

Initial Study Report Meeting

Study 10.13 Bat Distribution and Habitat Use

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Study 10.13 Status

ISR Documents (ISR Part D Overview):

- Initial Study Report: Parts A, B, and C (June 3, 2014)
- Study Completion Report (SCR) (November 4, 2015)

Status:

- Completed two years of acoustic surveys to assess bat distribution and habitat use.
- Documented occurrence of natural and man-made structures and their suitability as roost sites, maternity colonies, or hibernacula.
- Conducted mist-netting effort to capture bats for radio-tracking to locate bat roost sites.

The Study Plan objectives have been met and this study has been completed.

Study 10.13 Objectives

- Assess the occurrence of bats and the distribution of habitats used by bats within the proposed reservoir inundation zone and associated infrastructure areas for the Project.
- Review geological and topographical data to assess the potential for roosting, maternity, and hibernacula sites in the study area.
- Examine suitable geological features (caves, crevices) and human-made structures (buildings, mines, bridges) for potential use by bats as roosting sites, maternity colonies, and hibernacula.

Study 10.13 Components

- **Acoustic Surveys**
(SCR Section 4.1; pg 2)
- **Roost Surveys**
(SCR Section 4.2; pg 4)
- **Data Management/Analysis**
(SCR Section 4.3; pg 6)

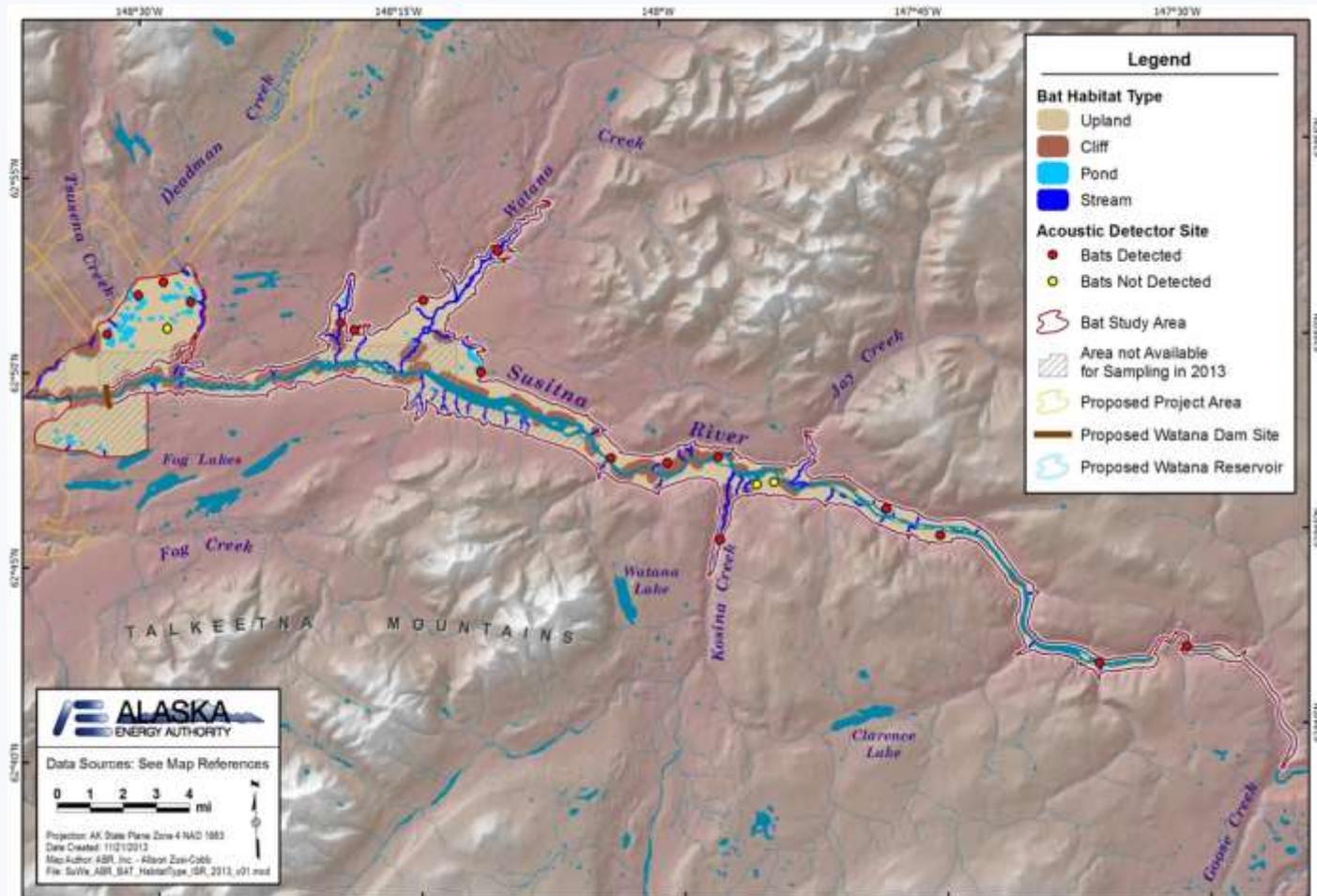


Study 10.13 Variances

- In 2013, acoustic monitoring and ground-based roost searches could not be conducted as planned on Cook Inlet Regional Working Group (CIRWG) lands due to the lack of an access agreement (RSP Section 10.13.4.1).
- In 2014, the study team rectified that omission by monitoring four new acoustic sites on CIRWG lands. Six other sites in which bats were recorded in 2013 were resurveyed in 2014 to better understand annual variability and to assist in targeting the mist-netting and telemetry effort in 2014, as described in ISR Part C, Section 7.1.2.
- In 2013, the search effort for artificial roosts (RSP Section 10.13.4.1) was expanded to include additional nearby structures outside of the study area.
- In 2014, field effort was devoted to the targeted mist-netting and telemetry effort designed to locate specific bat roosts, which was added as a study plan modification for the second year of field surveys, as described in ISR Part C, Section 7.1.2.

Study 10.13: Summary of Results

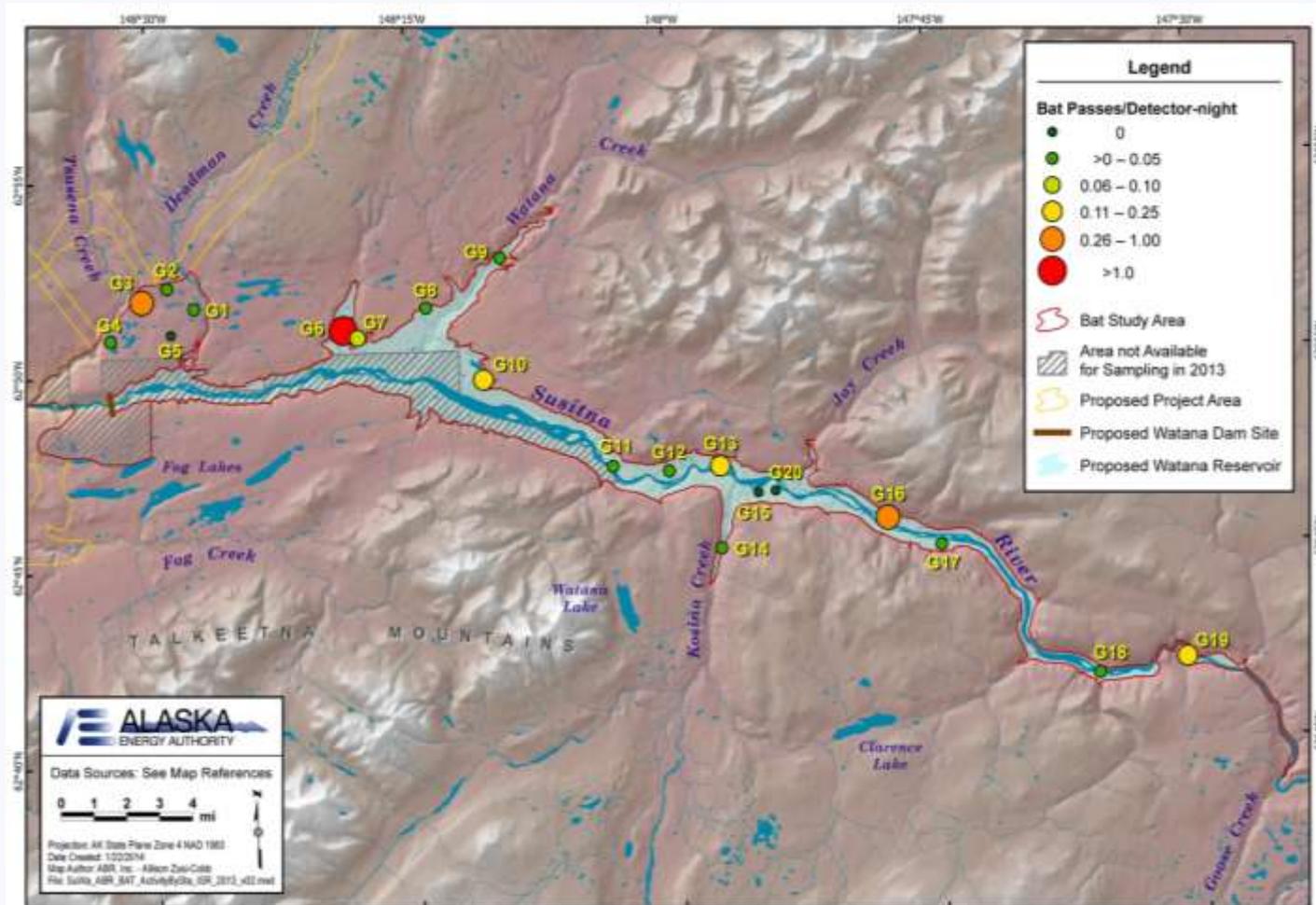
(ISR Part A, Section 5)



Widespread occurrence of bats was documented throughout the study area, based on calls recorded at 17 (85%) of 20 acoustic monitoring sites in 2013.

Study 10.13: Summary of Results

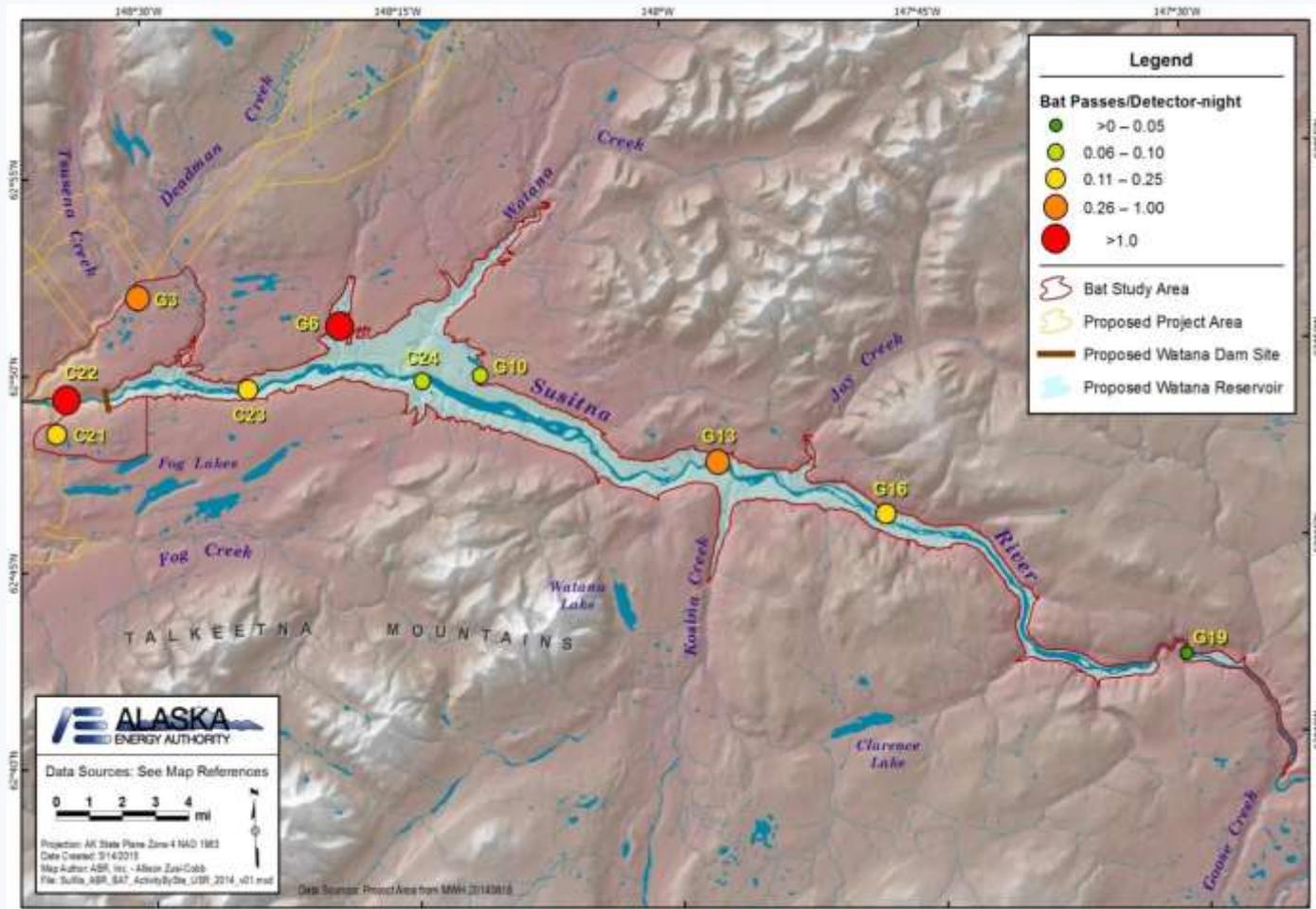
(SCR Section 5)



Distribution of bat activity among acoustic detector stations in 2013, with streams > ponds > cliffs > uplands.

Study 10.13: Summary of Results

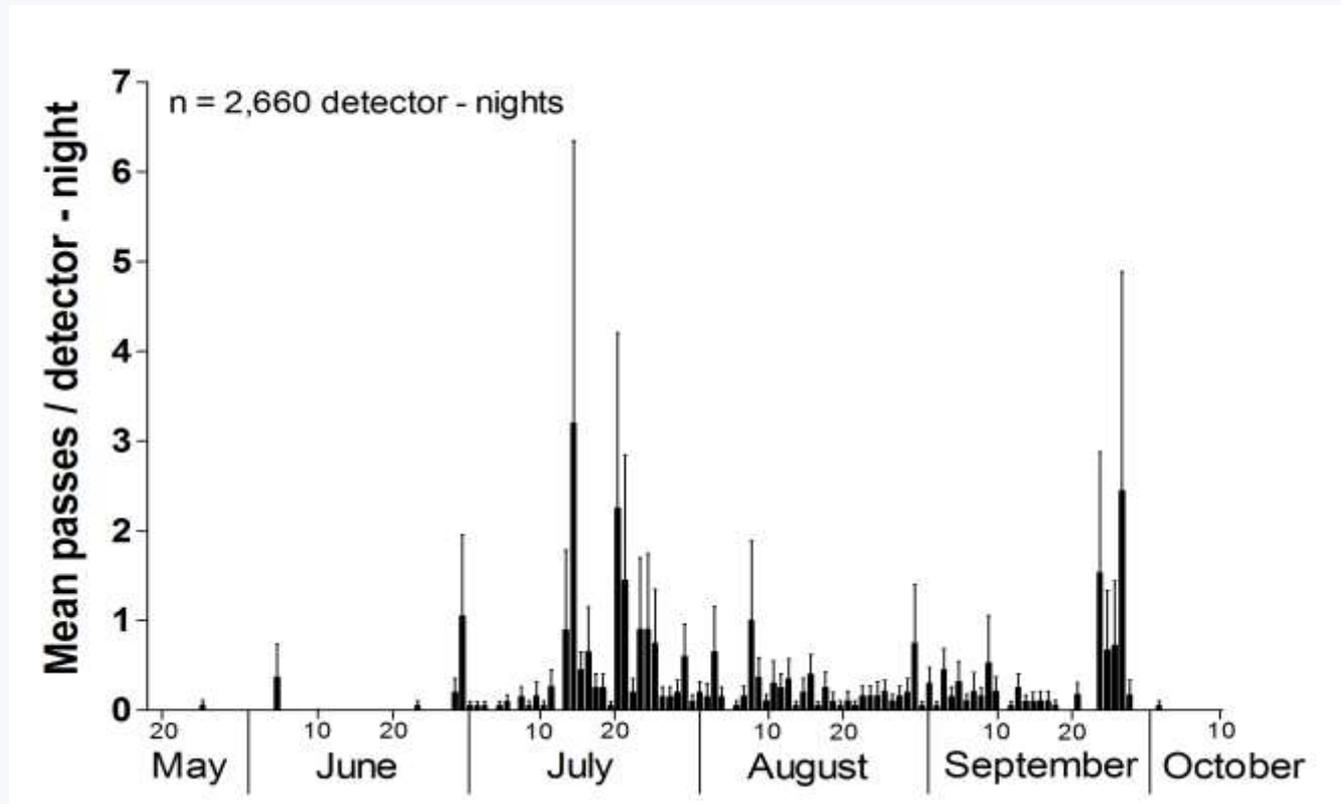
(SCR Section 5)



Distribution of bat activity among acoustic detector stations in 2014, with the highest activity occurring near streams.

Study 10.13: Summary of Results

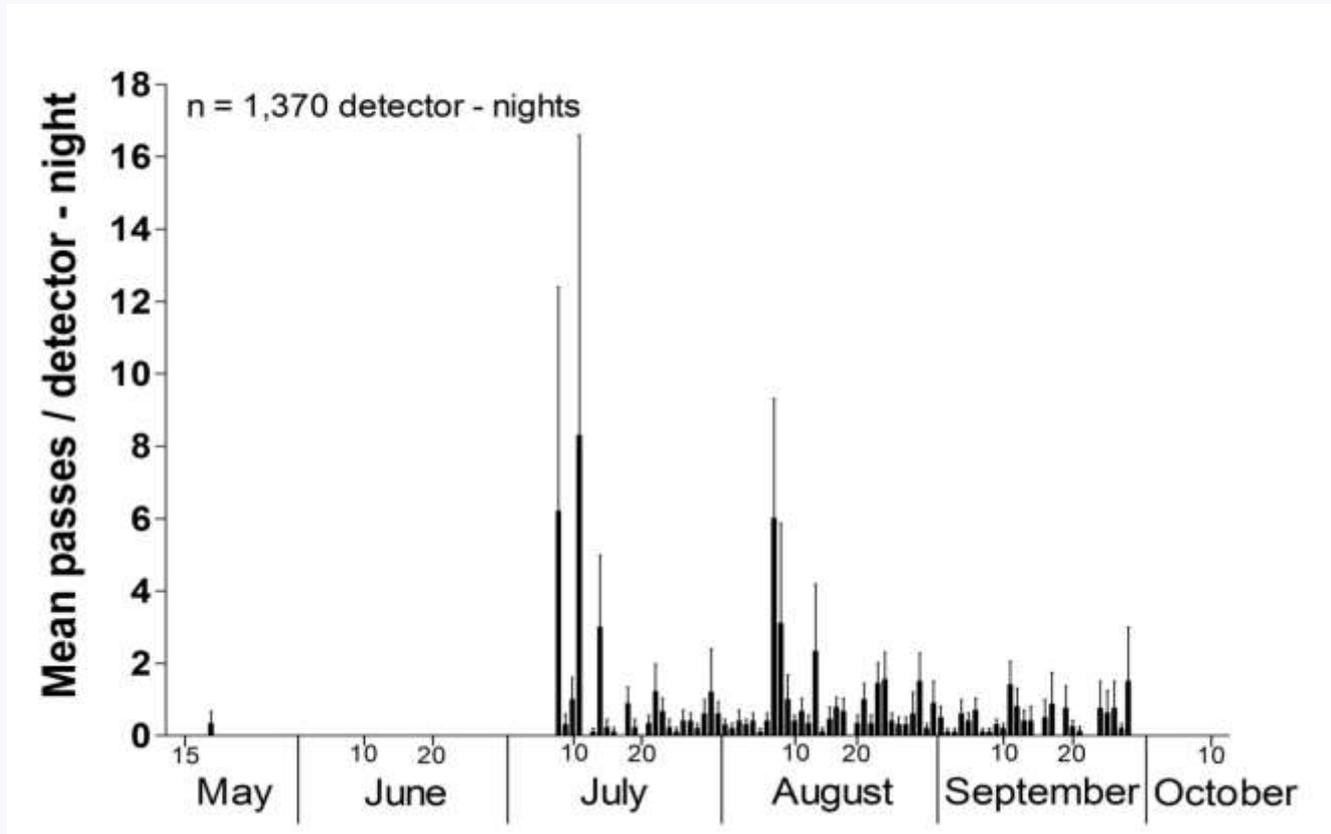
(ISR Part A, Section 5)



Seasonal activity in 2013 peaked in July (when maternity colonies are active) and in late September (prehibernation/migration period).

Study 10.13: Summary of Results

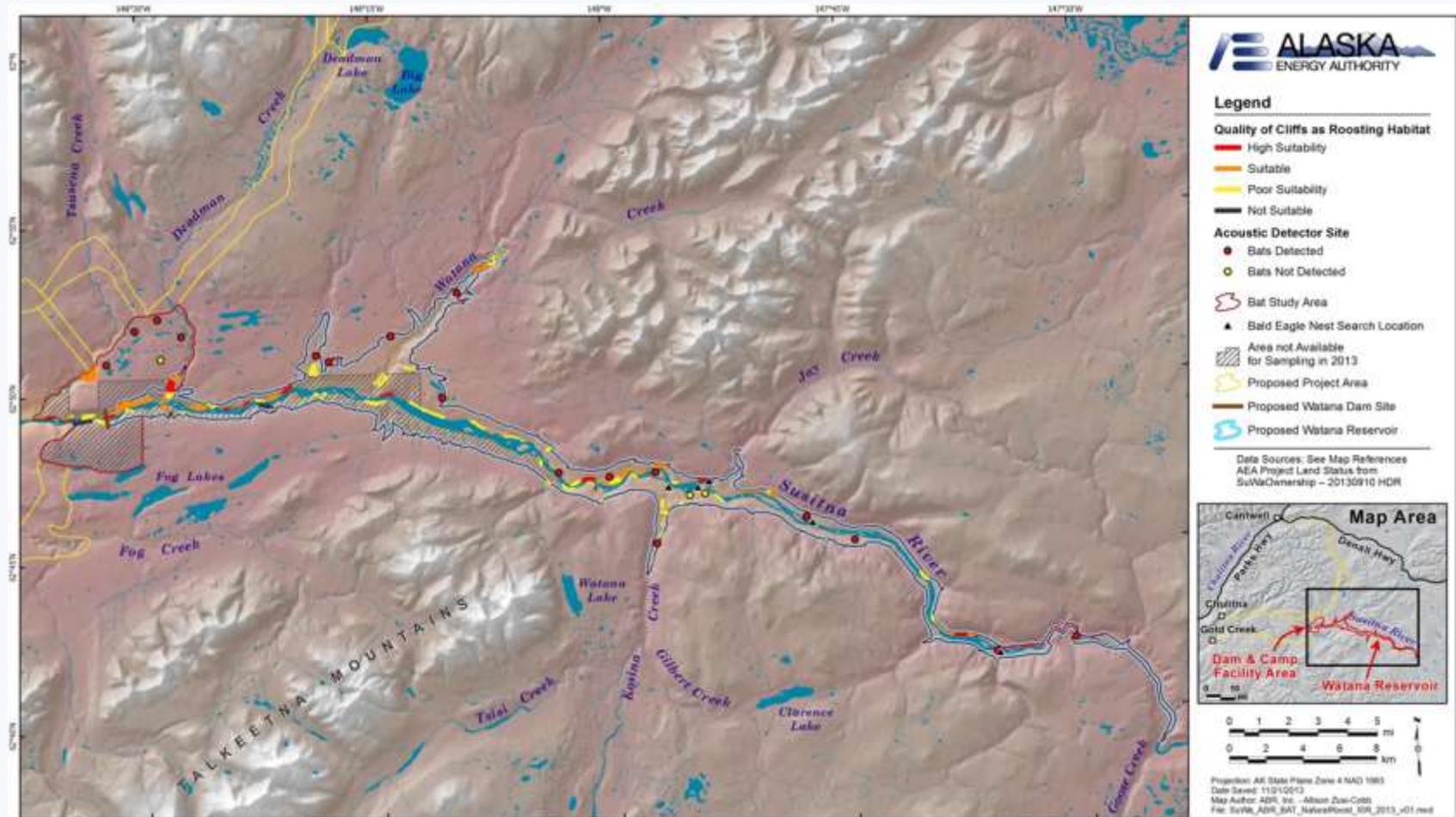
(SCR Section 5)



Seasonal activity in 2014 peaked in July (when maternity colonies are active) and in mid-August.

Study 10.13: Summary of Results

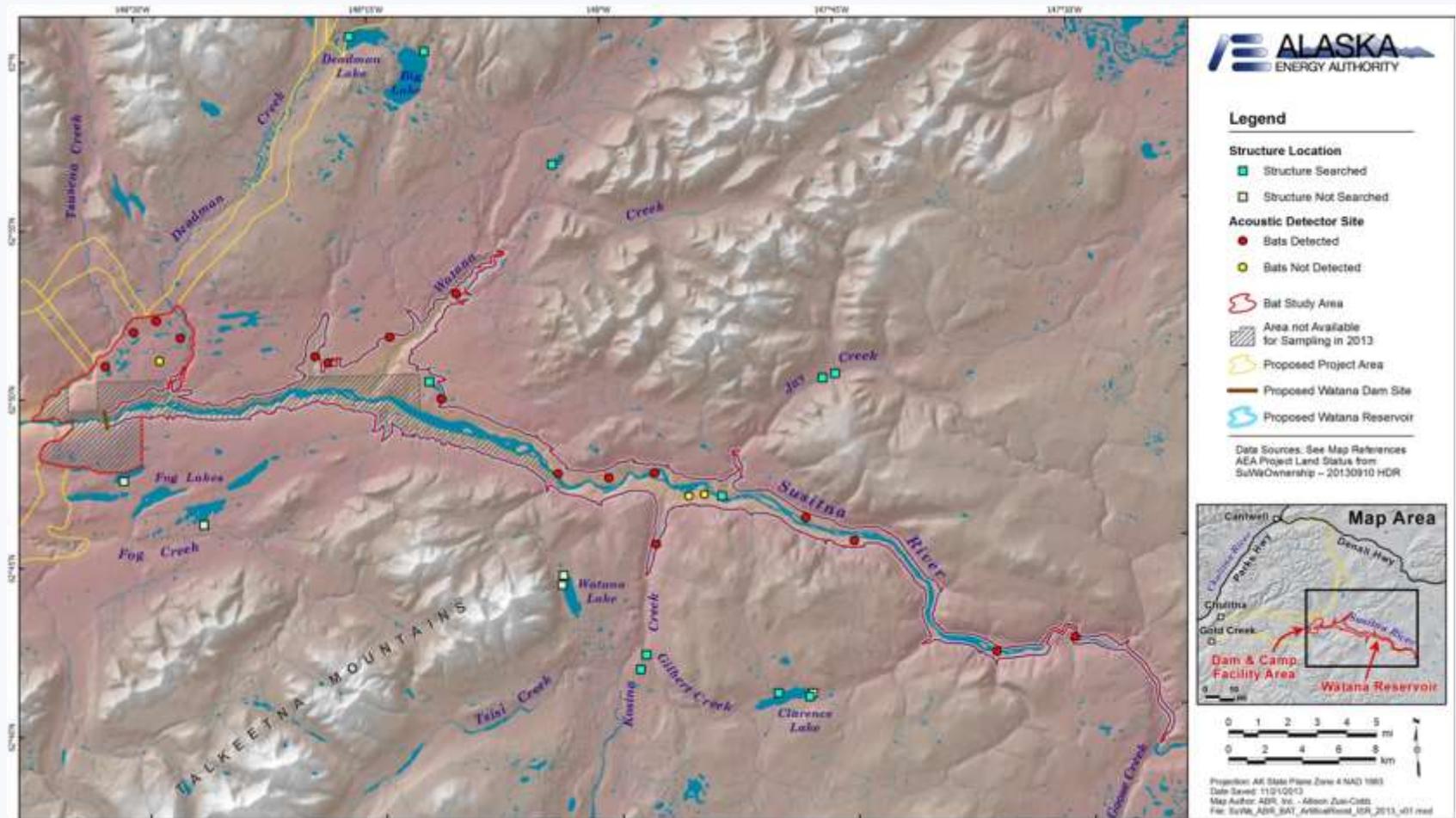
(ISR Part A, Section 5)



In 2013, study team assessed cliff systems along Susitna River and tributaries and examined Bald Eagle nest trees as potential natural roosts, but found none.

Study 10.13: Summary of Results

(ISR Part A, Section 5)



In 2013, study team searched 11 potential artificial roost sites in and near study area, including 26 separate structures, but did not locate any bats or evidence of roosting.

Summary of Results: 2014 Radiotelemetry (SCR Section 5)

Attempted deployment of 6 radio transmitters each during 2 separate capture/tagging/tracking efforts (totaling 12 transmitters) to locate roost sites of bats in the study area.

- First bat capture/tagging/radio-tracking effort was conducted July 14–28:
 - Poor weather (wet, cool) reduced capture success.
 - Captured and tagged 1 little brown bat (*Myotis lucifugus*).
 - Tracked bat to 3 different sections of cliff over a 10-day period.

- Second bat capture/tagging/radio-tracking effort was conducted Sep 18–Oct 1:
 - Cold, clear nights with average lows around 20° F.
 - Bats were active at temperatures down to 30° F.
 - Capture attempts were unsuccessful.



Decision Points from the Study Plan

(ISR Part C, Section 7.1.1)

- Continuation of surveys in 2014 was predicated on locating roost sites in 2013. No roost sites were found that year, but peaks of seasonal activity were found during the maternity colony and prehibernation/migration periods, so the survey effort continued in 2014:
 - Acoustic monitoring at 6 sites on ADNR and BLM lands that were monitored in 2013, plus 4 new sites on CIRWG lands.
 - Attempted deployment of up to 6 radio transmitters each during 2 separate capture/tagging/tracking efforts (totaling 12 transmitters) to locate roosting sites of bats in the study area.

AEA's Proposed Modifications to Study

AEA plans no modifications of the methods for this study, as this study is now complete.

Steps to Complete Study 10.13

(ISR Part D, Section 8)

The field work, data collection, data analysis, and reporting for this study successfully met all study objectives in the FERC-approved Study Plan.

AEA has completed this study.

Licensing Participants' Comments and Proposed Modifications to Study 10.13?

- Agencies
- CIRWG members and Ahtna
- Public

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