

ADF&G Comments - Draft Eklutna Study Plans

Response due to Samantha Owen November 25, 2020

Chapter	Study	Page	Section	Text	Comment	Author
2.0 Project Facilities and Operations	N/A		N/A	TWG presentation	We appreciate the detailed operational analysis provided by Sean Ellenson. This was a very informative window into the operational sideboard that we were previously concerned with...	ADF&G
3.0 Study Plans	Instream Flow Study			General Comment about the IFS and modeling (HEC-RAS and PHABSIM) exercises	<p>Sean presented the operational scenarios needed to accomplish various flow regimes associated with a potential F&W Program...we are curious what operational considerations are required to meet the proposed releases associated with the IFS study in 2021? With the knowledge that the resevoir would need to be filled essentially to the spill-point; is this achievable?</p> <p>Our initial concerns were associated with allocating a large "flushing flow" as the starting point for the Instream Flow Study which we were concerned my be more debtrimental than beneficial.</p> <p>We appreciate the adjustment toward an approach where initial calibration flows were moderated to a level necessary simply to guide future discussion on the appropriate magnatude of potential flushing flows.</p> <p>We consider this concern resolved.</p>	ADF&G
3.0 Study Plans	Eklutna River Fish Composition and Distribution	73 (map)	3.3.4.1	Reach 5 includes all habitats from the Thunder Bird Creek confluence upstream to the AWWU access road.	While this may make sense geomorphically, the physical habitats change dramatically at the top of the sediment wedge. We suggest that reach 5 be truncated to the section spanning from the Thunder Bird confluence to the top of the sediment wedge where fish habitats transition to an entirely differet situation. We feel it reasonable to segregate the fisheries assessment between habitats impacted by the diversion dam from those above.	ADF&G
3.0 Study Plans	Macroinvertebrate Study	84	3.4.2	The goal of the macroinvertebrate study is to characterize the the Eklutna River macroinvertebrate community in proximity to the diversion dam removal site. Standard community data metrics will be calculated and represent a baseline condition which can be compared to potential samplin efforts...	<p>We disagree with the assessment (as indicated in the comment response table) that the riparian invertebrate communities are not expected to be impacted by "the project". We similarly disagree that a condition factor analysis should be completed by the fisheries project prior to conducting an assessment of the drifting aquatic community.</p> <p>We agree that riparian invert data would not likely be used to inform future operational decisions (as stated in the comment response table), however this could be said for many of the data collected in association with these study plans including the benthic invert data. We feel that the purpose of collecting much of these data is to quantitatively and qualitatively show incremental ecological improvements through time as a results of the program take shape....this is how we can quantify what has been gained.</p> <p>we further understand that there is substantial overlap between the 3 components of the invertebrate community (for example, the adult phase of many of the benthics become memebers of the riparian community, and especially during high water events the benthics become a substantial portion of the drift community, etc.), however these relationships will adjust in conjunction with future changes in hydrology, water chemistry, geomorphology, and substrate composition...and we are not sure that focussing only on the benthic community will represent a sufficient baseline assessment.</p> <p>The goal of this study is to, "characterize the macroinvertebrate community"...and states that "the data will represent the baseline condition which can be compared to potential sampling effors in the future".</p> <p>We believe that leaveing out 2 of the 3 components of the complete macroinvertebrate community may undermine this goal for the following reasons:</p> <ol style="list-style-type: none"> 1. We believe that Increased lake discharge (as is planned for the IFS and Geomorph studies and appears to be the ultimate goal for the program from many of the team) will alter the hydrology, water chemistry, channel structure, substrate composition, and riparian habitats as the channel adjusts and migrates laterally and that this result will likely substantially alter each of the 3 components of the invert community. Because of this we feel it is important to charactorize baseline conditions for benthic, drift, and riparian communities. 2. The specific fish community (salmonids) that underpinns the purpose of this enitre project are known to be heavily reliant uppon drifting inverts (which includes riparian contribution)...these communities will be impacted by project operations and we feel should be included. 3. One of the primary drivers for recolonization of downstream invert communities and the influx of genetic diversity is the "drift". In a highly altered system where high water events that would oterwise encourage "drift" and recolonization is nearly absent, a major ecological improvement that may result from returning to a semi-natural system would be the recolonization of depleted invertebrate communities from the sediment wedge to the confluence of Thunder Bird. 	
3.0 Study Plans	Macroinvertebrate Study	84	3.4.3	Sites include: 1. Near AWWU 2. Diversion Dam 3. Just above Thunder Bird confluence	<p>Adding an additional site on Thunder Bird (or potentially on Eklutna below the confluence) may be usefull as a surragate baseline?</p> <p>At sites 2 and 3, invet communities may be artificially very limited and having an adjacent (more natural) baseline may be beneficial for future analysis.</p>	ADF&G
3.0 Study Plans	Lake Aquatic Habitat and Fish study	110	3.7.4.2	It is anticipated that the pond will be connected to the lake during September/October survey and visual observations of shoreline spawning may be limited by water turbidity.	Consider conducting some type of capture sampling (or maybe snorkling) within the pond (especially along the tributary delta) to determine if kokanee spawning is occuring there...Visual observations may indeed be obscured by turbidity, but this would be important to assess.	ADF&G