
From: Evan Sawyer - NOAA Federal <evan.sawyer@noaa.gov>
Sent: Friday, April 5, 2019 12:58 PM
To: Brian Ellrott - NOAA Federal
Subject: Re: Status of Sacramento I&S table

All I'll say is WUA is weird.

COS and PA have very similar flows overall and looking at the WR WUA analysis the habitat carrying capacity (in WUA units) "peaks" at the lowest flows and at flows >10,000 cfs. Basically I interpret this as at low flows the available is good (quality). At intermediate flows the habitat is less good (quality), and at higher flows habitat is again good (quality).

Its hard to attribute a direct effect to species from habitat conditions but it was the information available? I also looked at average flows during spawning and rearing to describe stranding/dewatering risk when minimum flows are implemented as I feel that provides a better representation of effects to species. Yes, your second question is about the likelihood of stranding/dewatering.

The "risk" of these actions was hard for me to describe as it could be either based on the modeled flows where the exceedance probability shows 30% chance of exceeding December flows of 3250. Or risk would be the 20% of years where EOS storage is <2.2 MAF? Or it could be every year since all years would have some flow decrease? Not sure.

Evan

On Fri, Apr 5, 2019 at 12:41 PM Brian Ellrott - NOAA Federal <brian.ellrott@noaa.gov> wrote:
correction, context is winter - spring minimum flows.

On Fri, Apr 5, 2019 at 12:39 PM Brian Ellrott - NOAA Federal <brian.ellrott@noaa.gov> wrote:
Does the following imply that the minimum flows under the PA are generally higher than the minimums under the COS, which results in increased carrying capacity?
(Context is spring flows.)

"Increased habitat carrying capacity (WUA) at lower flows providing increased feeding conditions, and decreased competition and predation."

On Fri, Apr 5, 2019 at 11:07 AM Brian Ellrott - NOAA Federal <brian.ellrott@noaa.gov> wrote:
Thanks Evan! Off and running on winter-run, no worries at all about spring-run. I likely won't get to them until early- to mid-next week.

On Fri, Apr 5, 2019 at 11:03 AM Evan Sawyer - NOAA Federal <evan.sawyer@noaa.gov> wrote:
Hey Joe, Brian,

I don't want to keep you waiting so I'm letting you know that the I&S tables for the Sacramento River effects is updated on the ROCON drive. I feel it's up to date for WR and GS but I need to review SR and Sh. I also have to do CH but I'm struggling a bit because the format that CH is presented in the effects section is different than for species. Anyway, I'm trying to accommodate your schedule as best I can. You can find the

table here: R:\Draft BiOp\2_ESA\2.5-2.6 Effects of the Action\Shasta Division\Sacramento River\2019.03.21_Excel template for I&S tables for Sacramento River.xls

One thing (or many) about the species effects are I still don't know how we are (or aren't) incorporating the programmatic action components. I've included them in the tables but you can see the results are... uncertain.

Oh, and If you have ANY opinions on what's in the table let me know and we can discuss.

Evan

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