

**From:** [Thomas, Sue](#)  
**To:** [McCarthy, Nicole](#)  
**Subject:** Re: Dungeness-S"Klallam Consultation Response  
**Date:** Thursday, April 18, 2019 9:40:04 AM

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Sure thing. Feel free to call if you want anything else. I'll be in today, teleworking tomorrow (so send an email and I'll be in touch) and potentially in the field Mon-Wed, then off next Thurs or Fri.

Best,  
Sue

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On Thu, Apr 18, 2019 at 9:23 AM McCarthy, Nicole <[nicole\\_mccarthy@fws.gov](mailto:nicole_mccarthy@fws.gov)> wrote:  
Lots of subtleties involved here. I can see the challenge in condensing the Stillman issue. I'm going to look at these papers. Thanks!

On Thu, Apr 18, 2019 at 9:09 AM Thomas, Sue <[sue\\_thomas@fws.gov](mailto:sue_thomas@fws.gov)> wrote:  
Hi Nicole,

The confusion is understandable. The statement is made by the authors of the Confluence Report (the topic of this particular bullet). They wrote the report under contract with the tribe to assess the impacts of aquaculture on wildlife. This statement relates to their interpretation of results from a paper created by Stillman et al. However, Stillman did not address aquaculture at all. That paper was about the effects of sea level rise on eelgrass and Brant foraging opportunities in Humboldt Bay. Stillman et al concluded that mudflats within the bay would migrate inland since there were few barriers to the migration of this habitat type. They assume that eelgrass would move with the mudflats and have minimal effect on Brant. That is not the case in Dungeness Bay since it is bordered by bluffs.

Stillman briefly addresses human disturbance but in the form of a few crabbers, hunters, etc and only in the context of the potential loss of eelgrass foraging opportunities due to sea level rise. Again aquaculture or mariculture is never mentioned. Stillman et al concludes that human disturbance in relation to the potential loss of eelgrass foraging opportunities due to sea level rise would have minimal effects in that system. However, and this is the clincher for me, 80% of Brant in the entire bay are located in the southern portion of the bay along with 78-95% of the eelgrass (Moore et al 2004, Scripps 1993) while all of the aquaculture is located in the northern part of the bay. Big difference. So the Confluence Report, created by the Tribe's contractors states "Stillman et al's (2015) observations in Humboldt Bay suggest that even 300+ acres of aquaculture activity may be having minimal or no impact on Brant" is misleading other than for Humboldt Bay or

similar very large bays where aquaculture and brant/eelgrass are effectively separated. I've attached Stillman and Moore in case you want to read more ;) The Scripps Inst. report is huge, so let me know if you reallllly want to dig in...ha! I've also attached the Confluence Report which is rife with this type of spurious information that would not be obvious unless you check their sources and/or know the ecology of the species and bays. As far as I can tell, the tribe is basing their finding of no effect on this report.

Please let me know if you have a better idea on how to state that. We were trying to be brief so I suspect detail was lost that may help clarify. Oh, and yes, Jennifer should be back by the 24th. Yay!

Best,  
Sue

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On Thu, Apr 18, 2019 at 6:50 AM McCarthy, Nicole <[nicole\\_mccarthy@fws.gov](mailto:nicole_mccarthy@fws.gov)> wrote:  
Hi Sue, no, I haven't heard from Jennifer yet, I think she is back on the 24th? Thank you so much for the reply. (I was teleworking yesterday and since it's early today, thought I'd write instead of call). I still want to make sure I have the involved parties right and who the tribe's permit request is going to.

- The Confluence report states that “Stillman et al’s (2015) observations in Humboldt Bay suggest that even 300+ acres of aquaculture activity may be having minimal or no impact on Brant” which is misleading since Stillman et al did not address aquaculture,[\[MN1\]](#) [\[TS2\]](#) and the majority of brant and eelgrass are located in the South Bay (Moore et al 2004) while all aquaculture was located in the northern portion of the bay.

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[\[MN1\]](#) doesn't the reference say “300+ acres of aquaculture activity”?

[\[TS2\]](#)? An issue of the ‘report’ vs the paper? The main point is that Stillman did not address aquaculture. In fact, the two main uses (aquaculture & Brant/eelgrass) occur primarily in different parts of the bay.

One thing I'm still confused about is that Stillman *does* seem to address aquaculture (he says 300+ acres may have no impact) but then later in the paragraph it says he *doesn't* address aquaculture. If his reference about aquaculture is for a different location than the tribe wants or is he is not analyzing the effects in enough, we could note that in the response, that his "analysis" of aquaculture is for a different part of the bay or that he is not addressing the details of aquaculture, like setup, maintenance, on-foot access, or whatever. That way it doesn't sound like a contradiction.

Anyway, again, if these are little details that don't matter or are too in the weeds, we can ignore this. Thank you!

Nicole.

Oh, I will ask Charlie about timing of this.

On Wed, Apr 17, 2019 at 3:52 PM Thomas, Sue <[sue\\_thomas@fws.gov](mailto:sue_thomas@fws.gov)> wrote:

Hi Nicole,

No, no, no - Thank You! The RD and Kevin are coming up on the 30th. I'm not sure how to prioritize this - do you know if Robyn has a preference on the # of days she is presented with background information prior to a trip? If Jennifer is out of commission, I'd defer to Charlie. He seems to be on top of these types of deadlines.

Best,  
Sue

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On Wed, Apr 17, 2019 at 3:07 PM McCarthy, Nicole <[nicole\\_mccarthy@fws.gov](mailto:nicole_mccarthy@fws.gov)> wrote:

Hi Sue, thanks for the information. I looked at a few older documents about tribal oyster farming that we have here from a few years ago. Like you said, it's complicated and sounds a little contentious.

One more question: what is your timeline on this? Is there a date by which you guys want to get this to Robyn (or Charlie)? That'll help me prioritize.

Thank you,  
Nicole

On Wed, Apr 17, 2019 at 1:47 PM Thomas, Sue <[sue\\_thomas@fws.gov](mailto:sue_thomas@fws.gov)> wrote:

Hi there Nicole,

Not sure if Jennifer has been in touch, so I've answered your questions as best as I can. It's such a complicated topic, that I sometimes get the fine points wrong, but at the least we will have something to go on. Ask me any wildlife question and I'm on it! But I'm a bit in the weeds on the management aspects of this issue. Jennifer is away on fire training and Lorenz, our Deputy, who may know more

is out removing creosote-covered logs from a few other refuges, so I guess I'm it.

We do not actually own the land where the farm is located, but hold it under a Easement from WA Dept of Natural Resources. We manage for Refuge purpose (as a preserve and breeding ground for native birds). The three entities that manage 2 permits are Clallam County which issues a Shoreline Development permit and the Army Corp of Engineers as well as WA Dept of Ecology which jointly manage Aquaculture permits in the state. The ACOE and DOE permit is the most pressing now, Clallam Co has put theirs on hold until the more specific aquaculture permit is issued.

I hope that helps! Feel free to call if you have any additional questions and I'll do my best,  
Sue

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On Mon, Apr 15, 2019 at 3:27 PM McCarthy, Nicole  
<[nicole\\_mccarthy@fws.gov](mailto:nicole_mccarthy@fws.gov)> wrote:

Hi Jennifer, thank you and Sue for the responses. I have a few more questions and I hopefully got all of them highlighted in yellow so it will be easier to find them in track changes. If they are too "in the weeds" or if they are information that everyone involved will already know, you can feel free to delete. I'm just reading this as a layperson and trying to figure out the relationship between the tribe seeking permits from one or all three other agencies, yet the farming is conducted in Refuge waters – I think? It seems like adding the specific agency, or all three if that permit request goes to all three, will help clarify a few details.

So, you can also look at what I did. There's so much solid information here, I just wanted to help it stand out a little to Robyn (or whomever) to get all your points.

I am more than happy to change or finalize this, or whatever helps. It's great to learn about things going on at refuges! I hope you are enjoying the east coast!

Thank you,

Nicole

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