

5/22/2019

National Oceanic and Atmospheric Administration Mail - CC Data



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

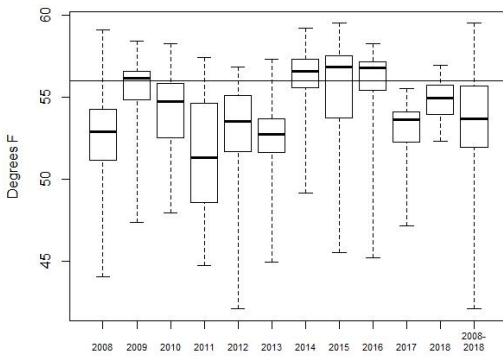
CC Data

Provins, Samuel <samuel\_provins@fws.gov>  
To: Sarah Gallagher - NOAA Federal <sarah.gallagher@noaa.gov>

Thu, Mar 28, 2019 at 9:52 AM

Plot below - Lemme know if you need anything else

CC SR incubation Temps (Above PW)



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

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Samuel\_Provins@fws.gov

On Thu, Mar 28, 2019 at 9:51 AM Provins, Samuel <samuel\_provins@fws.gov> wrote:  
Easy enough!

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On Thu, Mar 28, 2019 at 9:11 AM Sarah Gallagher - NOAA Federal <sarah.gallagher@noaa.gov> wrote:  
I think whatever is the simplest, and easiest to interpret works best for me. CAN that be easily done and change the E?

https://mail.google.com/mail/u/1?ik=37be0060a7&view=pt&search=all&permmsgid=msg-f%3A1629268980058521315&dsqt=1&simpl=msg-f%3A1629268980058521315

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**Sarah Gallagher | Fish Biologist**  
NOAA Fisheries | West Coast Region  
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650 Capitol Mall, Suite 5-100, Sacramento, CA 95814  
916-930-3712 | Sarah.Gallagher@noaa.gov

On Thu, Mar 28, 2019 at 8:55 AM Chamberlain, Charles <charles\_chamberlain@fws.gov> wrote:

The whiskers are something different if there are outliers displayed beyond them.

I usually change the settings in my boxplots so the whiskers represent the range, but that's not the default in R. My method is no more "right" than anybody else's, but it's easier to explain in a figure caption ;)

<https://www.r-bloggers.com/whisker-of-boxplot/>

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**Charles Chamberlain - Fish Biologist**  
Clear Creek Program Manager  
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On Thu, Mar 28, 2019 at 8:46 AM Provins, Samuel <samuel\_provins@fws.gov> wrote:

Yep, I can change E (~sigma) to something more useful if you like.

Yes that all looks correct. You might add something like - *Exposure was calculated using mean daily water temperatures at redd locations though emergence.*

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On Thu, Mar 28, 2019 at 8:39 AM Sarah Gallagher - NOAA Federal <sarah.gallagher@noaa.gov> wrote:

Sam and Charlie, thank you for responding to my data request. Very helpful.

Sam, question, Is E in the incubation temps graph= all of the redds from 2008-2018?. And, For a figure caption; is this accurate?

*Water temperature exposure of spring-run incubating embryos in Clear Creek, 2008-2018. Exposure was calculated using mean daily water temperatures at redd locations. Lines in boxes are sample medians, box-ends are upper or lower quartiles, whiskers are minimum and maximum, and points represent outliers (defined as 1.5 times upper and lower quartile).*

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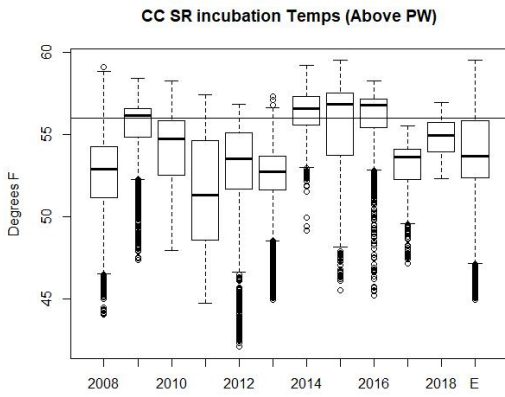
**Sarah Gallagher | Fish Biologist**  
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On Thu, Mar 21, 2019 at 10:20 AM Provins, Samuel <samuel\_provins@fws.gov> wrote:

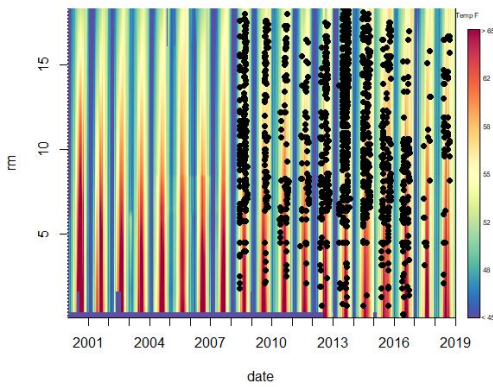
1.Yeah i think CCs plot does a good job of describing passage.

2.No response from Tom yet.

3. In the last 11 years, SR eggs in Clear Creek experienced mean daily temperatures over 56F approximately 25% of days. The proportion of incubation days over 56F was greater than half in 2014,2015 and 2016.



4. Lots of live observations...which data do you want?



5. Yes that distribution still describes spawning timing. It seems like the proportion has gotten smaller (along with the number of fish) down towards 0-10% before Sept 15th. It looks like in all but one year (2015) the early fish also spawned at a lower average RM in addition to spawning earlier. I can do a stat or make a figure if you would like, but yeah they will have experienced higher incubation temps.

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On Thu, Mar 21, 2019 at 9:21 AM Sarah Gallagher - NOAA Federal <sarah.gallagher@noaa.gov> wrote:

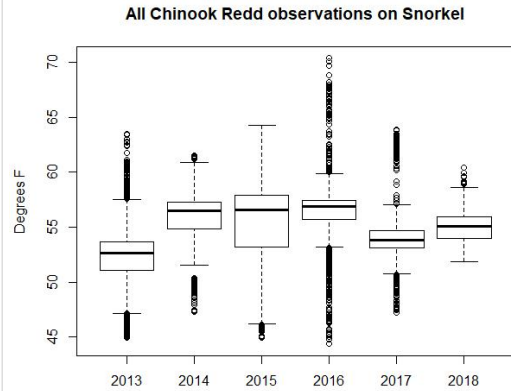
Thanks Sam, Just realized I have the plot for spring run timing from Charlie's pulse flow. I think only the redds upstream of PW since uncertainty -I am guessing the 1000 ft redd counts are in with the first plot which are mostly fall run. I think the format works but a verbal description would help (and in F). One thing this plot does is combine all redds and some difficulty in telling when they were exposed temperatures warmer than 56. Things I am thinking about are, how often and what proportion of redds are exposed to temps over 56? As far adult timing of steelhead- that would be great if Tom had anything summarized generally from video data. From my recollection, they start moving in late September, peaks in Dec and Jan, and goes through March.

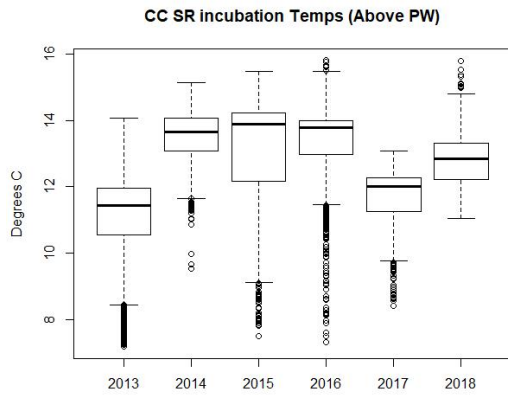
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On Thu, Mar 21, 2019 at 6:39 AM Provins, Samuel <samuel\_provins@fws.gov> wrote:

Getting you this stuff is my priority today. Cook is on AL for a week so we will have to piece together what we have. First day of telework! so call my cell if you have thoughts

1. General SR upstream timing  
-CC presented this info recently I will get you the plot
2. General Steelhead upstream timing  
-I can contact Tom from the state to get you this
3. SR redd incubation temperature distribution  
-I will get you this for all years we have clean  
-Do you want all redds or redds above the picket weir?  
-Does this data format work for you?





4 SR holding temperature distribution  
-Same data format as above maybe?

5. Prop SR redds before 9/15

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On Tue, Mar 19, 2019 at 4:57 PM Sarah Gallagher - NOAA Federal <[sarah.gallagher@noaa.gov](mailto:sarah.gallagher@noaa.gov)> wrote:

Average portion of redd count constructed before Sept 15 ranged from 0-26% from 2003-15. Has that changed with recent years? And can you tell from your analysis is those were those redds more exposed to higher temperatures?

**Sarah Gallagher | Fish Biologist**  
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On Mon, Mar 18, 2019 at 3:28 PM Sarah Gallagher - NOAA Federal <[sarah.gallagher@noaa.gov](mailto:sarah.gallagher@noaa.gov)> wrote:  
Perfect thank you!

**Sarah Gallagher | Fish Biologist**  
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On Mon, Mar 18, 2019 at 3:23 PM Provsins, Samuel <[samuel\\_provsins@fws.gov](mailto:samuel_provsins@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

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4 SR holding temperature distribution

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