



SUSITNA-WATANA HYDRO

Agenda and Schedule IFS-TT: Riverine Modeling Proof of Concept Meetings 4/15-17/2014

LOCATION: Alaska Energy Authority – Board Room
813 West Northern Lights Blvd.
Anchorage, AK 99503

TIME: Start: April 15, 8:30 am (AKDT)
Adjourn: April 17, 12:15 pm (AKDT)

SUBJECT: Riverine Modeling – Proof of Concept Discussions

GoTo MEETING: <https://www4.gotomeeting.com/register/887129471>
1-800-315-6338 CODE 3957#

GOAL: *The IFS-TT Proof of Concept (POC) meeting is a follow-up to the November 13-15, 2013 Riverine Modelers Meeting that provided a forum to review and discuss the riverine models and describe model linkages (see http://www.susitna-watanahydro.org/wp-content/uploads/2014/02/2013.11.13Modelers_Notes.pdf). The POC meeting is designed to advance the understanding of these models and how Project operations that influence riverine processes and fish habitats will be evaluated. This will be accomplished by demonstrating the application of the models specific to two key biological metrics (effective spawning/incubation habitat, and juvenile rearing habitat) at one Middle River Segment Focus Area (FA), FA-128 (Slough 8A). Modeling will include two scenarios –Existing Conditions and Operational Scenario (OS) – 1. Emphasis will be placed on demonstrating the model process and example model results. The overall goal of the meeting is to PROVE via demonstration that the modeling process is CONCEPTUALLY sound (Proof of Concept) and can be broadly applied to other areas of the Middle River Segment. The meeting will also briefly review the analytical approach being applied to the Lower River segment. See Handout on Meeting Goals, Structure and Outcome.*



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April 15 POC APPROACH AND MODELING INPUTS

- 8:30 – 8:45 (AKDT) Introductions and Facilities/Safety Procedures/Meeting Rules (AEA/R2) (15 min)
- 8:45 – 9:00 Meeting Goals and Objectives and Review Agenda (R2) (15 min) – D. Reiser
- 9:00 – 9:15 Brief Review of Riverine Modelers Meeting and Issues Identified (R2) (15 min) – D. Reiser
- 9:15 – 9:30 POC Components (R2) (15 min) – D. Reiser/P. Hilgert
- Selection of FA-128 (Slough 8A)
 - Selection and Description of Biological Metrics (effective spawning/incubation; juvenile rearing habitat)
 - Selection of Alternate Scenarios – Existing Conditions and OS-1
- 9:30 – 12:00 Modeling Inputs and Reach-Scale Drivers of the POC Analysis
- 9:30 – 10:00: Representative Years (1981 – wet; 1985 – avg; 1976 – dry; also freeze-up and break-up) (TT/R2/HDR) (30 min) – L. Zevenbergen/P. Hilgert/J. Zufelt
 - 10:00 – 10:20: Operations Modeling of Existing Conditions and OS-1 (MWH) (20 min) – J. Haapala
 - 10:20 – 10:30: BREAK
 - 10:30 – 10:50: Reservoir Water Quality Model (TT) (20 min) – J. Hamrick
 - 10:50 – 11:10: Riverine Water Quality Model (TT) (20 min) – J. Hamrick
 - 11:10 – 11:25: Open-water Flow Routing Model – Version 2 (R2) (15 min) – S. Beck
 - 11:25 – 11:45: River1D – Ice Processes Model (HDR) (20 min) – J. Zufelt/S. Ertman
 - 11:45 – 12:00: Geomorphology (TT) (15 min)
- 12:00 – 1:00 LUNCH BREAK
- 1:00 – 4:15 FA-128 (Slough 8A) Resource Models/Analytical Tools (discuss models as well as other empirical data that were or will be used for evaluating effects in FA-128 and other FAs)
- 1:00 – 2:30: Geomorphology (TT) (90 min) – L. Zevenbergen/B. Fullerton
 - 2:30 – 2:45: BREAK
 - 2:45 – 4:15: Groundwater (GWS) (90 min) – M. Lilly
- 4:15 – 4:45 Discussion, Review Day 1 Action Items
- 4:45 Adjourn



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April 16 FA-128 (SLOUGH 8A) RESOURCE MODELS (continued) AND ADDRESSING BIOLOGICAL QUESTIONS AT FA-128

- 8:30 – 8:45 (AKDT) Recap of Day 1 Activities and Planned Day 2 Activities
- 8:45 – 12:00 FA-128 (Slough 8A) Resource Models/Analytical Tools (continued from Day 1)
- 8:45 – 10:15: Ice Processes (HDR) (90 min) – J. Zufelt/S. Ertman
 - 10:15 – 10:30: BREAK
 - 10:30 – 11:45: Water Quality (TT) (75 min) – J. Hamrick/R. Plotnikoff
 - 11:45 – 12:00: Biological Inputs (HSC/HSI; Periodicity) (R2) (15 min) – P. Hilgert/D. Reiser
- 12:00 – 1:00 LUNCH BREAK
- 1:00 – 4:15 Addressing Biological Questions at FA-128 (Slough 8A)
- 1:00 – 1:15: Review of Biological Metrics (R2) (15 min) – D. Reiser
 - 1:15 – 3:00: Effective Spawning/Incubation Habitat: Open-water Conditions and Ice Covered (MEC/R2) (1 hr 45 min) – B. Miller/P. Hilgert with support from other resource modelers
 - 3:00 – 3:15: BREAK
 - 3:15 – 4:15: Salmonid Rearing Habitat: Open-water Conditions and Ice Covered (MEC/R2) (60 min) – B. Miller/P. Hilgert with support from other resource modelers
- 4:15 – 4:45 Discussion, Review Day 2 Action Items
- 4:45 Adjourn



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April 17 LOWER RIVER APPROACH AND OTHER CONSIDERATIONS

- 8:30 – 8:45 (AKDT) Recap Day 2 Progress and Review Day 3 Agenda
- 8:45 – 9:45 Options for Spatial Expansion of FA Results to Other Areas (R2) (60 min) – D. Reiser/P. Hilgert
- 9:45 – 10:45 Lower River Fish Habitat Modeling Approach (Golder/R2) (60 min) – K. Clipperton/P. Hilgert
- 10:45 – 11:00 BREAK
- 11:00 – 12:00 Open Discussion and Questions Regarding Day 1 and Day 2
- 12:00 – 12:15 Summary of Modeling Issues, Action Items and Next Steps
- 12:15 Adjourn

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