

Table 7.4-1. Summary of consultation on River Ice Processes study plans.

Comment Format	Comment Date	Licensing Participant Name	Licensing Participant Affiliation	Comment	Response
<u>Ice Processes In the Susitna River Study (Section 7.6)</u>					
Email to Dudley Reiser	09/12/2012	Eric Rothwell	NOAA	<p>I have a concern with winter flow routing and ice processes, and how they will inform site selection. Site selection for analyzing winter instream flow effects to fish and their habitat will depend on an understanding of operational effects downstream (to flow timing and quantity, hydraulics, and water quality). Also the extension of the studies downstream will depend on these results. The winter hydraulic flow routing model will rely on ice process modeling to determine the downstream extent and magnitude of operational flow effects. The ice process modeling will need several years of data, in addition to the ice thickness measurements and discharge measurements at each of the cross-sections for the winter routing model. I see a lack of time to collect data for the models (winter flow routing and ice process) calibrate the models and then selection sites and methods to conduct ISF studies to assess project effects on fish during winter operations under the currently proposed study period.</p>	<p>See Ice Study Interdependencies (Figure 7.6-1 and 7.6-2) and Schedule (Table 7.6-1) for a description of how ice processes model input and output are scheduled.</p> <p>Final winter flow routing/ice model results for project conditions will not be available prior to selection of focus areas. The selection of candidate focus area sites will use prior information (80s and other), current 2012 studies and professional judgment to select sites that would be affected by changes to winter flow. Preliminary results from a steady-flow HEC-RAS model with ice cover can be used to estimate the potential for stage changes in the lower river. For instance, if the HEC-RAS model indicates that winter discharges will be higher than the natural range of variability in the Lower River, marginal habitats that would be susceptible to under-ice inundation may be selected. The proposed model development and simulation goals will continue to inform the study teams during the 2013-14 study period so that information can be used to help refine studies, as technical and scientific analysis warrants. This adaptive approach will help the concurrent studies each run in parallel, helping address both the concerns of study timeframes and adaptive approaches to modifying study designs as additional knowledge is gained.</p>

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Email to Dudley Reiser	09/12/2012	Eric Rothwell	NOAA	<ul style="list-style-type: none"> • What can be determined from each of the study components, a description of deliverables (not results) this will help us understand if our requests have been met. • How will uncertainty be determined for each of the study components? (ice processes -> hydraulic flow routing -> winter fish and habitat effects) 	AEA has included in the Ice RSP Section 7.6.4 description of study components and deliverables (including field data collected and model output). 7.6.4.4 describes how the ice processes model uncertainty will be assessed by comparing the results of the existing conditions model to known conditions.

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