

# Initial Study Report Meeting

## *Study 11.9 Invasive Plants*

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*Prepared by*

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## *Study 11.9 Objectives*

- Identify the locations at which invasive plant species have already become established in the Project area and in nearby disturbed areas
- Estimate population sizes for invasive species and map their current distributions
- Determine whether any of the invasive species found could pose a substantial ecological threat (to native plants and animals) if populations were to spread into the Project area

## *Study 11.9 Components*

- Field surveys for invasive vascular plant species in disturbed areas in and near the Project area (ISR Part A, Section 4.1, p. 2)
- Conduct an ecological risk assessment for each of the invasive species found to assess the possibility and the ecological effects of spreading into the Project area (ISR Part A, Section 4.2, p. 4)

## *Study 11.9 Variances*

During 2013, there were no variances from the methods used to conduct field surveys and ecological risk assessments for invasive species as described in the RSP (Section 11.9.4).

## *Study 11.9 Summary of Results in ISR (ISR Part A – Section 5)*

### Field Surveys:

- 107 sites were sampled from August 19–28, 2013
- Sites surveyed included possible source areas for invasive plants (the Denali and Parks highway corridors near the Project area and regularly-used ORV trails that provide access to the Project area)
- 28 of the 107 sites were revisits to sites where infestations of invasive plants had been previously documented by the Alaska Natural Heritage Program
- Invasive species were found at 98 of the 107 sites sampled
- Across all sites, 31 invasive species were found

## **Study 11.9 Summary of Results in ISR (ISR Part A – Section 5)**

*The 15 species with the highest invasiveness rankings*

Scientific Name	Common Name	No. Sites Recorded	Invasiveness Rank
<i>Melilotus alba</i>	white sweetclover	7	81
<i>Bromus tectorum</i>	cheatgrass	1	78
<i>Vicia cracca</i> ssp. <i>cracca</i>	bird vetch	4	73
<i>Linaria vulgaris</i>	butter and eggs	2	69
<i>Melilotus officinalis</i>	yellow sweetclover	1	69
<i>Hordeum jubatum</i>	foxtail barley	50	63
<i>Bromus inermis</i> ssp. <i>inermis</i>	smooth brome	5	62
<i>Leucanthemum vulgare</i>	oxeye daisy	2	61
<i>Tanacetum vulgare</i>	common tansy	1	60
<i>Trifolium repens</i>	white clover	7	59
<i>Taraxacum officinale</i>	common dandelion	71	58
<i>Trifolium hybridum</i>	alsike clover	20	57
<i>Crepis tectorum</i>	narrowleaf hawksbeard	10	56
<i>Phleum pratense</i>	timothy	22	54
<i>Poa pratensis</i> ssp. <i>irrigata</i>	spreading bluegrass	10	52

# Study 11.9 Summary of Results in ISR (ISR Part A – Section 5)

## Preliminary Ecological Risk Assessment:

- Populations of invasive species found in 2013 were negligible to small in size, so the current ecological risk from invasive plants—at least in the Parks and Denali highway corridors—is relatively low.
- The two species found that are of greatest concern probably are *Hordeum jubatum* (foxtail barley) and *Melilotus alba* (white sweetclover).
  - *H. jubatum* (invasiveness rank: 63) is able to colonize a wide range of disturbed habitats, from well drained, gravelly substrates to relatively wet, silty soils.
  - *M. alba* (invasiveness rank: 81) is considered one of Alaska’s most problematic invasive species, due to its propensity to form dense stands on river bars and potentially having a negative effect on native colonizing plants.
- Both *H. jubatum* and *M. alba*, however, were found mostly at trace (< 1%) and low (1–5%) cover values during the 2013 survey.

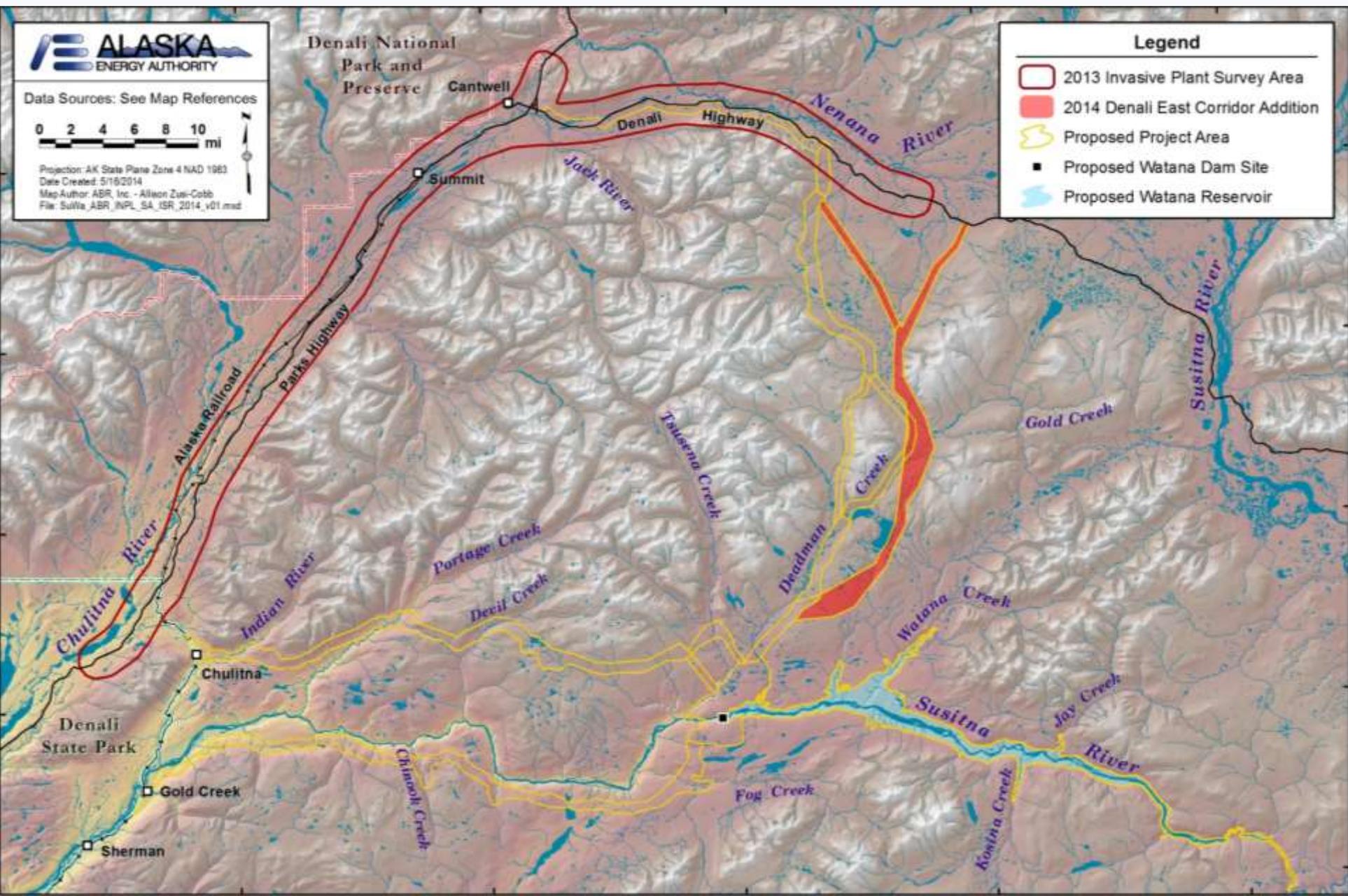
## *Study 11.9 Summary of Results since ISR*

No additional work has been conducted for this study since submittal of the ISR.

## *AEA Proposed Modifications to Study 11.9 in ISR (ISR Part C – Section 7.1.2)*

- No modifications to the Study Plan methods are needed to complete the study and meet the Study Plan objectives.
- However, the study area has changed from that described in the RSP (Section 11.9.3), with the addition of the alternative Denali Corridor East Option road and transmission line corridor. For this study, additional sample sites for invasive plant species will be surveyed in 2015 along the Denali Highway near where the new Denali Corridor East Option corridor would connect with the existing Denali Highway.
- As described for each of the alternative road and transmission line corridors in the RSP (Section 11.9.3), in 2015 the study team also will evaluate the possibility of sampling disturbed sites (e.g., ORV trails) within the 2-mi buffer used for the Denali Corridor East Option by the Vegetation and Wildlife Habitat Mapping Study in the Upper and Middle Susitna Basin (ISR Study 11.5).

# AEA Proposed Revision to Study Area (ISR Study 11.9, Part C – Section 7.1.2)



## *Current Status Study 11.9*

- In 2013, field surveys for invasive plants were completed as described in the RSP (Section 11.9.4.1) with no variances; no field surveys were conducted in 2014.
- In 2013, a preliminary ecological risk assessment was conducted for the invasive species located to date, as described in the RSP (Section 11.9.4.2).
- No work was performed on the Invasive Plant Study in 2014.

## *Steps to Complete Study 11.9 (ISR Part C – Section 7.1)*

- Conduct field surveys in 2015 in disturbed areas in and near the Project area that were not surveyed in 2013 (RSP Section 11.9.4.1); example sampling areas to be targeted include portions of the Denali Highway (noted above), Stephan Lake and High Lake lodges, Gold Creek Camp, and selected portions of the Alaska Railroad ROW.
- As in 2013, the Alaska Exotic Plants Information Clearinghouse (AKEPIC) database and current aerial imagery will be reviewed prior to the 2015 survey to identify locations of previous collections of invasive species and disturbed sites to help guide survey efforts (RSP Section 11.9.4.1).
- Conduct an ecological risk assessment for the invasive plant species found in 2013 and 2015 to evaluate the threat those species may pose to the native plant communities occurring in the Project area (RSP Section 11.9.4.2).
- Each of these tasks will be completed as described in the ISR.

## *Licensing Participants Proposed Modifications to Study 11.9?*

- **Agencies**
- **CIRWG members and Ahtna**
- **Public**