Susitna-Watana Hydro Project

Technical WorkGroup Meeting
Fisheries and Aquatics

Cook Inlet Beluga Whales

Interim DRAFT Revised Study Plan

25 October 2012

Prepared by HDR, Inc.

Cook Inlet Beluga Whale Study

Participant	Comment	Response
NMFS	The study area should only include the Susitna River delta and not all of Type 1 critical habitat	Study area was limited to Susitna River Delta. See RSP Section 9.17.3
NMFS	Aerial surveys should be conducted more regularly and should include times when not only prey resources are available (May and June) but also during times when calves are present (July and August)	The aerial survey schedule was revised to include more surveys which will document times when prey are abundant and when calves may be present. In addition, surveys will be scheduled to include different tidal cycles. See RSP Section 9.17.4.1
NMFS	Clarification needed regarding how group size, group composition and behavior will be documented.	Revised Study Plan included clarification. Aerial surveys will be used for group counts and group behavior while the video camera portion of the study will assist with group composition (i.e. calves) and individual behavior. AEA also clarified that these surveys will be conducted to gather data on distribution and relative group sizes – there will be no attempt at producing an abundance estimate from this data. See RSP Sections 9.17.4
ADF&G	Passive acoustic monitoring should be considered as a method for monitoring beluga presence, particularly for winter months when aerial and video surveys are not occurring.	AEA discussed using acoustics as a method for this study. However, given that acoustic recorders would need to be placed further away from the mudflats and in deeper water in winter due to ice scour, this data would not be relevant to the Project-related impact analysis. Therefore, modeling efforts and impact analyses will assume that belugas utilize the Susitna River delta year-round. See RSP Section 9.17.4.3
NMFS	Clarification needed for Impact Analysis	Impact Analysis will be conducted following 2013 and 2014 field seasons.

Revised Study Objectives

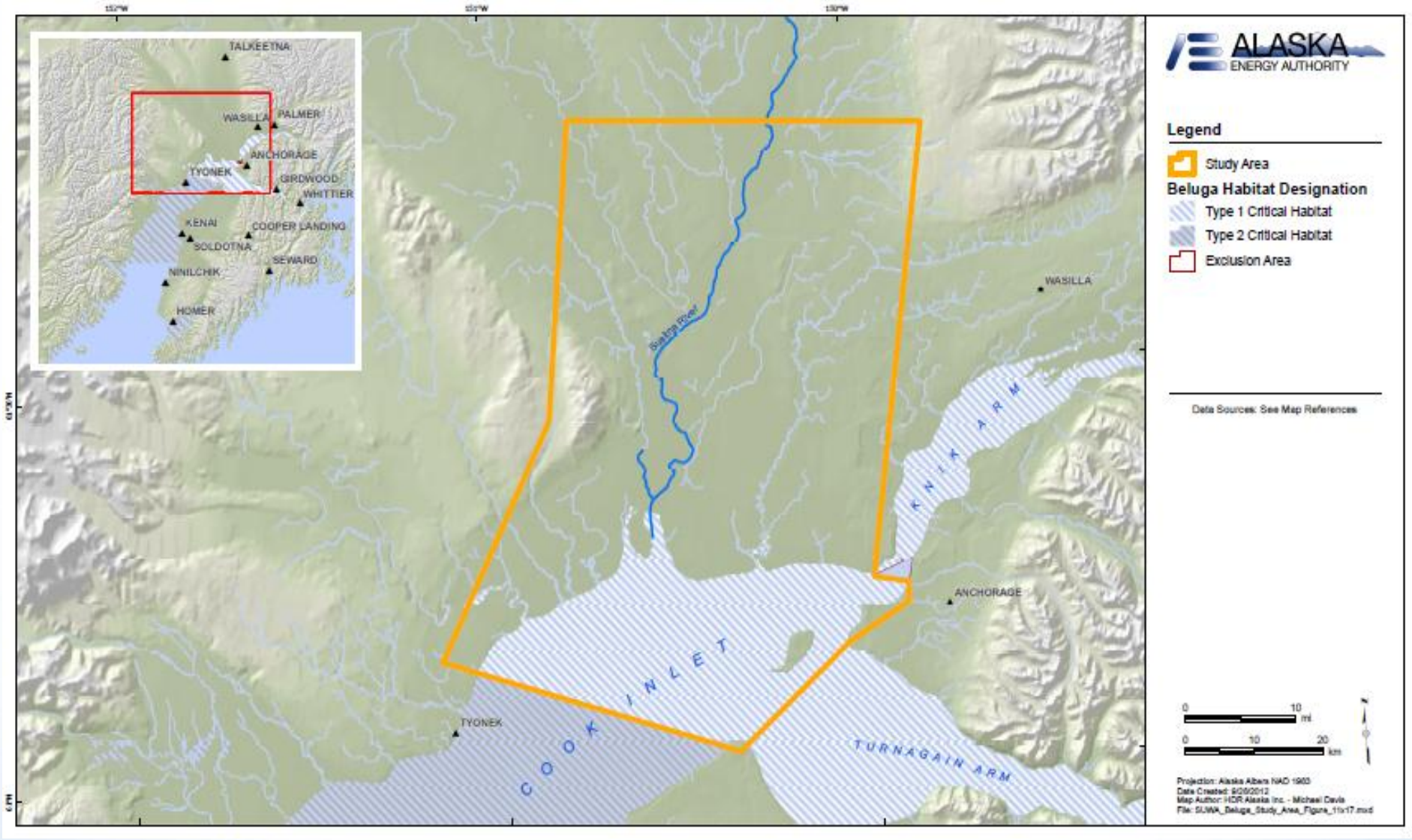
1. Document the presence of all marine mammals in the Susitna River delta, focusing on CIBW distribution and upstream extent in 2013 and 2014 from late April to October

2. Document CIBW group size, group composition and behavior within the Susitna River delta from late April to October in 2013 and 2014

3. Collect data necessary to evaluate the relationships between potential hydropower-related changes in the lower river, CIBW in-river movements, and CIBW prey availability

Revised Study Methods

1. Aerial Surveys
   a) Survey Area
      - PSP – All of Type 1 critical habitat
      - RSP – Susitna River delta


TALKEETNA
WASILLA
PALMER
ANCHORAGE
TYONEK
GIRDWOOD
WHITTIER
KENAI
COOPER LANDING
SOLDOTNA
SEWARD
NINILCHIK
HOMER
Susitna River
WASILLA
ANCHORAGE
TYONEK
COOK INLET
KNIK ARM
TURNAGAIN ARM
ALASKA ENERGY AUTHORITY
Legend
Study Area
Beluga Habitat Designation
Type 1 Critical Habitat
Type 2 Critical Habitat
Exclusion Area
Data Sources: See Map References
0 10 mi
0 10 20 km
Projection: Alaska Albers NAD 1983
Data Created: 8/29/2012
Map Author: HDR Alaska Inc. - Michael Davis
File: SUWA_Beluga_Study_Area_Figure_11x17.mxd

Revised Study Methods

1. Aerial Surveys
   a) Survey Area
   b) Survey Timing
      - PSP – 2 day surveys (7 surveys)
        - One in late April (or ice-out)
        - Two in May
        - One in June (in addition to the NMFS survey)
        - One in July
        - One in September
        - One in October
      - RSP – 4 hour surveys (18 surveys)
        - Two in mid-late April (or after ice-out)
        - Three in May
        - Three in June (in addition to the NMFS survey)
        - Three in July
        - Three in August (in addition to the NMFS survey)
        - Two in September
        - Two in October (or until freeze-up)

Revised Study Methods

1. Aerial Surveys
   a) Survey Area
   b) Survey Timing
   c) Purpose
      - Distribution
      - Relative group size (not abundance estimate)
      - Northern extent

Revised Study Methods

2. Remote Live-Feed Camera System
   a) Survey Area - unchanged
      - One to four cameras (depending on feasibility)
   b) Survey Timing - unchanged
      - Late April – Late October
   c) Purpose
      - Distribution
      - Relative group size
      - Group Composition (Age)
      - Behavior

Revised Study Methods

3. Collect data necessary to evaluate the relationships between potential hydropower-related changes in the lower river, CIBW in-river movements, and CIBW prey availability
   a) AEA is investigating model(s) to look at tidal flow, currents, and oceanography in the Susitna River delta and put these into perspective with the Project-related changes to the hydrograph at the mouth of the river
   b) In the absence of winter studies, models will assume CIBWs are present during winter months and that whales may be foraging