**From:** Tom Kahler [<mailto:tomk@dcpud.org>]   
**Sent:** Thursday, January 17, 2013 9:59 AM  
**To:** 'Leonard, Nancy'; 'Leah Sullivan'  
**Subject:** RE: actions from Jan FTF meeting

Hi Nancy,

I apologize for the confusion on this one.  What I described on the call was that Chelan PUD switched to acoustic tags in the early 2000s because they needed to determine bypass efficiency and route-specific survival at Rocky Reach.  Since Douglas PUD has no need to determine bypass efficiency or conduct route-specific studies at Wells, we haven’t switched to acoustic tags.  We still conduct all of our survival studies using PIT tags, and will continue to do so for our anticipated study of coho in 2017 and our verification study of yearling Chinook or steelhead in 2020.  Additionally, we are currently conducting a multi-year PIT-tag-based study of the life-history variation and behavior of subyearling Chinook from the Wells Reservoir.  We’ve learned that the size at which these fish commence migration is too small for even the new injectable acoustic tag, and the battery life of the acoustic tags is too short to meet the assumptions of the survival-study model.  If in the future we elect to conduct acoustic-tag studies we would still double tag with PIT tags because our HCP requires that we consider direct, indirect, and delayed mortality in our survival studies.

What I also described on the call was the reduction in PIT-tag numbers necessary for our 2010 survival study that resulted from our installation of a PIT-tag-detection system in Chelan’s Rocky Reach Juvenile Fish Bypass (RRJFB).  This comment was in the context of the discussion of tradeoffs between costs associated with tagging and detection activities during Bill Jaeger’s presentation.  We cut our tag number by about 65% for the 2010 study and all future studies by the one-time cost of improving detection probability downstream, and we’ll likely repeat that for our hatchery monitoring and evaluation program where we can reduce tag numbers (and thus fish handling and associated ESA permitting issues) by installing more or better in-stream detection arrays in the Methow Basin.  We’ll probably upgrade the readers in the RRJFB detection system before our next study to further reduce tag numbers.  From my back-of-the-napkin calculations I estimate that for about $6k-$8k worth of detection improvements at the RRJFB we could save $25k in tags/tagging costs per survival study.

I hope that helps.  Chelan did a bunch of R&D work on acoustic tags before making the switch from PIT tags, so the cost comparisons between PIT and acoustic studies isn’t so straightforward as that switch might be at present (where the technology is off-the-shelf).  The person at Chelan PUD that can most likely help you with your questions about switching from PIT to acoustic is Shaun Seaman, or perhaps Andrew Grassell or Keith Truscott.

Thanks,

Tom Kahler

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