

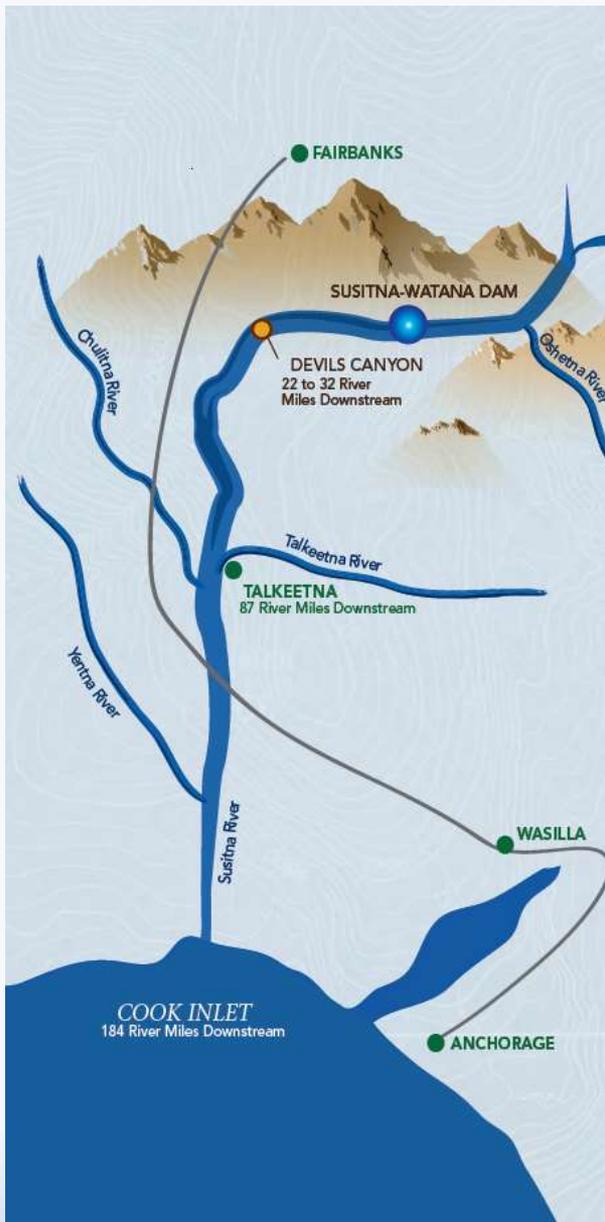
Initial Study Report Meeting

Study 11.5 Vegetation and Wildlife Habitat Mapping Study in the Upper and Middle Susitna Basin

October 21, 2014

Prepared by

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Research & Services



Study 11.5 Objectives

- Classify, delineate, and map existing vegetation and wildlife habitats in the Upper and Middle Susitna River Basin based on current aerial photos and satellite imagery—mapping is conducted for the Project dam site and reservoir area and along the possible transmission line/road corridors (areas that would be directly altered or disturbed by Project construction and operations)
- Vegetation mapping will be used to assess vegetation impacts, and wildlife habitat mapping will be used by wildlife researchers in the assessment of impacts to bird and mammal habitats

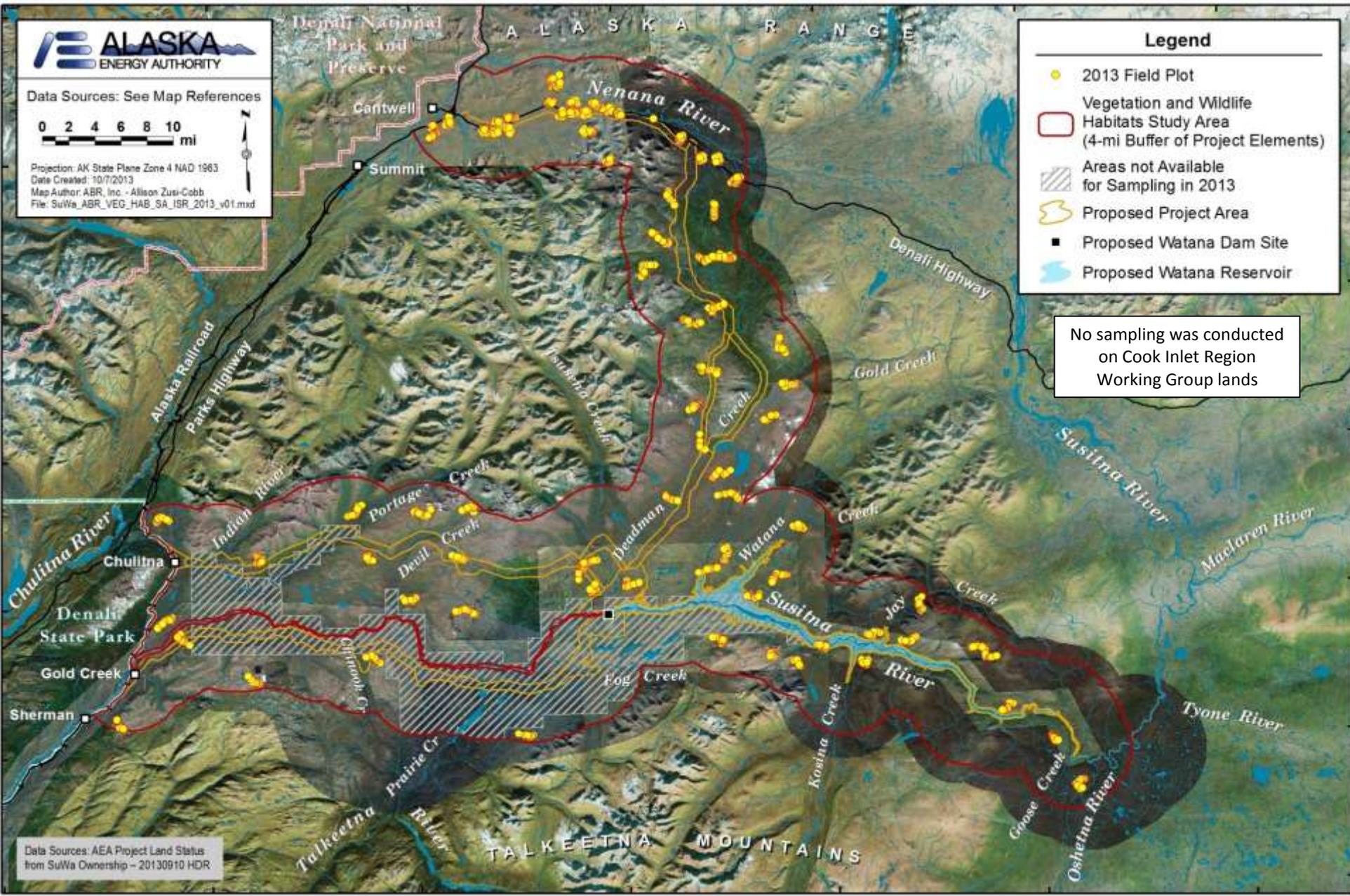
Study 11.5 Components

- Develop mapping materials from historical (APA Project) and current data (ISR Part A, Section 4.1, p. 3)
- Field surveys to collect ground-reference data for the mapping work (ISR Part A, Section 4.3, p. 5)
- Integrated Terrain Unit (ITU) mapping and derivation of wildlife habitats (ISR Part A, Section 4.2, p. 4)
- The study is being conducted in close coordination with the Wetland Mapping Study in the Upper and Middle Susitna Basin (Study 11.7); data are being collected for both studies at each sample plot in the field, and the mapping efforts for both studies are being performed concurrently

Study 11.5 Variances

There were no variances from the methods for the development of mapping materials, field surveys, or the ITU mapping described in the RSP (Section 11.5.4).

Study 11.5 Summary of Results in ISR (ISR Part A – Section 5)

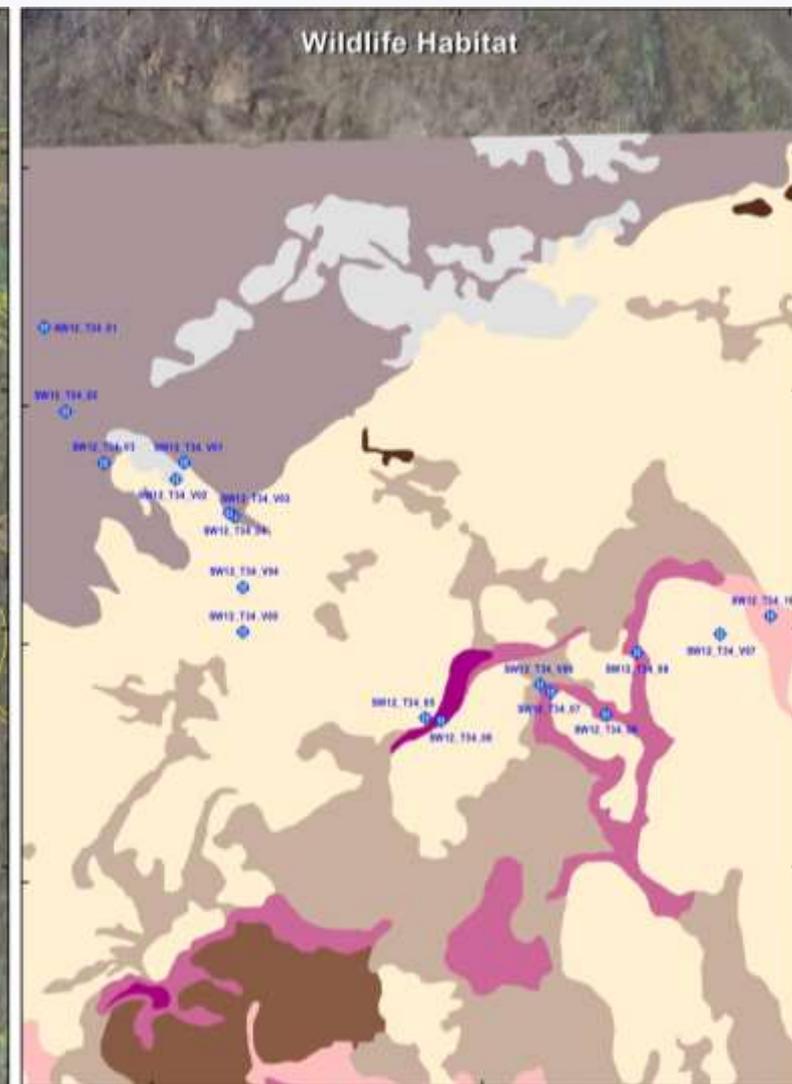


Study 11.5 Summary of Results in ISR (ISR Part A – Section 5)

- Field surveys conducted in early July and early August, 2013; a total of 916 plots were sampled (619 full plots and 297 rapid map verification plots on 77 transects)
- ITU mapping is ongoing, expected to be completed in 2015; example mapping map areas presented in the ISR
- ITU attributes recorded for each map polygon include:
 - Alaska Vegetation Classification (AVC) Level IV vegetation class
 - Physiographic type
 - Surface form type
 - Disturbance type, when applicable
 - National Wetlands Inventory (NWI) wetland class *
 - Hydrogeomorphic (HGM) wetland class *

* For use in the Wetland Mapping Study in the Upper and Middle Susitna Basin (Study 11.7)

Study 11.5 Summary of Results in ISR (ISR Part A – Section 5)



ALASKA ENERGY AUTHORITY

2012 Field Plot

WildlifeHabitatType

- Alpine Moist Dwarf Shrub Scrub
- Alpine Dry Barrens
- Subalpine Sedge Marsh
- Subalpine Wet Sedge-Shrub Meadow
- Subalpine Moist Graminoid-Shrub Meadow
- Subalpine Moist Birch Ericaceous Scrub
- Subalpine Moist Dwarf Shrub-Scrub
- Subalpine Low Willow Scrub
- Subalpine Dry Barrens

Integrated Terrain Unit (ITU) Mapping

ITU Code example:
 Physiography_Vierek IV = S_sdet
 S: Subalpine
 sdet: Ericaceous Dwarf Shrub Tundra

Integrated Terrain Unit (ITU) mapping incorporates individual terrain units such as vegetation type, physiography, and disturbance type into composite units, which represent the range of landscape variation in the study area. The composite ITUs are then aggregated into a smaller set of ecologically important categories that represent the habitats used by wildlife. Level IV vegetation types are based on the Alaska Vegetation Classification (Vierek et al. 1992).

Data Sources: See Map References. Imagery: Aerial July 2013

0 200 400 600 800 Feet
 0 50 100 150 200 250 Meters

Projection: AK State Plane Zone 4 NAD 1983
 Date Saved: 11/10/2013
 Map Author: Alisa, Inc. - Alaska Zoo-Cdd
 File: SuVA_ABR_VEG_HabSubalpine_ISR_2013_v01.mxd

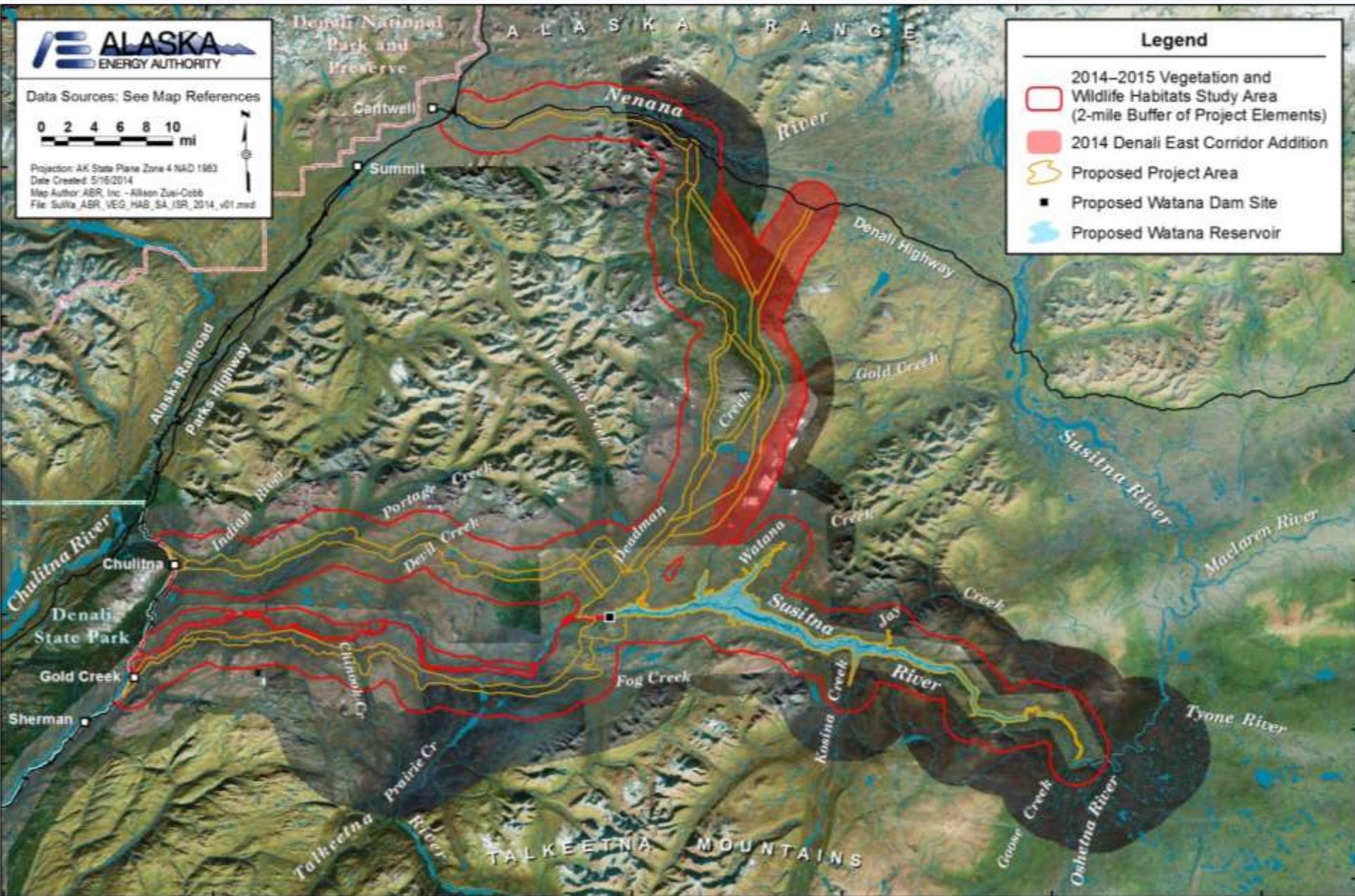
Study 11.5 Summary of Results since ISR

- No additional field surveys or data analyses have been conducted since the release of the ISR;
- ITU mapping occurred in 2014.

AEA Proposed Modifications to Study 11.5 in ISR (ISR Part C – Section 7.1.2)

- The original 4-mi study area buffer has been reduced to a 2-mi buffer to match the study areas for two closely related studies (Study 11.7 – wetlands mapping, and Study 10.16 – landbirds and shorebirds). The study team along with the wildlife researchers on the Project have determined that:
 - As for wetlands, with the new 2-mi mapping area buffer, local-scale Project effects on vegetation can be adequately quantified and assessed; and
 - The 2-mi buffer will be sufficient to adequately assess local-scale Project effects on wildlife habitats, both for direct impacts (habitat loss) and indirect impacts (habitat alteration).
- The study area has changed from that described in the RSP (Section 11.5.3), with the addition of the alternative Denali Corridor East Option road and transmission line corridor. The addition of this new corridor to the study area includes a 2-mi buffer surrounding the road and transmission line alignments for the Denali Corridor East Option.

AEA Proposed Revision to Study Area (ISR Study 11.5, Part C – Section 7.1.2)



New Modifications to Study 11.5 since ISR

The Chulitna Corridor has been dropped from the study area.

Current Status Study 11.5

- In 2013, field surveys were completed as described in the RSP (Section 11.5.4.3) with no variances; no field surveys were conducted in 2014.
- In 2014, the two modifications to the study area, described above and in the ISR (Study 11.5, Part C, Section 7.1.2), were implemented for the ITU mapping work; the study area modifications will be used also during the final field surveys in 2015.
- In 2013 and 2014, the mapping of vegetation and the three other ITU variables needed to derive wildlife habitats, as described in the RSP (Section 11.5.4.2), was continued.

Steps to Complete Study 11.5 (ISR Part C – Section 7.1)

- Field ground-reference data for the ITU mapping will be collected in 2015 on CIRWG lands, which have not yet been sampled.
- Additional field data also will be collected for vegetation types and wildlife habitats not adequately sampled during 2012 and 2013.
- Completion, review, and finalization of the ITU mapping in the revised study area to be completed in 2015.
- A final set of wildlife habitats will be developed in 2015 in coordination with researchers working on the wildlife studies (Studies 10.5 through 10.18) and the Riparian Vegetation Study Downstream of the Proposed Susitna Watana Dam (Study 11.6).
- Each of these tasks will be accomplished as described in the ISR.

Licensing Participants Proposed Modifications to Study 11.5?

- Agencies
- CIRWG members and Ahtna
- Public