

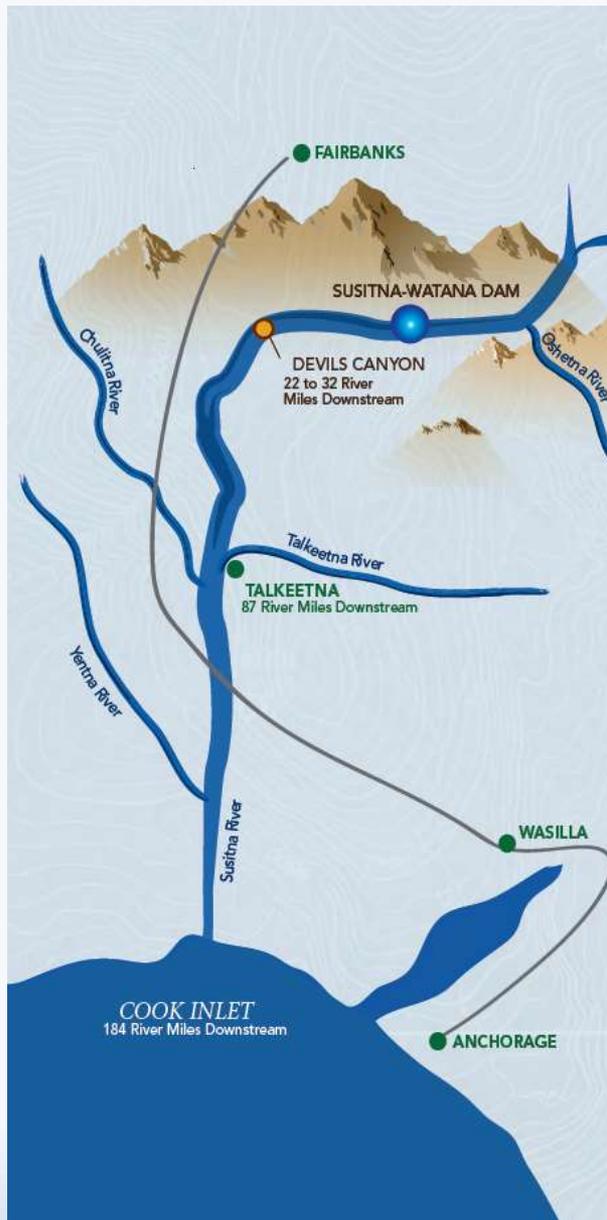
Initial Study Report Update Meeting

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

March 29, 2016

Prepared by

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Research & Services



Study 11.5 Status

ISR Documents (ISR Part D Overview):

- Initial Study Report: Parts A, B, and C (June 3, 2014)

Status:

- In 2013 and 2015, the field surveys were completed as described in the RSP (Section 11.5.4.3).
- 1,453 field plots were sampled, which included 1,042 full study plots and 411 rapid map-verification plots.
- The digitizing of map polygons for the Integrated Terrain Unit (ITU) variables has been completed for the entire, revised study area.
- Senior-level QA/QC of the ITU map polygons is well underway.

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)
- 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 conducted concurrently

Study 11.5 Variances

(ISR Part D, Section 6)

- In the June 2014 ISR (Part A), 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).
- Since June 2014 ISR, three variances, all involving revisions to the study area, were implemented:
 - (1) **The Denali East Corridor Option was added to the study area** as an additional, alternative north-south corridor alignment for transmission line and road access from the dam site to the Denali Highway (ISR Part D, Section 6);
 - (2) The east-west trending **Chulitna Corridor was eliminated from Project plans** and therefore from the study area (ISR Part D, Section 6); and

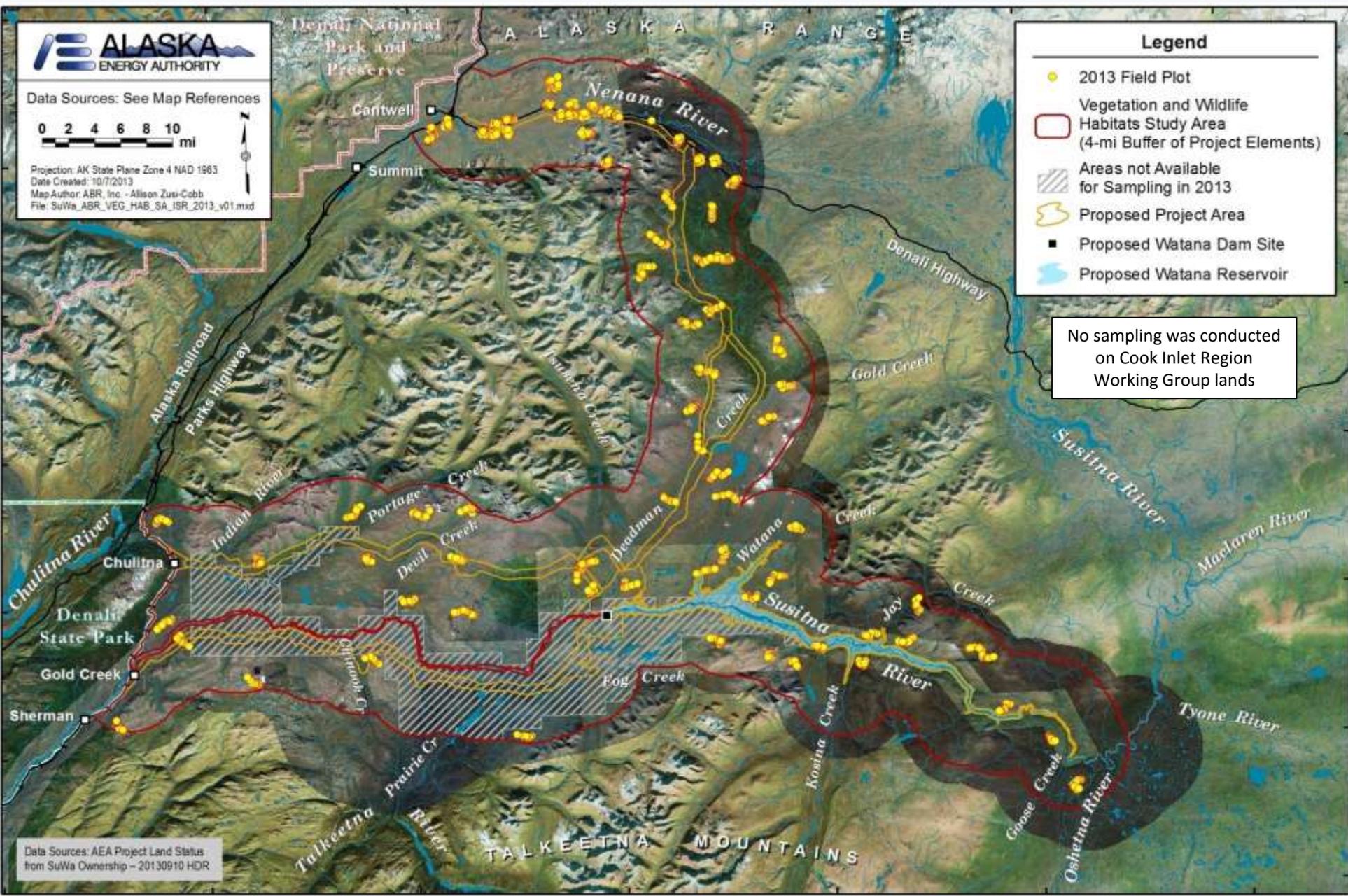
Study 11.5 Variances continued

(ISR Part D, Section 6)

(3) The original study area buffer of 4 miles was reduced to a 2-mile 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 with wetlands, using a 2-mile mapping area buffer will be adequate to quantify and assess local-scale Project effects on vegetation; and
- The 2-mile 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) (ISR Part D, Section 6).

Study 11.5 Summary of Results (ISR Part A, Section 5): Plots Sampled in 2013



Study 11.5 Summary of Results

- Field surveys reported in the June 2014 ISR were conducted in July and August 2013 and the final field surveys were conducted in August 2015
- Combining the data for both years, a total of 1,453 field plots were sampled (1,042 full study plots and 411 rapid map-verification plots)
- As of March 1, 2016, the ITU mapping was completed; the mapped ITU variables (which will be used to derive final wildlife habitat types) are:
 - Alaska Vegetation Classification (AVC) Level IV vegetation class
 - Physiographic type
 - Surface form type
 - Disturbance type, when applicable

AEA's Proposed Modifications to Study 11.5

(ISR Part D, Section 7)

(1) The **Chulitna Corridor** was eliminated from the study area (ISR Part D Overview, Section 1.3) and the **Denali East Corridor Option** was added to the study area as an additional, alternative north-south corridor alignment for transmission line and road access from the dam site to the Denali Highway (ISR Part C, Section 7.1.2)

(2) The original study area buffer of 4 miles was reduced to a 2-mile buffer to match the study areas for two closely related studies (Study 11.7, wetlands mapping, and Study 10.16, landbirds and shorebirds). (ISR Part C, Section 7.1.2)

Steps to Complete Study 11.5

(ISR Part D, Section 8)

- Senior review and revision of the map polygon boundaries and ITU attributes to prepare a final ITU map layer (RSP 11.5.4.2)
- Completion of a spatial join in GIS to match and merge the polygon boundaries mapped in this study with those in the adjacent study area for the Riparian Vegetation Study Downstream of the Proposed Susitna-Watana Dam (Study 11.6) so as to facilitate the preparation of a Project-wide map of wildlife habitats (RSP Section 11.5.7)
- Development of a final set of wildlife habitats (RSP Section 11.5.4.2) in coordination with both the wildlife researchers working on the Project (Studies 10.5 through 10.18) and the study team for the Riparian Vegetation Study (Study 11.6)

Licensing Participants Proposed Modifications to Study 11.5?

- Agencies
- CIRWG members and Ahtna
- Public

