

25 August 2014

Russ Kiefer (IDFG) and Stuart Ellis (CRITFC) comments on UI Technical Report 2014-12-DRAFT: “Reach conversion rates of radio-tagged Chinook and sockeye salmon in the lower Columbia River, 2013”, with UI responses (in bold text below comments).

Russ Kiefer comments:

IDFG's Fisheries Chief asked if Keefer et al. "Reach Conversion Rates of Radio-tagged Chinook and Sockeye Salmon in the Lower Columbia River, 2013" could also calculate spring and summer Chinook conversion rates using the US Vs. Oregon fisheries management date of June 16th. I talked to Matt about this and he said they have the data coded in a way that this would not be that difficult to do. IDFG would like this additional analysis be included in the final report if possible.

Please give me a call at 208 334-3791 if either of you have any questions.

Thanks,

Russ

Response: In the revised report we included raw and adjusted reach conversion estimates for spring and summer adult and jack Chinook salmon separately. We limited the ‘new’ data to the Bonneville-McNary reach. This reach covers the full study area and the estimates capture the essential result for spring versus summer fish. Changes to the report include additions in the Executive Summary, Methods, and Results sections.

Stuart Ellis comments:

I would suggest that you not refer to the "harvest rates" for these fish. It appears to me that what you are reporting is simply the number of tags that fishers choose to report. This is not a harvest number. It is just a reporting number. Total harvest rates in Zone 6 are much higher than you your report appears to claim. When you say that 2.8% of the sockeye and 4.5% of the chinook were harvested, those is a nonsensical numbers. And when you say that some of the un-accounted for fish are from un-accounted for harvest you appear to be implying that fisheries are not accounting for the catch correctly which is a bold claim when you are basing it on a flawed estimate of catch. I think the best thing to do would be to remove any mention of harvest rates from you paper since you can not estimate any kind of realistic harvest rate based on voluntary reporting of radio tags. We actually have a number of fishers who would never return a radio tag no matter how much you paid them because they don't trust the motivation of people doing this kind of research.

Response: We appreciate this comment and made a number of clarifying changes to the revised report to better communicate that the ‘unreported harvest’ is specific to radio-tagged fish only. Please see changes in paragraphs 2 and 3 of the Executive Summary,

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paragraph 4 of the 'Conversion rate estimation' section, the caption to Table 3. We also inserted 'radio-tagged' in front of several of the 'unreported harvest' uses, to more clearly separate the tagged sample from the harvest rates assessed by management agencies.

Another thing you don't seem to discuss much in the report are the sea lions in the Bonneville Pool. We think there were four of them last spring and summer. At least one of them spends almost all his time at The Dalles (he hauls out at the marina). These things may have eaten a large number of fish including a bunch of your radio tagged fish.

Response: We added a paragraph in the Discussion about the potential impact of the sea lions in the Bonneville pool in 2013.

Another thing, that I found puzzling about this report is that you don't make any comparisons of conversion or fall back estimates made with fish PIT tagged as juveniles or even with the adults we PIT tag a Bonneville. It isn't really clear to me that you have explained how these estimates are any better than estimates made with other methods.

Response: PIT-based estimates of 'conversion' or survival are superior in many ways to the radio-based estimates, particularly going forward with the new PIT sites at The Dalles Dam. What the PIT studies can't do well is describe the behavior of the fish in the tailraces and fishways and in response to changing operational and environmental conditions at those sites. These behavioral evaluations are the primary reason the RT work was conducted. The reach conversion RT study component has the benefit of being able to assess tributary turnoff into sites without PIT antennas, fallback rates, and behaviors in reservoirs. It also allows us to assess a relatively random sample of the runs at large (though note our comments regarding the bias associated with excluding *all* known-origin fish. . . .) Lastly, it would be useful to compare the RT conversion results with some estimates based on PIT-tags, and particularly with unknown-origin fish PIT-tagged at Bonneville in 2013. However, this was not one of our study objectives.

When you try to clarify that some unknown proportion of the unaccounted for group is harvest, it would be good to clarify that while it may be "unreported" to you, it should be stated so people don't get the impression that there is a bunch of harvest going on that nobody is accounting for. If you just use the term "un-reported harvest" with no qualifiers, then people may jump to the conclusion that there are a bunch of fisheries, that have faulty catch estimates.

Response: please see comments above.

Stuart Ellis
Harvest Management Biologist
Columbia River Inter-Tribal Fish Commission
700 NE Multnomah, Suite 1200
Portland, Oregon 97232
503-238-0667
Direct Line 503-731-1312

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Fax 503-235-4228

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