25%. (Moderate/significant cost) Would remove the non-IFS food fishing option for Metro Vancouver residents (significant). (significant cost) Province likely to request net closures during these same times/locations.

Discussion Items -

1. Recovery Potential. Making sure the collective Executive are clear on a key point of disagreement.
 - DFO: even in the absence of any fishing, the two steelhead stocks of concern are unlikely to recover. The DFO summary differs from the key points BC's science experts agreed to and believed there was consensus on.
 - BC: the current CBA under-represents the probability of recovery. As previously provided to DFO: The authors of the science paper specifically noted that removal of the bycatch impacts would push-back the timeline to potential extinction, thereby providing the time to implement additional management actions to address the other limiting factors and risks identified in the science paper. This coupled with likely underreporting of interception of IFS in DFO managed fisheries, provides an inaccurate and overly pessimistic conclusion on recovery potential in the draft CBA.
2. Water Use: s.13; s.16 had noted specific concerns about water withdrawals, and the lack of monitoring, etc., along with concerns about drought for the 2019 season (which may affect juveniles rearing in the system through the summer as well as perhaps returning spawners in September, depending upon how the weather unfolds). He had also noted concerns about a new farm with a very large water licence (1/3 of flow) that would be drawing water from a critical area, to see if anything could be done to address impacts.

Deadman Creek. Concluded.

Diversion without authorization

- Skeetchestn Indian Band put in a softwood plantation on their reserve bordering the s.16
- NROs investigated and a committee was set up to determine how to respond and address compliance and enforcement.
- The District Manager spoke with the CEO of Skeetchestn Natural Resources department who indicated they were closely monitoring flows to ensure there was no impact.
- Floods in 2017 destroyed works, and a fire burned some of the pipelines. Since then there have not been any additional diversion for that project
- The committee is no longer active
- There is open communication with the Skeetchestn.

Efforts to better manage flows in the creek

- Deadman creek is fully recorded, no new authorizations are being provided
- There are dams in the upper watershed that provide some nominal flows to the stream.
- One step that is being taken by the Skeetchestn is to move a point of diversion from the Deadman to the Thompson. Regional Water has authorized the project. s.16
- s.16

-

The BC document notes some points regarding drought and water use but focusses on assessment and is silent on undertaking actions. We had discussed the need to be pro-active about conserving water in 2019, especially in the Thompson system – are there plans in place for the Thompson systems to support water conservation this season?

Can any commitments be made with respect to monitoring water use, at least with most significant water users? Is there any monitoring of water intakes for required screening to protect juvenile fish? Anything that exists under current programs that will be ongoing in the Thompson?

Yes, we can add more on drought and flow management. There is significant work on Drought management. A key element in the immediate-action plan was noting the commitment for agricultural irrigation work.

3. s.13

- Most important new tool is Federal new Fish Act. We will insert that one.
- We have a BC–DFO Fish Habitat Committee, which should cover this item. We can add this as an example to the governance piece.
- We are still figuring out the watershed monitoring (beyond CEF) – need to run this up through resourcing and ministerial approvals first.

4. s.13

Not reflected in this document because we need to commit and implement a recovery plan first. If low numbers continue, in spite of the 2019 plan, at that time we might consider hatchery.

Note: We have declined hatcheries in 2018 because we believe recovery is a potential outcome; and the negative impacts of hatchery production on wild fish recovery.

We can: **Review Hatchery policies to ensure appropriate actions can be taken based on recovery results in the first 1-3 years.**

5. s.13

Can do.

6. s.13

- Agreement was to deal with the Sturgeon issue with regulatory improvements.
- Need a quick check in re - Do we need to implement a full trout/salmon recreational closure?
- See PPT.

7. Sturgeon fishery

- Verified this is no longer a critical-issue to DFO, and it will be removed from BC's IFS recovery plan.

8. BC Letter - Listing Recommendation - Process Check

- DFO sent a letter to ENV asking about the Government of BC's position on listing of IFS, originally requested by January 18, 2019. This comes via Deputy/ADM MOE.
- We have told DFO staff we were delaying our response in order to allow negotiations – target was a joint-jurisdictional plan to submit as a recovery option. Also verified by s.13; s.16
-

9. Closures. Where are we at re reaching consensus recommendation?

- Current understanding is that DFO is making a package which will include their recommendations on closures. So separate DFO and BC submissions.

From: Ethier, Tom FLNR:EX
To: Davis, Jennifer C FLNR:EX
Cc: Kristianson, Eric PREM:EX
Subject: Re: Eric/Tom - Status Update - IFS Emergency Management Plan
Date: Monday, June 3, 2019 7:07:12 PM

This looks very complete to me Jen. Cheers

Sent from my iPhone

On Jun 3, 2019, at 6:15 PM, Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca> wrote:

Good evening,

Today we addressed additional concerns and commitment from MJW in the Action Plan. Attached is the final version.

Status: MOE is taking a fresh look at this. There was some discussion re including recommendations for DFO in the BC plan vs taking them out and only including them in the SARA Recommendation letter. Some of the wording is smoothed out, but the plan currently still keeps the recommendation. Had a good discussion and Jennifer McG will get back to me if she feels additional edits are needed. MOE is also looking into final edits to the cover letter.

Other items:

- <!--[if !supportLists]-->• <!--[endif]-->Tuesday - MDD, MLP and MJW meeting re IFS and commitments.
- <!--[if !supportLists]-->• <!--[endif]-->Wednesday – BC lead scientist, Rob Bison, invited to be witness at the House of Commons Standing Committee on Fisheries and Oceans (FOPO) . “It was agreed, — That the Committee conduct a study of issues related to the management of Interior Fraser Steelhead including bycatch; that the Committee report its findings to the House and; and that senior officials from the Department of Fisheries and Oceans be asked to brief the Committee on the current status of Interior Fraser Steelhead prior to commencing the study.”

Jenn.

JENNIFER DAVIS

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From: [Davis, Jennifer C FLNR:EX](#)
To: [Ethier, Tom FLNR:EX](#); [Kristianson, Eric PREM:EX](#); [McGuire, Jennifer ENV:EX](#); [Mack, James AGRI:EX](#)
Cc: [Mlinar, Shannon C FLNR:EX](#); [Mulloy, Eleanor PREM:EX](#)
Subject: Final Version - IFS plan. No more edits.
Date: Tuesday, June 4, 2019 9:53:09 AM
Attachments: [Interior Fraser Steelhead Emergency Management Plan 2019 05.pdf](#)

Good morning,

Again, my appreciation to all of you for your direct involvement in completing this plan. I have now discussed with everyone their suggested edits and incorporated the results.

As of now, there is no intent to edit this document further (fingers crossed). Great work!

Jenn

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Interior Fraser Steelhead Emergency Management Plan

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BACKGROUND

The Province of British Columbia is the jurisdiction with lead responsibility to ensure wild Interior Fraser Steelhead (IFS) and their habitat are managed in a manner that results in a self-sustaining wild population for current and future generations. IFS are made up of two large runs (the Thompson and Chilcotin) and several smaller runs (e.g. Bridge and Seaton) and are commonly called Thompson-Chilcotin Steelhead. There are a number of factors contributing to the decline, resulting in the need for a coordinated and comprehensive action plan. This plan provides the best option for recovering IFS.

IFS recovery is a priority not only for ecological reasons. Other Fraser River salmon stocks are also collapsing, making the remaining fish a critical factor in sustaining the food chains. IFS are culturally important to Indigenous peoples. First Nations that have the spawning grounds in their territory continue to be strong advocates and caretakers of the species' key habitat. IFS are economically important. The Thompson run historically supported a world-renowned fishery, providing significant revenue to rural communities which are currently suffering downturns in other resource sectors. The Provinces' official symbol for fish is the Pacific Salmon (*Oncorhynchus*) grouping, which includes steelhead and additional salmonid species.

Several First Nations have taken their own actions to protect and conserve IFS and have provided strong advice that the Province needs to take more direct and meaningful action to ensure the cultural and economic benefits of IFS are once again available to all First Nations along the migratory route. One of



the first steps is to set clear and measurable targets and expectations for all parties who impact IFS survival. This plan is a first step.

The ongoing commitment of a number of Societies, Foundations, Associations, stakeholders and other non-Government partners in supporting management actions must also be recognized. These groups have been long-standing partners in seeking solutions to the decline of IFS and will continue to be important members of the multi-party recovery work.

PLAN OVERVIEW

This plan is based on a strategy of immediately reducing mortality to enable the species to survive long enough for other contributing factors such as ocean survival and pinniped predation to improve, while also taking action on the longer-term activities.

This plan outlines a suite of actions for all contributing factors, which are included in the section titled Comprehensive Action Plan. This plan is intended to be a foundation for future actions.

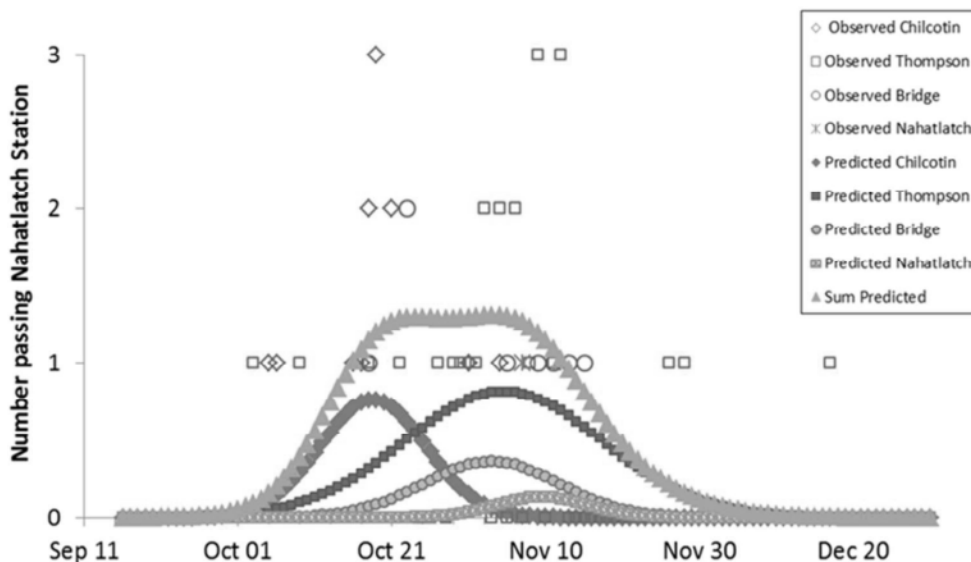
This plan is also dependent upon the implementation of two critical elements prior to the 2019 run-time dates:

1. Interim access to viable habitat: Improvements to habitat condition through out the Fraser system are necessary to support IFS recovery. It is concerning to see similar downward trends in both the Thompson watersheds which are more heavily developed and the Chilcotin watersheds have been largely undeveloped or “pristine”. The current habitat is estimated to have a carrying capacity for smolt production in the thousands of fish. However, provincial ministries need to increase focus on habitat protection and sustainable management, particularly due to the scope of wildfires across key watersheds. As interim measures for fish to access viable habitat, immediate actions were needed to move fish from holding areas into the spawning grounds along the Bonaparte River in spring 2019. A trap-and-truck strategy was completed. Going forward, a plan for fish-passage and longer-term remediation is required.
2. Non-selective fisheries bycatch mortality: The primary factor affecting mortality rates that is within human control is the reduction of bycatch mortality in non-selective net fisheries. By reducing mortality an extinction date is deferred which will allow actions to be taken on the longer-term factors. Even small increases in ocean productivity or survival may be enough to initiate positive abundance trajectories. While the Federal Minister has the responsibility to consider a number of variables for net-fisheries closures, BC is recommending an increase to the IFS closure to protect more than 95% of the run (total run time is 84 days rolling window) from bycatch mortality. For example, a 75 day closure would equate to approximately 97-98% protection.

RUN TIMING AND SPAWNER RETURNS

The 2019 estimate for steelhead return is 257 (Thompson is 175, and Chilcotin is 82). The 2019 estimates are based on a very small number of actual fish caught in the test fishery (e.g. less than 10) which further highlights the need for meaningful conservation measures.

IFS enter the Fraser River from mid-August to November overlapping with the return of late run sockeye and chum salmon, including hatchery-produced chum. Both Thompson and Chilcotin Steelhead Trout have to ascend a set of seasonal barriers in the lower Fraser canyon (~180–210 river km upstream) while Chilcotin Steelhead Trout have to also ascend a second barrier further upstream (~320 km river km upstream). Consequently, Thompson and Chilcotin Steelhead Trout exhibit different migration characteristics. Chilcotin Steelhead Trout migrate earlier and migrate faster on average at a given water temperature compared to Thompson Steelhead Trout. The IFS run time is approximately 84 days at each point along the route (rolling window). The combination of the two runs creates a bell curve with a sharply rising increase at the front end and sharp decrease at the tail end. Protecting the “tails” is important for genetic resiliency especially in the face of climate change.



In 2018 DFO and the Province had separate models for predicting the time and place steelhead were in the river. Joint-science team discussions in the fall 2018 advised that while DFO was intending to protect approximately 90% of the run, the DFO model used a combination of Coho Salmon migrations speeds and steelhead migration speeds from non-IFS rivers, resulting in a prediction that IFS were moving upstream faster and over a shorter duration than the Provincial model. The Provincial model is based on empirical data for real-time swimming speeds of Thompson Chilcotin fish.

THREATS

Evaluation of threats to Chilcotin and Thompson Steelhead is informed by past assessments, modelling of exploitation rates on IFS, studies on genetic interaction between resident and anadromous forms, and content from the October 23 2018 draft science paper which was developed to support the SARA review process.

The threats by spatial area include:

1. Thompson River System

- Physical habitat degradation (bank erosion, siltation, loss of riparian structure and function)
- Decreasing water quantity (decreased summer/fall flows)
- Increasing frequency of winter floods related to rain-on-snow events
- Increasing water temperature in summer due to higher air temperatures and decreased flow
- Risk of life history shift from anadromous to non-anadromous forms
- Outbreeding depression of Steelhead Trout caused by increased levels of inter-breeding with resident Rainbow Trout owing to lower spawning populations of Steelhead Trout
- Freshwater range contraction resulting from reduced spawning populations.
- Mortality from directed non-retention sport fishing (handling stress); however as of 2018 the Province has established a recreational fishing closure in both the Chilcotin and Thompson holding and spawning areas.
- Mortality from First Nations fisheries targeting Steelhead Trout, including gillnetting on the Thompson River in some years. However, in the past few years the Thompson First Nations have been actively pursuing recovery solutions including voluntarily forgone fishing opportunities in favour of IFS recovery.

2. Chilcotin River system

- Outbreeding depression of Steelhead Trout caused by increased levels of inter-breeding with resident Rainbow Trout owing to reduced Steelhead Trout spawning populations
- Freshwater range contraction resulting from reduced Steelhead spawning populations.
- Mortality from First Nations fisheries targeting Steelhead Trout, however in recent years the Tsilhqot'in National Government has voluntarily forgone fishing opportunities in favour of IFS recovery, eliminating this source of mortality.

3. Fraser River

- Fishing mortality from the collective non-selective salmon fisheries (bycatch from commercial fishing, test fisheries, etc.)
- Fishing mortality from non-retention sport fishing targeting salmon and Trout (handling stress)
- Water quality/pollution in the mouth of the Fraser River estuary.

4. Inshore Ocean Fishing Areas

- Fishing mortality in salmon fisheries (bycatch from commercial fishing)
- Ocean conditions (inclusive of all parameters, including anthropogenic effects)
- Predation by fish and marine mammals

- Attraction of predators resulting from large numbers of hatchery-produced fish, resulting in higher mortality rate of wild smolts
- Selective hatchery enhancement of early-timed Chum Salmon which increases run timing overlap with Interior Fraser Steelhead Trout.

5. Offshore

- Ocean conditions inclusive of all parameters (including prey availability) as determined by anthropogenic and natural changes in global climate
- Ocean conditions inclusive of all parameters (including prey availability) as determined by anthropogenic and natural changes in total salmon biomass and as evidenced by body size trends (Ruggerone and Irvine 2018)
- Fishing mortality.

RECOVERY POTENTIAL

Steelhead have a few advantages over other salmonids. Like all salmon, steelhead are a very fecund species meaning each female carries a significant number of eggs. While most salmon die after spawning, some IFS can spawn multiple times and return to the ocean 2-3 times. Steelhead also have more survival options than salmon as they can adjust the amount of time they spend in the freshwater habitat. This allows for only a few adults to have the ability to produce enough offspring to quickly expand and occupy the freshwater habitat.

Historically, Thompson Steelhead Trout were unusually large and females were highly fecund with small eggs (McGregor 1986). After accounting for body size, Thompson Steelhead Trout are 15% more fecund than Chilcotin Steelhead Trout and 40% more fecund than coastal winter run Steelhead Trout in southern BC (R. Bison, unpublished data). A time series of the size of returning adults to the Thompson DU, indicates a large decline in maximum size and fecundities between 1979 and 1994, and a second decline between 2004 and 2009 (R. Bison, unpublished).

Recovery targets for Thompson and Chilcotin are based on the best-available science, as completed in 2018 by Provincial experts (CSAS IFS 2018 RPA currently unpublished). This work also supported joint-science team collaborations with DFO in the SARA review process. The combined recovery target is 1500 spawners (938+ 562). Recovery targets for Thompson were estimated to be 938 spawners. Targets for the Chilcotin are 562-744 spawners. These result in a high probability that 100 spawners or more will escape annually to each of five spawning groups within the Thompson watershed, and to each of the two groups in the Chilcotin watershed. The longer-term objective would be to achieve stable numbers of Thompson steelhead at approximately 5000, and Chilcotin at approximately 3000 for long term genetic integrity of the stock.

RECOVERY TARGET: 1,500

Initial Recovery Target: 1,500. Minimum of 938 spawners in the Thompson watershed and 562-744 spawners for the Chilcotin for, each year of one full generation (5-8 years).

Longer-term Recovery Target: Thompson at approximately 5,000, Chilcotin at approximately 3,000. (Note: Historical Levels combined were approximately 30,000)

COMPREHENSIVE ACTION PLAN

The following tables of actions were developed in collaboration between the Province of BC and the Federal Department of Fisheries and Oceans. All items on this list are commitments by the lead government. There are two time-sensitive issues still being discussed: the closure time for reducing IFS mortality in by-catch from non-selective fisheries and salmon recreational fisheries. The following plan includes a BC recommendation, but the Federal Minister has yet to make his final decision on these matters.

Improving Management & Governance.

Year 1 (2019/20)	Lead /Status (2019 05)
Establish DFO-BC Executive Level Dispute Resolution Process. <ul style="list-style-type: none"> Minister. Further develop collaborative management approaches through regular Minister-level meetings as agreed upon February 2019 and an updated MOU. Executive. Schedule regular meetings for the Director/ADM committee to develop options/solutions and improved relationships 	<ul style="list-style-type: none"> DFO/BC
Indigenous Collaborations on the Management of Interior Fraser Steelhead (IFS) <ul style="list-style-type: none"> Establish an effective partnership between the Province and Indigenous partners along the full watercourse in order to determine "system scale" solutions. 	<ul style="list-style-type: none"> BC
Public & Stakeholder Engagement Process. <ul style="list-style-type: none"> Undertake a public engagement process using Engage BC as well as discussion forums to collect the range of ideas and opinions. 	<ul style="list-style-type: none"> BC

Improve Production (Habitat)

Year 1 (2019/20)	Lead /Status (2019 05)
Watershed Management <ul style="list-style-type: none"> New watershed fish-habitat assessment tool completed 2018. Apply to the Thompson and Chilcotin watersheds to identify priority issues, areas and multi-year actions. Ensure the results of the watershed monitoring are incorporated into resource management decisions, guidance and operational policy. 	<ul style="list-style-type: none"> BC BC/DFO

Year 1 (2019/20)	Lead /Status (2019 05)
<ul style="list-style-type: none"> For restoration issues, complete a watershed restoration plan with clear projects priorities and a multi-year implementation plan. Significant investments in the Habitat Program to better support habitat protection, including more staff to evaluate project and development proposals and to support a more integrated management approach. 	<ul style="list-style-type: none"> BC DFO
Habitat Recovery – Fish Passage (old road crossings). <ul style="list-style-type: none"> Fish Passage Detailed Assessment. Complete a detailed assessment and inventory of passage problems across the IFS staging and spawning areas. Direct new-funding to these priorities. 2 remediations completed (approx. \$300,000. LBIS Fish Passage) 	<ul style="list-style-type: none"> BC – initiated BC underway
Habitat Recovery - Bonaparte River <ul style="list-style-type: none"> Fishway stabilization and repairs Elephant Hill Fire Recovery – Complete a Fish Passage Plan and Restoration Plan for sediment blockages and other on-the-ground Actions by Dec 2019. Bonaparte River 2019 fish-passage to spawning grounds. DFO has hired a senior biologist for Kamloops as part of the DFO Resource Restoration Unit. 	<ul style="list-style-type: none"> DFO BC BC - Trap and truck completed DFO
Habitat Recovery – Channelized/Lost streams <ul style="list-style-type: none"> Inventory and riparian assessment of developed streams in drought-prone areas of IFS holding and spawning habitat in order to identify remediation opportunities and prioritize work (including third party). Pilot 1-2 riparian remediation projects (municipal or agricultural) 	<ul style="list-style-type: none"> BC BC
Habitat Protection - Regulatory <ul style="list-style-type: none"> Riparian Areas Regulation (RAR) update completion (2019) – increased accountability RAR Effectiveness Review – Review implementation, requirements and guidance; identify options to strengthen RAR for streams with species of concern. Forest and Range Practices Act – improvements to fish and water guidance for legislative process in 2020 Identification and implementation of management actions for agricultural areas. Fisheries Act – completion of the Act updates in 2019 which strengthen the protective measures for habitat. Water Sustainability Act - Sensitive Streams. Complete the assessments and implement decisions on designations (target 2019) on all holding and spawning areas with a first priority on tributaries to the Thompson system. The Province will monitor conditions and be prepared to declare significant water shortages as required and regulate to protect critical environmental flow needs. 	<ul style="list-style-type: none"> BC – drafting BC BC – FRPA modernization BC DFO BC
Habitat Management/Protection – Drought and Water Flow Management <ul style="list-style-type: none"> Water allocation review – update the policy and procedures to ensure water flow and condition needs for IFS are met as a priority. Develop a water flow/temperature mitigation strategy. Identify drought prone areas and areas that may incur water shortages and develop a mitigation plan to address current and future climate change impacts. Assessment of potential alternative Irrigation opportunities/practices in the Thompson (AGRI, FLNRORD) Earlier activation of the BC Drought Response Plan. A Provincial Technical Drought Working Group, with representation from the Province, Environment Canada and 	<ul style="list-style-type: none"> BC BC BC BC/DFO

Year 1 (2019/20)	Lead /Status (2019 05)
<p>Department of Fisheries and Oceans Canada, was initiated early (May 25-28) and the Drought Information Portal was activated. Consideration of the water needs in IFS holding and spawning areas is a priority. To support implementation, each region establishes a stream-watch list early in the year for streams that are fish-bearing and have a history of mortality-generating low flows. Under the current low flow conditions, staff have initiated additional streamflow and temperature monitoring on these streams, including IFS streams.</p> <ul style="list-style-type: none"> New regulatory tools. Immediate voluntary water conservation is being encouraged while the Province develops regulations for water usage through the Water Sustainability Act to protect fish populations and give priority of water rights to critical environmental flow thresholds. 	<ul style="list-style-type: none"> BC
<p>Habitat Management / Protection – Wildfire</p> <ul style="list-style-type: none"> New 2017 Chief Forester and ADM Stewardship guidance for wildfire salvage, ensuring habitat needs were highest priority over economic interests. Review implementation and results, identify and implement improvements. Use the Watershed assessment to drive the identification and prioritization of habitat recovery/management projects. I.e. ensure hydrological stability before investing in in-stream remediation. 	<ul style="list-style-type: none"> BC BC
<p>Data and Knowledge Management</p> <ul style="list-style-type: none"> Partner with Pacific Salmon Foundation to put Steelhead on the Salmon Explorer. Review Chum hatchery production with consideration of reducing or eliminating run time overlap with wild IFS Review advancements in aquaculture/hatchery techniques and update the provincial policy. Develop an enhanced IFS Monitoring Strategy for implementation late 2019 Continue to refine the scientific understanding of IFS through BC-Federal science collaborations as well as incorporation of Traditional Knowledge. 	<ul style="list-style-type: none"> PSF - Initiated DFO BC BC BC / DFO

Reduce Mortality / Increase Survival

Year 1 (2019/20)	Lead /Status (2019 05)
<p>Recreational IFS Fishery</p> <ul style="list-style-type: none"> Provincial Regulations in place for no IFS fishery. Update penalties including increasing fines to make them a deterrent. 	<ul style="list-style-type: none"> BC - Closure In place BC
<p>Recreational Fishery Bycatch: Holding and Spawning Areas</p> <ul style="list-style-type: none"> Recreational fishing closures for all fishing across holding and spawning areas. 	<ul style="list-style-type: none"> Closures In place
<p>Recreational Fishery Bycatch: IFS Migration Route (Fraser Mainstem)</p> <ul style="list-style-type: none"> Illegal to retain IFS in Fraser Mainstem. Recreational Fishery for other species – <ul style="list-style-type: none"> Fraser River – BC. While regulatory limits are in place, to further negate the potential bycatch in the small-scale trout fishing, additional regulatory closures will be put in place. These may be additional timing restrictions or species restrictions. Fraser River – DFO. Implement recreational salmon fishing closures in times and areas where IFS may be intercepted (Fraser River Mainstem, Thompson and Chilcotin Rivers). The SARA reviewed sturgeon Catch and Release fishery does not materially overlap with IFS. However, BC will be implementing further regulatory controls 	<ul style="list-style-type: none"> BC - In place BC BC Recommendation to DFO BC / DFO

Year 1 (2019/20)	Lead /Status (2019 05)
and seeks consistency between the tidal and non-tidal fisheries.	
Non-Selective Fisheries – Bycatch. <ul style="list-style-type: none"> • Increase the IFS closure to protect more than 95% of the run (total run time is 84 days rolling window) from bycatch mortality resulting from non-selective salmon fishing. E.g. a 75 day rolling closure is expected to protect 98-99% of the run. Multi-year commitment, preferably 5. 	<ul style="list-style-type: none"> • BC Recommendation to DFO
Selective Fisheries <ul style="list-style-type: none"> • Invest in partnerships with First Nations in traditional selective methods. • Work with industry to further advance selective fishing methods 	<ul style="list-style-type: none"> • BC & DFO • DFO & BC
Monitoring and Enforcement <ul style="list-style-type: none"> • Increased enforcement. • Guardians and Monitors – In collaboration with the First Nations Fisheries Council, improve coordination and effectiveness between provincial, federal and indigenous guardians/monitors in BC waters. 	<ul style="list-style-type: none"> • BC / DFO • BC
Predators <ul style="list-style-type: none"> • Technical conference hosted by DFO on the science and impacts of pinniped predation on all salmonids. This will inform future management discussions. • Follow-up session in fall, 2019 to engage more broadly on pinniped/salmon interactions, and considerations. 	<ul style="list-style-type: none"> • DFO – June • DFO - fall
Stock Data/Information <ul style="list-style-type: none"> • Develop a proposal for integrating data systems between BC and DFO to enable collective access to the best decision-support information. 	<ul style="list-style-type: none"> • DFO/BC

From: [Davis, Jennifer C FLNR:EX](#)
To: ["Thomson, Andrew"](#)
Cc: [Ethier, Tom FLNR:EX](#); [Kristianson, Eric PREM:EX](#); Rebecca.Reid@dfo-mpo.gc.ca
Subject: Andy - Background from BC re closure decision - support materials.
Date: Thursday, June 6, 2019 4:09:18 PM
Attachments: [Interior Fraser Steelhead 2019 Closure BC Recomendation.docx](#)

Andy, thank you again for committing to provide your Minister with the background info from BC. I had hoped to get this to you yesterday, but had to get the team to refocus the work on the key issues that came up from Minister Wilkinson. Please let me know if you think any additional info would help.

Warm regards,
Jenn.

JENNIFER DAVIS

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BRIEFING NOTE FOR INFORMATION

DATE: June 05, 2019

PREPARED FOR: Andrew Thompson, Regional Director, Fisheries and Oceans Canada (DFO)

ISSUE: Background information from BC regarding a 2019 IFS protection window.

BACKGROUND:

- Interior Fraser Steelhead (IFS) are currently being considered for listing under the Federal Species at Risk Act (SARA). As outlined by Committee on the Status of Endangered Wildlife in Canada (COSEWIC), one of the primary factors that is contributing to the decline, and is also under human control, is bycatch mortality in salmon fisheries.
- The decision on salmon fisheries openings is fully the responsibility of the Federal Minister.
- DFO and BC staff are using different models, which creates a difference of opinion regarding the required duration of the protection window (closure).
- Whatever decision Minister Wilkinson takes will have large implications on the conservation and long term survival of IFS, the fishing economies, and meeting First Nations Food, Social and Ceremonial (FSC). All of which are also BC interests.
- Consideration of impacts to the lower Fraser River First Nations' salmon FSC fisheries need to be considered with the impacts to the upper Fraser River, Thompson and Chilcotin First Nations FSC fisheries for steelhead. Many of the Thompson Nations, along with the Tsilquot'in National Government have taken voluntary actions to close down their salmon FSC fisheries and have demanded Governments work together to ensure conservation and the collective rights for fish are met.
- Estimated Population: The 2019 estimate for steelhead return is 257 (Thompson is 175, and Chilcotin is 82). The 2019 estimates are based on a very small number of actual fish caught in the test fishery (e.g. less than 10) which contributes to the real uncertainty in estimated the run timing windows proposed by both DFO and Provincial BC staff.
- BC did not provide formal comment to DFO during the stakeholder consultation process. At that time senior level collaboration discussions were underway and we felt the issues should be run-to-ground outside of the public arena. As this was not achieved, BC appreciates DFO senior staff's commitment to provide BC comments directly to the Minister as part of his background information when making an opening/closure decision.
- This Note is intended to support Minister Wilkinson by providing additional information on this complex and challenging decision.

DISCUSSION:

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Fisheries Interests.

- The fish that live in BC waters have huge importance to the Province for commercial, social, ecological and numerous other reasons.
- The Province's goal is to recover this species as quickly as possible to sustainable levels in order to also recover the important fisheries associated with both IFS and Salmon.
- The Province also wants to supporting ways to offset economic implications such as shifting to more selective harvesting methods to allow greater access to chum.

PREPARED BY:

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