From: Sarah Gallagher - NOAA Federal <sarah.gallagher@noaa.gov>

Sent: Thursday, April 4, 2019 10:21 AM

To: Cook, John
Cc: Provins, Samuel

Subject: Re: [EXTERNAL] Re: CC Data

Thank you Ryan, Very helpful. Some great information on entry timing into Clear Creek. Glad you are working on getting things finalized. I know it's a big task!

Sarah Gallagher | Fish Biologist

NOAA Fisheries | West Coast Region U.S. Department of Commerce 650 Capitol Mall, Suite 5-100, Sacramento, CA 95814 916-930-3712 | Sarah.Gallagher@noaa.gov

On Wed, Apr 3, 2019 at 3:59 PM Cook, John < john_cook@fws.gov > wrote:

I put together the passage for video years 2013-2017 STT >16" passage. These are the raw video passage numbers with no imputed passage values. I am still working through the final GAM estimates for STT, and the final estimates don't necessarily translate well to passage timing, mostly just total for the season. I included the outage values for each day and the season total for your discretion. Looks like 2014 and 2015 are your best bet as far as low outage. However, the numbers seem to have a significant range over the years.

Hope this helps! Ryan

On Tue, Apr 2, 2019 at 9:19 AM Sarah Gallagher - NOAA Federal < <u>sarah.gallagher@noaa.gov</u>> wrote: In general, this is what I am looking for: This is CDFW final estimates- 16"+ passage into Clear Creek.

Sarah Gallagher | Fish Biologist

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On Mon, Apr 1, 2019 at 4:57 PM Sarah Gallagher - NOAA Federal < sarah.gallagher@noaa.gov > wrote: Thanks Ryan. Yes. Maybe one of the years that is complete. I have the Sept-Dec data from Doug and I know you guys have not completed estimates in most years. But if there is a good example year that is done to show the migration period of steelhead including the peak. No need to spend too much time if it's not ready, just would be nice to be able to cite some of that great monitoring you have been doing!

Sarah Gallagher | Fish Biologist

NOAA Fisheries | West Coast Region U.S. Department of Commerce 650 Capitol Mall, Suite 5-100, Sacramento, CA 95814 916-930-3712 | Sarah.Gallagher@noaa.gov On Mon, Apr 1, 2019 at 4:15 PM Cook, John < john cook@fws.gov > wrote: Hey Sarah,

Sorry I was not able to get to this sooner. I am in the field tomorrow, but should be able to start on this Wednesday. Just to clarify for the STT >16 passage you requested today: you are looking for one year of daily passage?

On Mon, Mar 18, 2019 at 3:28 PM Sarah Gallagher - NOAA Federal < <u>sarah.gallagher@noaa.gov</u>> wrote: Perfect thank you!

Sarah Gallagher | Fish Biologist

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On Mon, Mar 18, 2019 at 3:23 PM Provins, Samuel < samuel provins@fws.gov > wrote:

Hey Sarah,

Good talking to you. Ryan and I are going to try and get you three things:

- 1. General SR upstream timing
- 2. General Steelhead upstream timing
- 3. SR redd incubation temperature distribution
- 4 SR holding temperature distribution

Working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.

Sam Provins, Fish Biologist Pacific Southwest Region United States Fish and Wildlife Service

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J. Ryan Cook

Fish Biologist U.S. Fish and Wildlife Service

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J. Ryan Cook

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