From: Kristin Begun - NOAA Affiliate <kristin.begun@noaa.gov>

Sent: Wednesday, February 27, 2019 11:46 AM

**To:** J. Stuart - NOAA Federal

**Subject:** Re: ROC on LTO

So not a cut and dry answer. With all the unknowns, sounds like they would need to include a study such as AT surveys. I'm not sure how flushing agricultural drainage would be beneficial, but I have my reading assignments so hopefully things become clearer.

On Wed, Feb 27, 2019 at 10:25 AM J. Stuart - NOAA Federal < j.stuart@noaa.gov > wrote:

The question is whether the transit time in the Sac DWSC is longer or slower and whether the exposure risk to predators is greater or smaller. We don't have much info on predator density in teh ship channel, but I know that it is full of largemouth bass, catfish and stripers. It is a known "hot-spot" for bank fisherman and trollers. The question is whether the predator density is greater or smaller than going down the Sacramento side (but have to look at the mainstem versus Sutter and Steamboat sloughs, as well as risk to entrainment into the DCC and Georgianna Slough) Lots of variables here with little to go on I'm afraid.

On Wed, Feb 27, 2019 at 9:17 AM Kristin Begun - NOAA Affiliate < kristin.begun@noaa.gov > wrote: Okay, I'll focus on water quality issues in Suisun area and Colusa Drain. From what I've read on the West Sac lock system, it sounds like they want to connect the Sac River with the DWSC for food flushing, but do we want our fish to be re-routed to the DWSC? Might be a faster ride through the gauntlet and good rearing habitat at Liberty Island, but they would bypass that stretch of the Sac River. So maybe that could be beneficial. What are your initial thoughts?

Kristin Begun, Natural Resource Specialist Contractor with Ocean Associates, Inc. NOAA Fisheries West Coast Region kristin.begun@noaa.gov

On Wed, Feb 27, 2019 at 8:42 AM J. Stuart - NOAA Federal < j.stuart@noaa.gov > wrote:

We might want to add questions regarding water quality of the wet land discharge back to Suisun and Grizzly bays as well as what they plan to do with the Colusa Drain water and the operations of the Sac Boat locks. I have some concern for water quality of the discharge (BOD/COD impacts on DO and any chemical constiuents that may impact - NH4, NO3, CH3Hg, additional P and N loads etc.) also migration impacts for emigrating/immigrating fish if the gates are open at the operable boat locks.

On Wed, Feb 27, 2019 at 8:32 AM Kristin Begun - NOAA Affiliate < <a href="mailto:kristin.begun@noaa.gov">kristin.begun@noaa.gov</a>> wrote: Hi Jeff,

I'm checking in to see if there's any particular area I should focus on for our Delta-related review. I was hoping the "food subsidies studies" would be discussed on the SMSCG call, but it was mainly focused on salinity. There isn't much info on how the RRDS would change, the BA just mentions that SMSCG ops will be combined with RRDS for food production and freshwater flushing. Despite the lack of detailed information, I think these additional summer operations are minor. What are the potentially major hot topics on your list and what can I help review?

## Kristin

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On Wed, Feb 13, 2019 at 7:50 AM Kristin Begun - NOAA Affiliate < kristin.begun@noaa.gov > wrote: Well I'll start reviewing and try to make sense of it. Since I worked on the Suisun Marsh Salinity Control Gates operations request I will take a look at that and see if anything stands out, and will do a general review to try and get my bearings.

On Tue, Feb 12, 2019 at 7:18 PM J. Stuart - NOAA Federal < <u>i.stuart@noaa.gov</u>> wrote: Yeah I'm still slogging through our sufficiency review - lots of pages of vague details unfortunately. Effects section is several hundred pages long for our species, and divided up in a not so user friendly way. Not a lot detail on how they arrived at conclusions, that's buried in the thousands of pages of appendices I'm afraid. Kind a like a big scavenger hunt to find the pearl of wisdom. Have fun in Utah.

Jeff

On Tue, Feb 12, 2019 at 12:09 PM Kristin Begun - NOAA Affiliate < <u>kristin.begun@noaa.gov</u>> wrote: Hi Jeff.

I should coordinate with you on reviewing the Delta-related sections of the BA. I haven't dived in yet, and I am out of town (in Utah) on Thursday through Sunday. But in case there is a furlough, I want to make sure I am as productive as can be.

I am DOSS focused today but plan to focus on the BA tomorrow. Can we have a call to discuss?

Thanks, Kristin

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Jeffrey S. Stuart, M.S. Fishery Biologist

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