



Susan Bishop - NOAA Federal <susan.bishop@noaa.gov>

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## Re: FRAM run for May fisheries

1 message

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James, Chris <cjames@nwifc.org>

Thu, May 5, 2016 at 9:47 AM

To: Susan Bishop - NOAA Federal <susan.bishop@noaa.gov>

Cc: Ned Currence <ncurrence@nooksack-nsn.gov>, Ben Starkhouse <BenS@lummi-nsn.gov>, Breena Apgar-Kurtz <BreenaAK@lummi-nsn.gov>, Craig Bowhay <cbowhay@nwifc.org>

Susan,

The data in cell P:77 on the input page is the comanager developed input of the proportion of early NOR returns to the Nooksack that are expected to spawn in the NF itself; therefore NF NORs in the NF divided by total NOR returns. The numbers I provided you on May 2nd were terminal abundance before the C&S fishery removals and were relative numbers to describe the higher SF escapement in the TAMM ER\_ESC OVERVIEW. In FRAM/TAMM, the NF NOR's expected in the SF are considered part of the TAMM South Fork Escapement (see ER\_ESC\_Overview tab for the Nooksack Earlies cells E7:9)). The total Nooksack early escapement (terminal run - C&S harvest) is proportioned by what will spawn in the NF (27.5%) and the rest in the SF (72.5%) which is a combination of assumed NF Origin spawning in the SF and SF origin in the SF. In the SF, it is expected that most of those will be of NF origin (n~135 minus C&S removals) and the rest (n~90 minus C&S removals) would be SF NORs in the SF. The splitting of the terminal run in FRAM as far as what goes to NF and SF occurs after C&S is removed.

As for the captive brood, after speaking with Ned, it doesn't sound like there is much expectation for the captive brood returns to stray to the spawning grounds and most are expected to recruit to the hatchery rack as they have seen in the past couple of years.

I've cc'd the tribal bio's here, so if I've captured something incorrectly they can correct me.

While this is a tribal only fisheries package, the forecast numbers have been agreed to by the co-managers, as I understand it. The outputs in this model should be considered as accurate as the model will allow, given that it is a model. While I understand the intent to be thorough in your analysis, reviewing co-manager agreed to inputs at this point is excessive, seems outside the purview of NOAA responsibility, and only delaying completion of the BiOp. We would appreciate the focus of NOAA to be on reviewing the plan for ESA and harvest objective compliance.

Chris James  
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On Thu, May 5, 2016 at 6:28 AM, Susan Bishop - NOAA Federal <susan.bishop@noaa.gov> wrote:

Hey Chris,

Can you track down the derivation of the number in InputPage P77 of the model run you provided for the full plan (Chin2716\_STTFinal\_TreatyOnly\_PuySkokSkagit). I'm trying to reconcile that % with the ratio of the North Fork and South Fork Nooksack forecasts. The forecast has the terminal wild North Fork run at 205 and the South Fork at 135 which would make % North Fork 60% of the NOR return, not 27% and result in different escapement splits. But maybe the 27% represents something else. I'm still confused a bit about this given the parental brood escapement data and forecasts of the two populations. The North Fork has always been substantially larger. So I just want to confirm this is correct and that I haven't misrepresented something.

Based on our conversation the other day, I also understood that the South Fork estimate (242ish) represents both SF NORs, straying NF NORs and possibly anticipated returns from the SF captive broodstock so you had checked and estimated about 135 of the SF estimate would be SF NORs. The 135 estimate is what I have used in the analysis although we speak to the anticipated larger contribution of the conservation programs. The forecast is for wild South Fork Nooksack Chinook is 135 and the escapement wouldn't be higher than the forecast so.....

I need to resolve this before sending the biop on for final review to make sure the analysis is correct.

Thank you for your help with this,  
Susan

On Tue, May 3, 2016 at 10:43 AM, James, Chris <[cjames@nwifc.org](mailto:cjames@nwifc.org)> wrote:

Based on stock proportions from the FRAM 2716 run, here is what I estimate for Population abundances in the MU with the escapements from the methodology we provided yesterday:

Nooksack (n=334)

NF= 92 (27.5% \* 334) [27.5% in cell P:77, Input Page]

SF= 242 (334-92)

Skagit Spring (n=1889)

Upper Sauk=1,026 (1889 \* 54.3%) [54.3 from cell B:23, Input Page]

Upper Cascade= 349 (1889 \* 18.5%) [18.5% from cell b25, input page]

Suiattle= 514 (1889 \* 27.2%) [27.2% from input page, cell b24]

Sknohomish (n=2955)

Skykomish= 2,147 (2955 \* 72.7%) [72.7% from cell b35, input page]

Snoqualmie= 808 (2955 \*(100%-72.7%))

White River naturals= 1,688 (3112 \* (1690/3115)) [1690/3115= 54.2% estimates proportion of white river naturals to sum of WR nats and WR hatch]

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On Mon, May 2, 2016 at 12:33 PM, Susan Bishop - NOAA Federal <[susan.bishop@noaa.gov](mailto:susan.bishop@noaa.gov)> wrote:

OK. Chris, we will take a look and make a decision on which one to use. The numbers are close between the two and I need to break out the management units into their populations.

On Mon, May 2, 2016 at 11:20 AM, James, Chris <[cjames@nwifc.org](mailto:cjames@nwifc.org)> wrote:

Susan,

Attached is the methodology we suggest for estimating potential spawning escapements in consideration of only assessing tribal fisheries which begin in May. While it is stated in the document, we feel that this methodology is more appropriate than adjusting FRAM inputs to estimate escapements and ERs because of FRAM model assumptions during unique time-steps. We suggest the methodology we developed be used in the BiOp.

**Nooksack Early returns:**

I spoke with Ned regarding the SF abundances and forecasts estimates. This year, they are estimating a terminal run size with more NF NOR (based on DNA) to return to the SF than to the NF itself, 115 and 90 fish, respectively, with an expected SF NOR origin terminal run of ~135. This year is the first year where NF NOR estimates to the SF are expected to be greater than the NF NOR estimate for the NF, itself; thus the deviation from past years forecasts of terminal run size for the SF Nooksack.

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On Fri, Apr 29, 2016 at 3:09 PM, Susan Bishop - NOAA Federal <[susan.bishop@noaa.gov](mailto:susan.bishop@noaa.gov)> wrote:

We were able to make it work to get the information needed for the biop on the proposed spring Chinook Puget Sound tribal plan.

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