



October 19, 2022

To: Distribution

**Re: Status Update for Fraser River Late-Run Summer Steelhead**

Fraser River late-run summer steelhead is a group of 10 spatially discrete spawning stocks distributed in the Fraser watershed upstream of Hell's Gate. The sub-group referred to as "Thompson and Chilcotin Steelhead" comprises 6 out of these 10 stocks.

The current spawning population forecast for **Thompson and Chilcotin** is **505** (95% credible interval 370-1456). At the current forecasted abundance, the sub-group is classified as an **Extreme Conservation Concern**. Reference points that define conservation classifications for this sub-group are the Limit Reference Point of 727 and the Conservation Concern Threshold of 1950. Below 727, the aggregate is classified as an Extreme Conservation Concern. Between 727 and 1950, the aggregate is classified as a Conservation Concern.

The current spawning population forecast for the **Thompson** watershed is **339** (95% credible interval 248-987). At the current forecasted abundance, the Thompson is classified as an **Extreme Conservation Concern**. Reference points for the Thompson watershed that define conservation classifications are the Limit Reference Point of 431 and the Conservation Concern Threshold of 1187. Below 431, the Thompson is classified as an Extreme Conservation Concern. Between 431 and 1187, the Thompson is classified as a Conservation Concern.

The current spawning population forecast for the **Chilcotin** watershed is **166**. At the current forecasted abundance, the Chilcotin is classified as an **Extreme Conservation Concern**. Reference points for the Chilcotin watershed that define conservation classifications are the Limit Reference Point of 296 and the Conservation Concern Threshold of 763. Below 296, the Chilcotin is classified as an Extreme Conservation Concern. Between 296 and 763, the Chilcotin is classified as a Conservation Concern.

Conservation classifications are described further in the Provincial Framework for Steelhead Management in BC (2016) and supporting technical documents.

The current forecasted spawner abundance for the Thompson ranks 40<sup>th</sup> over a 46-year monitoring time frame. The current forecast for the Chilcotin ranks 44<sup>th</sup> over a 52-year monitoring time frame.

The run of Thompson, Chilcotin, and other Fraser River late-run summer steelhead stocks occurs over about a 12-week period and normally peaks in the Johnstone Straits and in Juan de Fuca Strait in late September. In the lower Fraser test fishing areas near Fort Langley, the run normally begins in late August and continues into the latter half of November, peaking in early-to-mid October. Stocks that spawn furthest inland (i.e. Chilcotin watershed) tend to arrive earliest while stocks that spawn furthest downstream (i.e. Nahatlatch) tend to arrive latest. The remaining stocks which include those that spawn in the Bridge, Seton, Stein, and in the tributaries of the Thompson watershed (i.e. Deadman, Bonaparte and Nicola watersheds), tend to be intermediate in their arrival timing to the Fraser River.

Further updates on abundance status will be provided as the season progresses.

Robert Bison  
Fisheries Stock Assessment Biologist  
Fish & Wildlife, BC Ministry of Forests

The following figures are attached:

Figure 1. The estimated spawning abundances of Thompson River steelhead in relation to conservation reference points. The last data point illustrates the expected spawner abundance for this season's return which will spawn in the spring of 2023.

Figure 2. The estimated spawning abundances of Chilcotin River steelhead in relation to conservation reference points. The last data point illustrates the expected spawner abundance for this season's return which will spawn in the spring of 2023.

Figure 3. Observed catches of steelhead to date in the Whonnock, Albion-Chum and Albion-Chinook test fisheries, illustrated by the circle, square and diamond points, respectively. The lines illustrate the "average" pattern expected for the balance of the season, given the observed catches to date, the historical data on run timing, and the historical data on the steelhead catching efficiency of the gillnets.

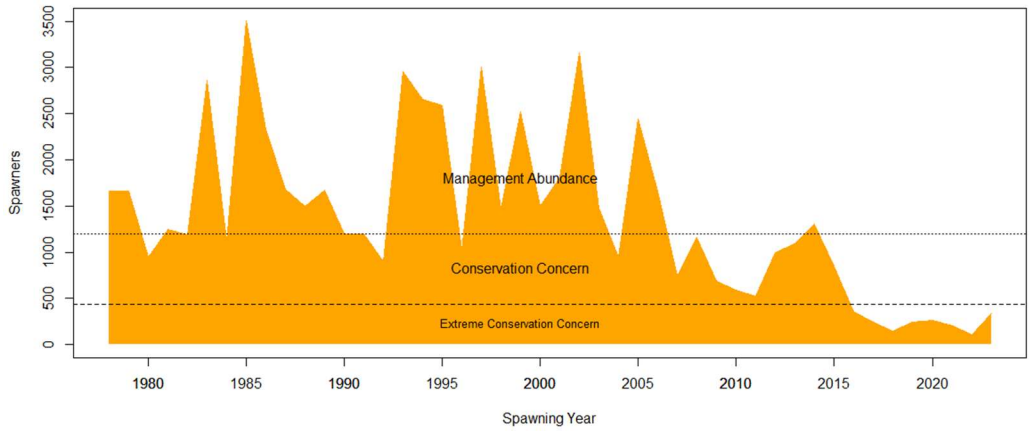
Figure 4. Patterns of daily catch of steelhead in the chinook (filled points) and chum test fisheries (unfilled points) in the 4 years of highest steelhead abundance. Year labels indicate the test fishing year rather than the spawning year. Data from September 1 to November 20 are plotted to ensure that early-run summer steelhead and winter run steelhead are not included.

Figure 5. Population specific run timing at the test fishing location based on the average timing and duration of the aggregate, the estimated differences in peak dates, and assuming population-specific spreads are equal.

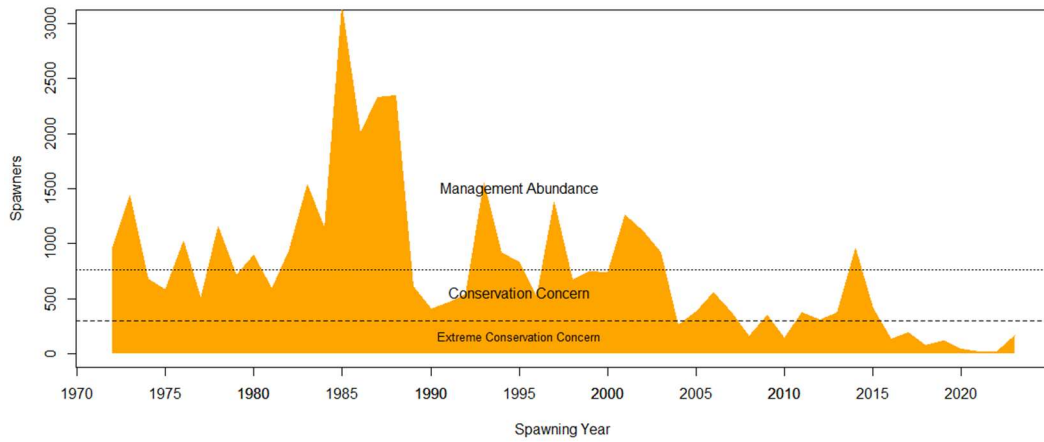
Acknowledgement:

The Whonnock Test Fishery catch data illustrated in Figure 3 are provided by the Pacific Salmon Commission and the Albion-Chum and Albion-Chinook test fishery catch data are provided by Fisheries & Oceans Canada.

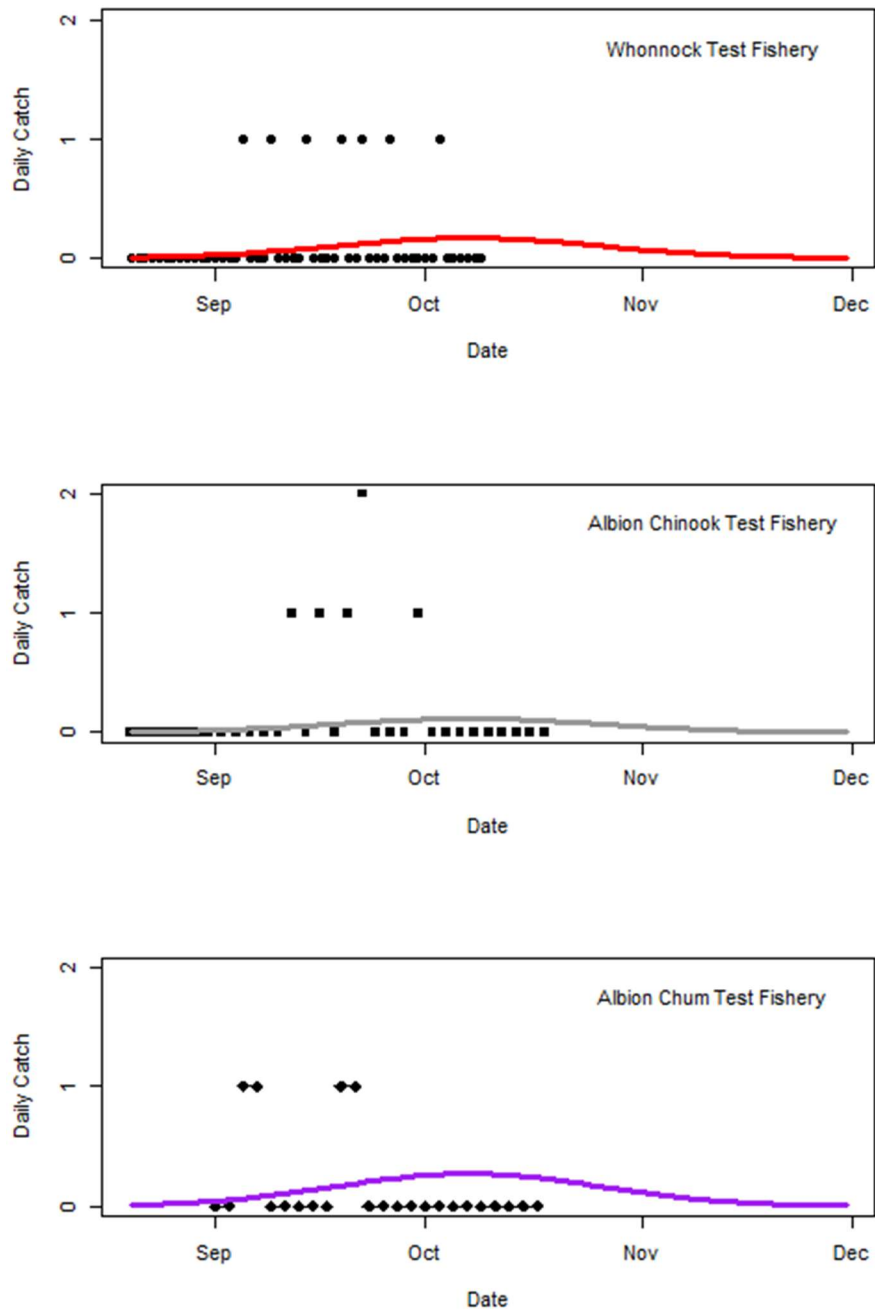
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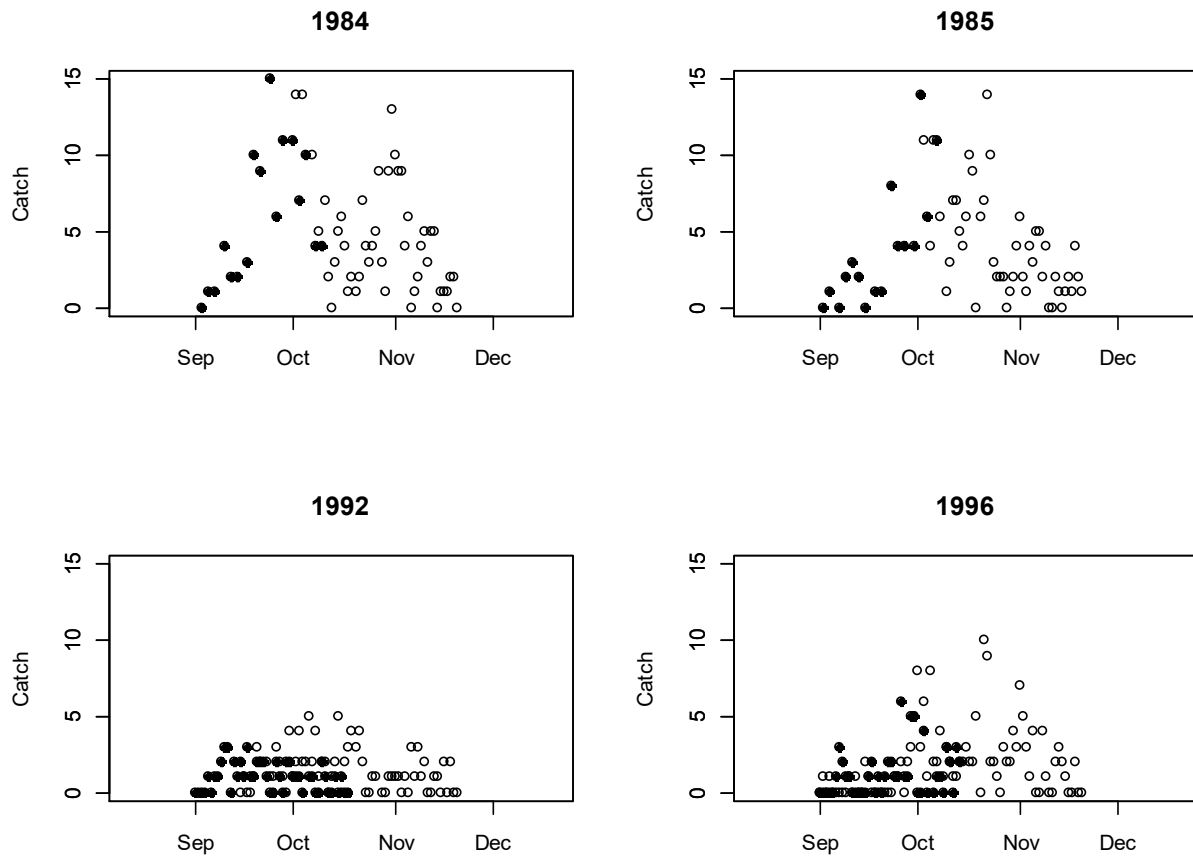
**Figure 1. The estimated spawning abundances of Thompson River steelhead in relation to conservation reference points. The last data point illustrates the expected spawner abundance for this season’s return which will spawn in the spring of 2023.**



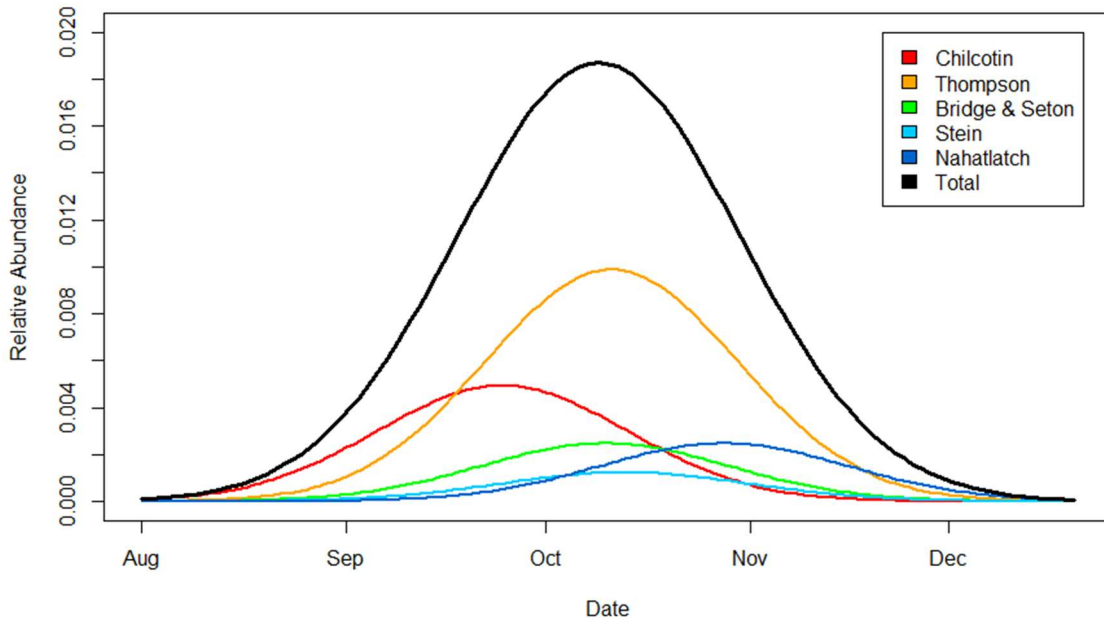
**Figure 2. The estimated spawning abundances of Chilcotin River steelhead in relation to conservation reference points. The last data point illustrates the expected spawner abundance for this season’s return which will spawn in the spring of 2023.**



**Figure 3. Observed catches of steelhead to date in the Whonnock, Albion-Chum and Albion-Chinook test fisheries, illustrated by the circle, square and diamond points, respectively. The lines illustrate the “average” pattern expected for the balance of the season, given the historical data on run timing, and the historical data on the steelhead catching efficiency of the gillnets.**



**Figure 4. Patterns of daily catch of steelhead in the chinook (filled points) and chum test fisheries (unfilled points) in the 4 years of highest steelhead abundance. Year labels indicate the test fishing year rather than the spawning year. Data from September 1 to November 20 are plotted to ensure that early-run summer steelhead and winter run steelhead are not included.**



**Figure 5. Population specific run timing at the test fishing location based on the average timing and duration of the aggregate, the estimated differences in peak dates, and assuming population-specific spreads are equal.**