

## Goals, Structure and Outcome of the Riverine Modeling IFS – Technical Team (TT) Meetings - November 13-15, 2013

**GOAL:** *This IFS-TT meeting is intended to provide a forum to review and discuss various riverine-related modeling and study integration efforts. The meeting is centered on the Middle River segment and is concentrated on discussing how the various modeling efforts will be used to address biologically relevant questions related to Project operational effects on fish and fish habitats. The overall goal of the meeting is to seek input from participants regarding the models that are being developed and how these models will be used to address resource questions and issues pertaining to project operations.*

**STRUCTURE:** *The meeting is structured into three sessions:*

- **Session One (Day 1) – MODEL DESCRIPTIONS.** This session will open with an overview of the Goals and Objectives of the meetings and a brief review of the agenda. This will be followed by a review of the IFS Framework and model linkages, and then a session that will focus on each of the models individually and more broadly how they will be used to address specific resource issues. That session will consist of each Lead Modeler describing the purpose of the model, the type, format and timing of inputs and dependencies, model outputs and metrics, and the model development schedule. The session will be interactive, with *participants* able to ask questions of each of the modelers as each model is discussed. This session will set the framework for Session 2 (Day 2) that will focus on model integration.
- **Session 2 (Day 2) – ADDRESSING BIOLOGICAL QUESTIONS.** This session concentrates on describing how the models will work together (i.e., integration) to address selected biologically relevant questions. These questions will be prepared and provided to each participant in advance of the meeting. The session is divided into three sub-sections, consisting of: an Open – Water section (morning); an Ice-Covered section (after lunch); and a breakout session (mid-afternoon). The Open-Water section will highlight and use 3-4 biologically relevant questions pertaining to open-water flow conditions in the river as a means to demonstrate how the different models will provide metrics useful for addressing the questions. The Ice – Covered section will likewise use 2-3 questions pertinent to winter/ice-covered conditions to demonstrate model applications. This will be followed by a break-out session into five groups in which Resource Model Leads for Geomorphology, Ice Processes, Groundwater, Water Quality, and Fish Habitat will entertain questions, comments and suggestions from *participants* who have specific interests in the respective areas. *Participants* can and are encouraged to engage in multiple group discussions.

Day 2 will end with a reconvening of all participants and summary debriefs provided by spokespersons from each of the five break-out groups.

- **Session 3 (Day 3) – TYING IT ALL TOGETHER.** This session will include a recap of Day 2 activities, an overview of the Operations Model, and an introduction to and discussion of options for Decision Support Systems (DSS). The DSS discussion will be interactive with questions and suggestions from *participants* welcome. The remaining portion of the day will be a facilitated roundtable discussion in which questions concerning models or metrics can be posed by participants. As part of this, each agency participant will be requested to provide their comments, suggestions and recommendations concerning the different models being applied, candidate metrics, and DSS options. The goal of this discussion is to identify those aspects of the modeling plan that are well supported, identify areas or issues that warrant further discussion, and develop plans for follow-on Modeling TT meetings to address those issues.

**OUTCOME:** *At the end of this meeting Participants will have a better understanding of:*

- The models being used for each resource study, and the lead modeler(s) of each;
- The type, format and expected timing of inputs, dependencies of each model;
- The model development schedule;
- Model outputs (units, spatial scale, format) and how these feed into other models;
- Types of ecosystem and biologically relevant questions addressed by the models;
- Types of evaluation metrics that will be generated from the models and how these will be integrated into project effects analysis; and
- Decision Support Systems and DSS options for conducting an Integrated Resource Analysis of the Susitna-Watana Hydroelectric Project.