

Initial Study Report Update Meeting

Study 11.7 Wetland Mapping Study in the Upper and Middle Susitna Basin

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Prepared by

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Study 11.7 Status

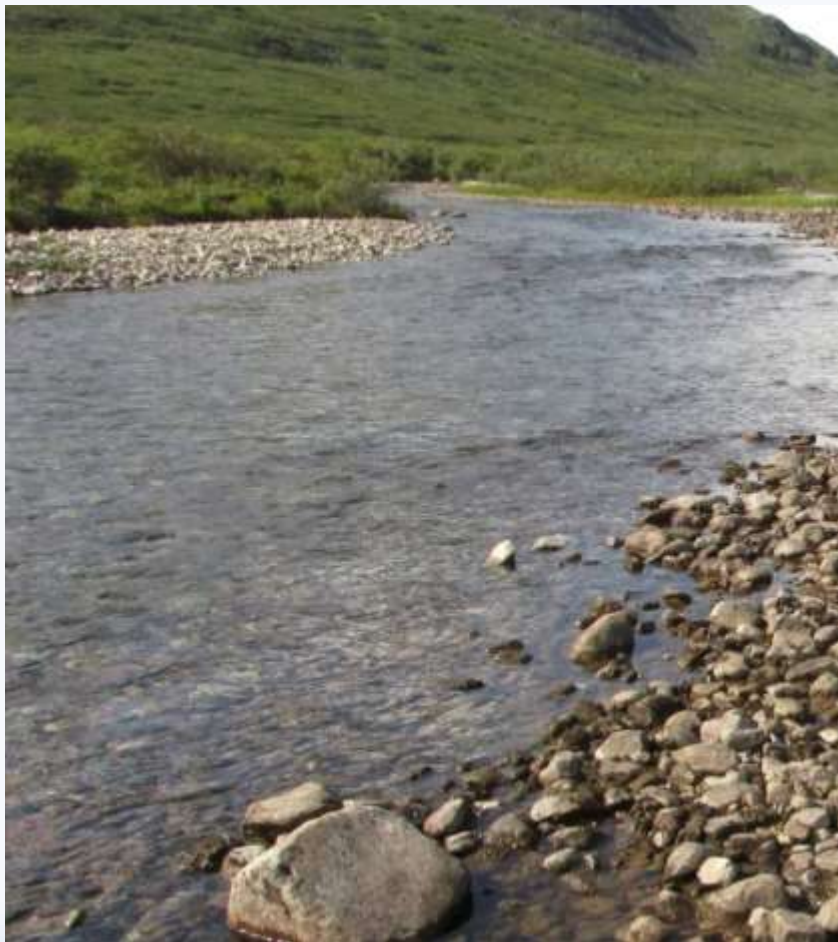
ISR documents (ISR Part D Overview):

- 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 11.7.4.2).
- 1,453 field plots were sampled: formal wetland determinations and wetland functional assessment data were collected at 1,042 full study plots and 411 rapid map-verification plots were sampled.
- The digitizing of map polygons for the wetland variables has been completed for the entire, revised study area.
- Senior-level QA/QC of the wetland map polygons is well underway.

Study 11.7 Objectives



- Classify, delineate, and map existing wetlands 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)
- Determine and evaluate the ecological functions of the mapped wetland types to facilitate an assessment of the relative value of the mapped wetland types in the study area

Study 11.7 Components

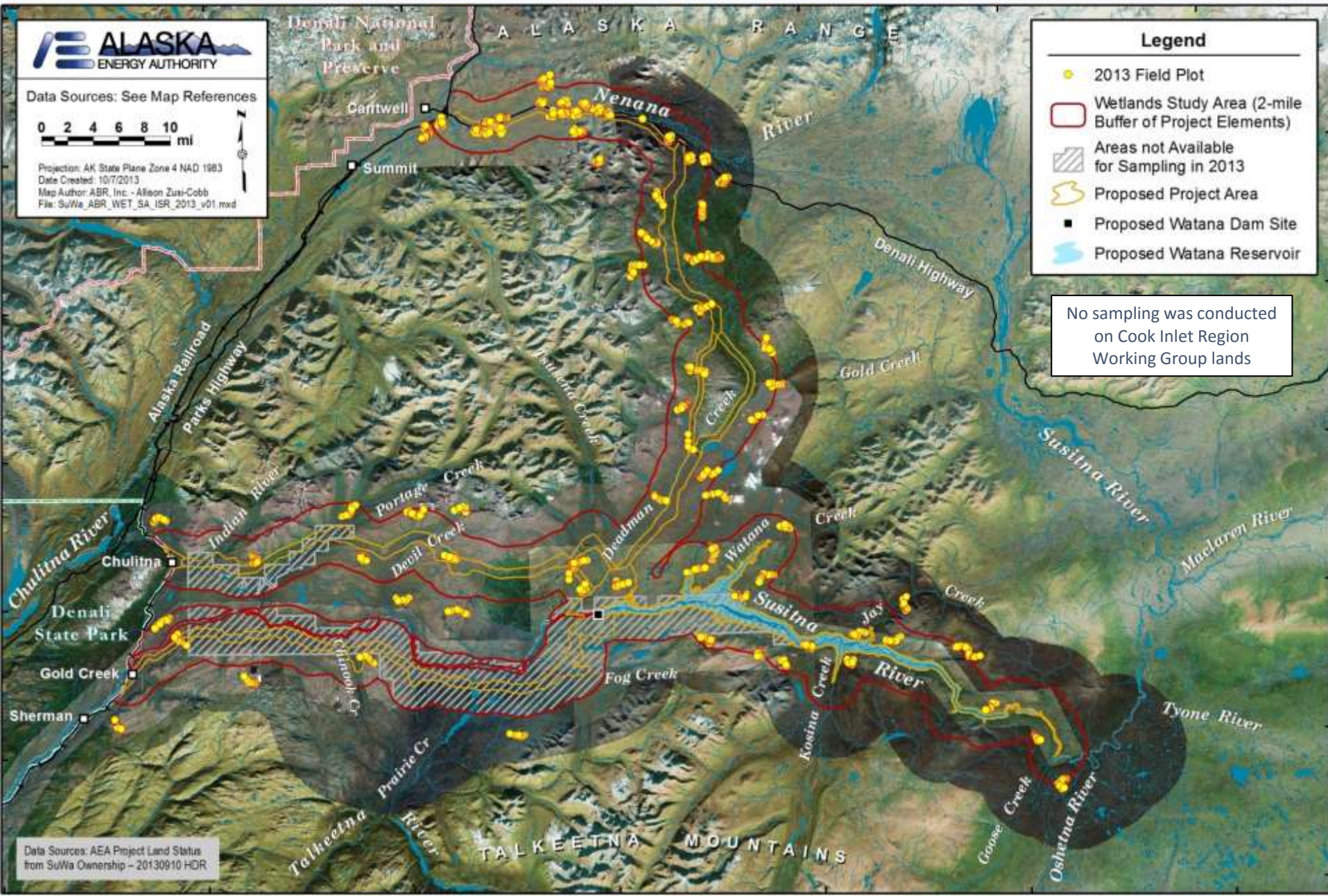
- Field surveys to collect ground-reference data for the wetlands mapping work (ISR Part A, Section 4.2, p. 5)
- Multivariate wetlands mapping incorporating wetland function—based on three classification systems (ISR Part A, Section 4.1, p. 3)
- Preparation of a wetland functional assessment for each mapped wetland type (ISR Part A, Section 4.3, p. 7)
- Study is being conducted in close coordination with the Vegetation and Wildlife Habitat Mapping Study in the Upper and Middle Susitna Basin (Study 11.5); 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 11.7 Variances

(ISR Part D, Section 6)

- In the June 2014 ISR (Part A), there were no variances from the field survey, wetland classification and mapping, or functional assessment methods described in the RSP (Section 11.7.4).
- Since the June 2014 ISR, two variances, both 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; and
 - (2) **The east-west trending Chulitna Corridor was eliminated from Project plans** and therefore from the study area.

Study 11.7 Summary of Results (ISR Part A, Section 5): Plots Sampled in 2013



Study 11.7 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 (formal wetland determinations and wetland functional assessment data were collected at 1,042 full study plots and 411 rapid map-verification plots were sampled)
- The wetlands mapping has been completed; the mapped wetland variables (which will be used to derive final, multivariate wetland types) are:
 - National Wetlands Inventory (NWI) wetland class
 - Hydrogeomorphic (HGM) wetland class
 - Alaska Vegetation Classification (AVC) Level IV vegetation class
 - Physiographic type
 - Surface form type
 - Disturbance type, when applicable

Study 11.7 Summary of Results (ISR Part A, Section 5): Preliminary Mapping of Fen Wetlands in Forested Landscape



ALASKA ENERGY AUTHORITY

Data Sources: See Map References
Imagery: MatSu 2011 NatColor

0 200 400 Feet

Projection: AK State Plane Zone 4 NAD 1983
Date Created: 11/12/2015
Map Author: ABR, Inc. - Allison Zusi-Cotté
File: S:\W\A_BR_WET_MW\wetland_SFR_2015_v01.mxd

Map Area

NWI Code ¹	NWI Description	
Waters		
PUBH	Permanently Flooded Pond	
Wetlands		
PEM1E	Seasonally Flooded/Saturated Persistent Emergent	
PEM1/SS1B	Saturated Persistent Emergent/Broadleaf Deciduous Shrub-Scrub	
PSS1B	Saturated Broadleaf Deciduous Shrub-Scrub	
PSS4B	Saturated Needleleaf Evergreen Shrub-Scrub	
PFO4B	Saturated Needleleaf Evergreen Forest	
Uplands		
U	Upland	

¹ National Wetland Inventory annotation based on Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1970).

AEA's Proposed Modifications to Study 11.7

(ISR Part D, Section 7)

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)

Steps to Complete Study 11.7

(ISR Part D, Section 8)

- Senior review and revision of the map polygon boundaries and/or wetland attributes to prepare a final wetland map layer (RSP 11.7.4.1)
- 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 wetland map (RSP Section 11.7.7)
- Development of a final set of multivariate wetland types that incorporate wetland-function information—to be conducted in coordination with the study team for the Riparian Vegetation Study (Study 11.6) (RSP Sections 11.7.4.1 and 11.7.7)

Steps to Complete Study 11.7 continued

(ISR Part D, Section 8)

- As discussed in the ISR for this study (Part A, Section 6.2), revisions of some parameters in the wetland functional assessment model to make the wetland functions assessed more representative of the conditions in the study area (RSP Section 11.7.4.3)
- Incorporation of Project-specific and spatially referenced information for 3 of the 10 wetland functions assessed using GIS data layers from four other study programs: fish distribution and abundance and fish habitat studies (Studies 9.5, 9.6, and 9.9), wildlife studies (Studies 10.5 through 10.18), the Recreation Resources Study (Study 12.5), and the Subsistence Baseline Documentation Study (Study 14.5) (RSP Sections 11.7.4.3 and 11.7.7)
- Development of a final set of wetland functional classes, which will represent groups of mapped wetland types that share similar wetland functions (RSP Section 11.7.4.3)

Licensing Participants Proposed Modifications to Study 11.7?

- Agencies
- CIRWG members and Ahtna
- Public

