



FINAL 2009-2010 ANNUAL REPORT

BALD EAGLE WINTER ROOST MONITORING  
ON THE  
PINEDALE ANTICLINE PROJECT AREA  
SUBLETTE COUNTY, WYOMING

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11 MARCH 2010

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## I. INTRODUCTION

Raptor monitoring on the Pinedale Anticline Project Area (PAPA) in Sublette County, Wyoming was initiated 1998 by Archie Reeve of PIC Technologies. Wyoming Wildlife Consultants, LLC (WWC) conducted surveys over the entire PAPA and additional segments of the Green River in 1999 and 2000. In 2001 all wildlife surveys on the PAPA were contracted to TRC Mariah Associates, Inc. , with WWC acting as a sub-contractor and continuing the raptor field work and reporting in 2001 and 2002. Staff biologists with TRC conducted raptor monitoring from 2003 to 2008. The monitoring area varied during that time. During this ten year span contractors were hired directly by the Operators on the PAPA.

The 2008 Record of Decision for the Supplemental Environmental Impact Statement (SEIS) for the Pinedale Anticline Oil and Gas Exploration and Development Project Sublette County, Wyoming (ROD) established the Pinedale Anticline Project Office (PAPO) to obtain, collect, store, and distribute monitoring information to support adaptive management and analyze mitigation projects. WWC was awarded the 2009 raptor monitoring contract through a competitive bidding process.

Bald eagle winter roost surveys to date on the Pinedale Anticline Project Area have been sporadic, generally focused on a project-specific need. A set of three surveys annually to locate bald eagle winter roosts is included as part of the annual raptor monitoring contract administered by the PAPO.

## II. METHODS

Protocols for this monitoring effort were provided by the Bureau of Land Management, Pinedale Field Office (BLM-PFO), and were made a part of the contractual agreement between WWC and PAPO. These protocols are attached to this report as Appendix A.

Local pilot Jim McLellan was used for the survey. Mr. McLellan has flown us for years in the Pinedale area and has conducted winter bald eagle roost surveys for WWC and other clients. A Cessna Skyhawk 172 aircraft was used, flying approximately 250 feet above the landscape. Some cattle and horses are present on the river bottoms, and we actively watch for any signs of disturbance caused by the aircraft. No instances of livestock distress were observed during the performance of this survey.

Two observers were used on all three flights, John Dahlke and Gregg Shedd. A Trimble Nomad GPS unit was loaded with layers including topographic maps and project boundaries, and was used to record bald eagle sightings.

## III. Results

Three flights, in the months of December, January and February, were completed for this project. WWC is based in Pinedale, and we have the ability to modify scheduled flight dates to meet desired conditions. All three flights were conducted under excellent observational conditions.

Bald eagles were observed at eight locations during the December flight, twelve locations during the January flight, and seven locations in February. These cumulative observations are illustrated below as Map 1. Five of the eight locations on the December flight were classified as roosts, with three groups of two birds and two groups of three eagles. Two roost locations were documented on the January flight, both on the Green River, one group with two birds and one site with three eagles. Two groups of two eagles were observed on the February flight. The roost locations are presented below as Map 2.

Data associated with the bald eagle sightings are included as the EXCEL file WWC\_BAEA\_Roost\_Survey\_loc, attached below as Appendix B. We used the most recent data entry protocols and data sheet found on the BLM-PFO website.

#### IV. Discussion

Most of the rivers surveyed on the first two flights were ice-covered. On the December flight we estimated >90% of the surface was frozen, with some stretches along riffles still open along the centers. During the January flight that amount had increased to over 95% , with only a few spots still open. The exception is the upper portion of the West Fork New Fork from approximately the Town of Pinedale downstream to west of the Pinedale Airport. Many springs along the toe of the upland bench provide warmer water to be introduced, which on the first two flights kept this stretch of river mostly open. On the February flight open water had increased slightly, but less than 10 % was not ice-covered. The amount of open water available, and visible, may have limited the number of bald eagles present during the 2009-2010 survey.

The PAPO contract protocol establishes two eagles as the lower threshold for the number of birds which defines a roost location. In this survey, six observations yielded two birds, with three of these sightings directly associated with nests active in 2009. Two of these three sightings were of obvious pairs, sitting very close together on the same branch. The third observation in this set was of two birds in the same tree, on each side of the nest. It is our opinion that these three locations should not be described as roost sites.

Only one area had any consistency for bald eagle roosting. Two groups of eagles about one quarter mile apart, representing three adults and one adult and one juvenile, were observed on the Green River on the December flight. On the January flight two groups of eagles, again representing three and two birds but with a slightly different age categorization, were found approximately one mile north of the December location. Additional single eagles were also observed in the general area. Cottonwood trees are available in this area, but at a relatively low density and spatial extent typical of other Wyoming bald eagle roosts.

WWC has conducted several project-specific bald eagle roost surveys on the PAPA during the past ten years. The largest roost we located was just east of where the PAPA crest crosses the New Fork River. No eagles were seen in this area during the 2009-2010 survey effort. On a general visual assessment, this previously identified roost was situated in one of the larger stands of cottonwoods available within the study area.

V. Appendix A – Bald Eagle Winter Roost Survey Protocols

**BALD EAGLE WINTER ROOST SURVEY PROTOCOL**

Adapted from: WILDLIFE SURVEY PROTOCOL FOR COAL BED NATURAL GAS DEVELOPMENT POWDER RIVER BASIN WILDLIFE TASKFORCE February 2005

*These survey procedures and data standards may be changed at any time at the discretion of the BLM.*

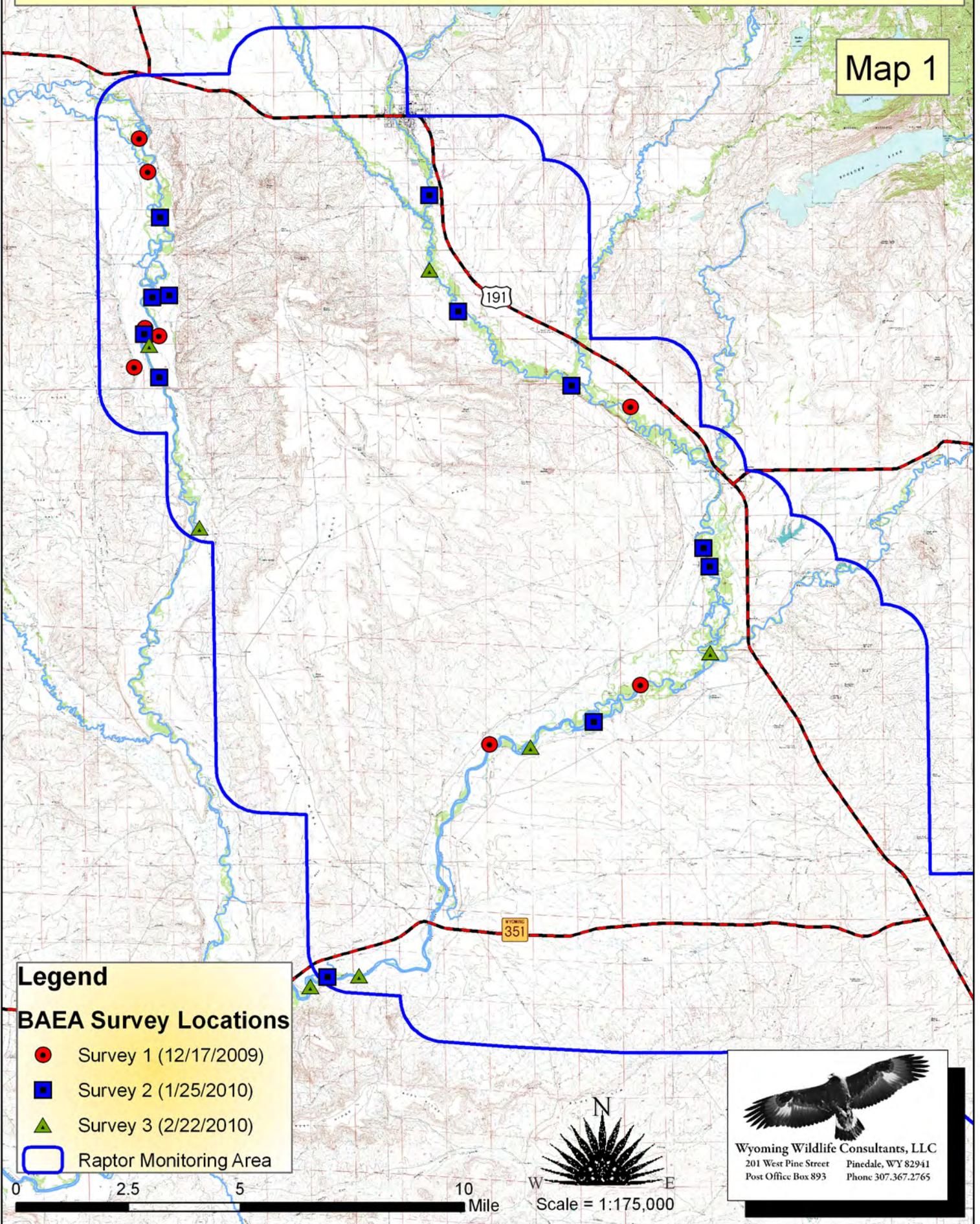
**Recommended protocol based on peer reviewed publications.**

1. Survey stands of coniferous and cottonwood trees during the period of Dec.1 to March 1 from 1 hour before sunrise or sunset to 1 hour after sunrise or sunset. Surveys after this period are not reliable. Late afternoon surveys may be preferable as eagles often leave roost sites at or before dawn and may return to roost throughout the afternoon.
2. Helicopters or fixed-wing airplanes can be used for surveys. If not following a drainage, suspected roost habitat should be flown on north - south transects with lines about one km (.6 mi) apart. Under conditions of marginal light, transect width should be narrowed.
3. Transects should be flown at about 100-150 meters (300-450 ft) above ground level.
4. Whenever possible, two observers should be used in addition to the pilot so that one observer is always looking away from the sun regardless of the direction the aircraft is flying.
5. Surveys should begin at the east edge of the survey area and work west to minimize the possibility of the plane flying over roost sites prior to them being observed.
6. Document all bald eagle observations using GPS equipment (UTMs - NAD83). Record: date, location, number seen by age class (adult, juvenile, unknown eagle) tree type and habitat any additional comments

Survey will consist of at least 3 visits, with at least 1 week between visits. Visits should extend throughout the winter roosting season (recommended minimum of 1 visit per month), as eagle use is largely dependent on regional weather patterns, and eagle use often increases as the roosting season progresses. APD analysis shall proceed with the completion of 3 visits so as not to delay APD analysis for the entire three month survey period.

# Bald Eagle Winter Survey Locations 2009-2010

Map 1



## Legend

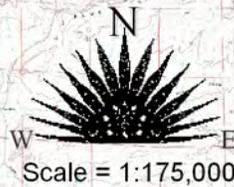
### BAEA Survey Locations

- Survey 1 (12/17/2009)
- Survey 2 (1/25/2010)
- ▲ Survey 3 (2/22/2010)

□ Raptor Monitoring Area

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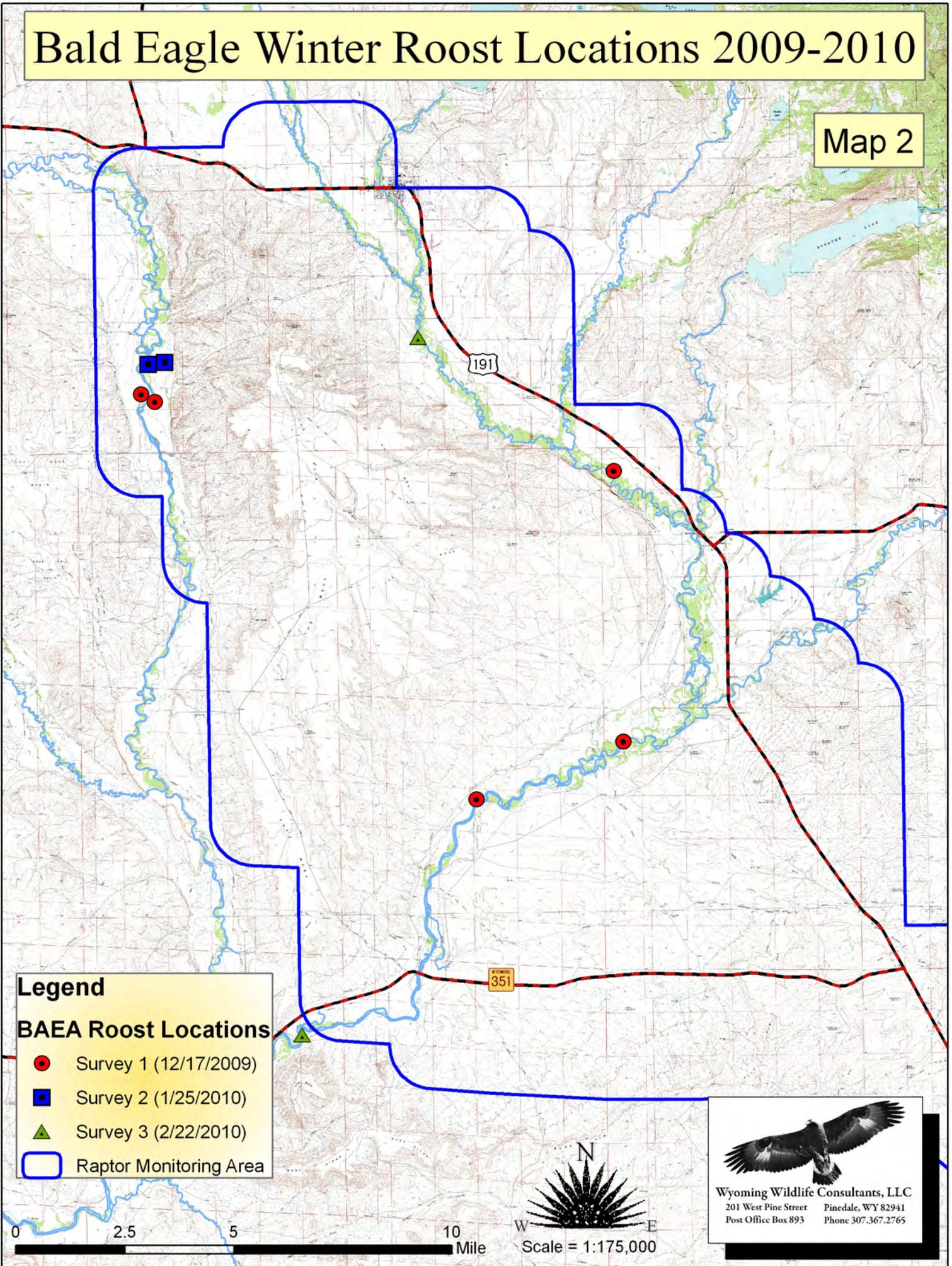
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# Bald Eagle Winter Roost Locations 2009-2010

Map 2



## Legend

### BAEA Roost Locations

- Survey 1 (12/17/2009)
- Survey 2 (1/25/2010)
- ▲ Survey 3 (2/22/2010)
- Raptor Monitoring Area

  
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