| From: | Garwin Yip - NOAA Federal [garwin.yip@noaa.gov](mailto:garwin.yip@noaa.gov) |
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| Sent: | Sunday, June 16, 2019 3:41 PM |
| To: | Cathy Marcinkevage |
| Cc: | Naseem Alston |
| Subject: | Fwd: Take tables |

Cathy,
Forwarding Evan's comments on my comments on the IT table. I haven't looked at them yet, but thought we could put our heads together to think about these.
-Garwin-
Garwin Yip
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Forwarded message
From: Naseem Alston - NOAA Federal [naseem.alston@noaa.gov](mailto:naseem.alston@noaa.gov)
Date: Sun, Jun 16, 2019 at 2:28 PM
Subject: Fwd: Take tables
To: Garwin Yip < Garwin.Yip@noaa.gov>

Since most of these are in response to your comments, let me know if you have any concerns with his approach. It's hard for me to track this way without looking at the table...
$\qquad$ Forwarded message
From: Evan Sawyer - NOAA Federal < evan.sawyer@noaa.gov>
Date: Sunday, June 16, 2019
Subject: Take tables
To: Naseem Alston - NOAA Federal [naseem.alston@noaa.gov](mailto:naseem.alston@noaa.gov)

Hi Naseem,
The document is currently locked as Maria is reviewing it. I don't know if there is a better workaround so I'm going to 'collect' my thoughts/responses here for now:

- Garwin's comment about how the mean/median mortality as a level of take WILL be exceeded in $50 \%$ of the time (definition of median). My response: This is why I'm not suggesting to use a direct quantity as the take limit. Instead I'm suggesting a series of compliance criteria that together provide an indication of whether or not take has been exceeded. The last criteria is whether or not operations are consistent with the proposed performance metrics which equivocate on an exact level of mortality. I don't belive a change is neccessary?
- Garwin's comment re: Ramping rates, which are based on 90-5 (starting on pg. 60) not the 2008 BA. To respond to your comment about alternatives to reinitiating I would suggest the following text: "In situations where Relamation determines that exceeding these ramping rates would provide a benefit to water storage, a species of concern, or other some other benefit, Reclamation may do so with NMFS concurrence. In situations of emergency, Reclamation may exceed these ramping rates, and within two week Reclamation will provide to NMFS an assessment of operations and their effects during the emergency reduction in flow."
- Garwin's comment re: the \% of redds affected vs \% of eggs/fry. Resolve by changing all instances of "redds" to "eggs/fry."
- Garwin's comment re: end of Shasta summer temperature management which is October 31 (confirmed). No change, correct as is.
- Garwin's comment re: Spring-run redd dewatering, where the $\%$ of fall-run redds dewatered at varying flow rates is the surrogate. Need to identify as such.
- Garwin's comment re: will Reclamation accept operating to 7DADM? I see this differently, in that we used 7DADM metrics converted to a DAT threshold (dependent on month and location) to assess effect but the expectation is not that Reclamation would operate to it. Similar to WR take would be exceeded if Reclamation exceeded the criteria identified (that includes the 7DADM metric among some others). I believe it is correct as written (no change) and shouldn't cause too much of a problem with Reclamation?

As I said in my last email in this chain, I expect to be able to make these changes later tonight. In the meanwhile, if you have time, could you look at my responses above and give you blessing (or not) for me to add them later? If not I will assume you agree and add the changes.

Evan
On Sun, Jun 16, 2019 at 9:11 AM Naseem Alston - NOAA Federal [naseem.alston@noaa.gov](mailto:naseem.alston@noaa.gov) wrote: Hi all,

I know at least most of you have looked at Garwin's review comments/edits and starting making some revisions.
I went through and added a few comments to at least one of each of your sections (I think) - to be carried through all sections.
SCHEDULE: is to have a good ready to go copy by Monday. Thanks for those of you that are putting some time in this weekend!
Let's keep communicating when you close the Tables doc so others know they can get into it.
For example, some reminders about the $\mathrm{A} / \mathrm{E}$ of take column:

1) Incidental take is $\mathrm{A} / \mathrm{E}$ that we expect to occur based on the PA (modeling, etc). This should be an "acceptable" amount (that avoids J)
2) As take is number of "death/injury/capture, etc of fish" - when we don't have this, we are using an ecological surrogate (a metric we use to help inform what the level of effect/take will be). In the table for every cell, we should then start with "The ecological surrogate is... "
3) If it is not already stated, we should include how this surrogate relates to the actual number of fish being taken (for example a degraded habitat area surrogate would include description of how the degraded habitat is expected to result in reduced growth/survival of juveniles) - this is the "probable change in fitness" column.
4) To end the $\mathrm{A} / \mathrm{E}$ discussion, we need to indicate when take would be exceeded. This is when the level of take goes BEYOND what was indicated in the PA/modeling - and so beyond the surrogate. In some cases we don't want to just end it, triggering reinitiation, but we would want some intervention (like call us to reduce), other times a "target" will be exceeded - but take won't be exceeded until the target is missed a certain number of days in a year or number of years, etc.

If you are still struggling to identify/define a surrogate or when it is exceeded, float the question with this group and maybe someone can help.

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