Maybe you can help me figure out how to use Kevin's feedback (below) to improve the response.

-Jennifer

Sent from my iPhone

Begin forwarded message:

> **From:** "Kilbride, kilb" <kevin_kilbride@fws.gov>
> **Date:** April 21, 2021 at 5:10:26 PM PDT
> **To:** "BrownScott, Jennifer" <jennifer_brownScott@fws.gov>
> **Subject: Re: IMPORTANT: Aquaculture Request**
>
>
> Hi, Jennifer:
>
> You did an excellent job with the narrative. I would suggest a few things about terminology in your write up. Specifically, an ISI represents a draft protocol and Level 1 represents a less intensive (less robust) type of survey. Plus, I suggest pointing out that a less robust survey likely would not have statistically based results.
>
> As you indicated, it is important to emphasize the justification for the survey associated with the draft protocol (ISI) that contrasts with the scientific information needed for assessing the effects of aquaculture activities of migratory birds (e.g., brant, wigeon, shorebirds) based upon their use of the 50-acre site in order to meet specific life-history requirements.
>
> As we discussed during our last meeting, a research project with a BACI design maybe an appropriate way to address the specific information need. A robust survey is another means of gathering scientific information in order to make statistically based conclusions.
>
> Kevin Kilbride
> US Fish and Wildlife Service
> I&M Coordinator
> Columbia Pacific Northwest (R9) & Pacific Islands (R12)

Branch of Refuge Biology
911 NE 11th Avenue
Portland, OR 97232
(503) 231-6176 (Phone)

From: BrownScott, Jennifer <jennifer_brownScott@fws.gov>
Sent: Wednesday, April 21, 2021 3:47 PM
To: Kilbride, kilb <kevin_kilbride@fws.gov>
Subject: IMPORTANT: Aquaculture Request

JST has requested the DNWR Shoreline Survey ISI. I want to make sure I fully explain the limitations of the survey protocol, as it may relate to use as a baseline survey, or survey template for assessing aquaculture disturbance impacts. Could you please take a look at the below paragraphs and let me know if I am adequately capturing the limitations and the ways that this survey protocol does not meet base requirements for data collection related to statistically analyzing this controversial and uncertain cause and effect scenario?

Thanks for your help,
Jennifer

_____

Please find attached the Initial Survey Instructions for the Dungeness National Wildlife Refuge Shoreline Survey. This Level 1 Survey was conducted to collect diversity and abundance of wintering wildlife within the survey area, for use in oil spill response. Surveys were conducted in 2014 and 2015 and only covered a small portion the proposed aquaculture lease area. Incidental observation of disturbance vectors were noted, but the survey was not intended to identify the quantity, magnitude, duration or overall impacts of disturbance. The protocol does not identify the desired accuracy of estimates, magnitude of detectable change, or acceptable error rate as would be necessary to statistically determine disturbance impacts (if disturbance data collection was the focus of this survey).

Given the incidental nature of disturbance data collection, the length of time since the survey was conducted, the fact that the survey area does not adequately cover the lease or adjacent areas, and the inability to fully understand data accuracy we would not recommend using data from this survey as baseline information to understand potential wildlife impacts from aquaculture activities.

_____

Jennifer Brown-Scott

Project Leader

Washington Maritime National Wildlife Refuge Complex

715 Holgerson Road

Sequim, WA 98382

(360) 457-8451

~~[Dungeness NWR](~)~[Protection Island NWR](~)~[San Juan Islands NWR](~)~[Copalis NWR](~)~[Flattery Rocks NWR](~)~[Quillayute Needles NWR](~)~~