

**Bald Eagle Winter Roost Surveys
Pinedale Anticline Project Area
Sublette County, Wyoming
January-February, 2011**



Report Prepared for:

**Wyoming Game and Fish Department,
Pinedale Anticline Project Office, and
Bureau of Land Management**

Pinedale, Wyoming

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INTRODUCTION

The 2008 Record of Decision (ROD) for the Supplemental Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project in Sublette County, Wyoming (USDI-BLM 2008) requires annual surveys for bald eagle winter roosts. Monitoring implemented under the 2008 ROD aims to protect and maintain existing bald eagle winter roost habitat throughout the Pinedale Anticline Project Area (PAPA) to comply with the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act. Mitigation efforts for bald eagles within the PAPA include restricted activity within one mile of known communal winter roosts from November 1 to April 1, and no surface disturbance within one mile of active roost sites year round.

Hayden-Wing Associates, LLC (HWA) was contracted by the Pinedale Anticline Project Office (PAPO) through the WGFD to survey for bald eagle winter roost sites within one mile of the PAPA during the winter of 2010-2011.

PROJECT AREA

This raptor monitoring project was conducted within Sublette County, Wyoming, on the Pinedale Anticline Project Area (PAPA; 198,037 acres). Surface land ownership is mainly BLM with small amounts of state and private land. Elevation ranges from approximately 6,850 feet to 7,750 feet, and average annual precipitation is about 10-12 inches (USDA-NRCS 2009). The PAPA is comprised primarily of Wyoming big sage land cover, with lesser amounts of desert shrub and irrigated crops. Two rivers flow through the PAPA: the Green River in the west and the New Fork River in the east. Both of these river systems support riparian habitats consisting of large cottonwoods and willows. These two rivers and their tributaries provide suitable winter roost habitat, the majority of which is on private land.

METHODS

The following surveys were performed in accordance with the BLM's *Wildlife Survey Protocols – Pinedale Field Office, January 2011*. All spatial data described in this report were obtained using Trimble® Juno SB Global Positioning System (GPS) units. ArcGIS® 10 ESRI software was used to generate maps and conduct spatial analyses.

Aerial surveys were conducted in and within one mile of the PAPA for bald eagle winter roosts on January 11, 25, and February 22. The surveys were performed in a fixed-wing aircraft flying at an altitude of 100-200 feet above ground and airspeed of 60-70 miles per hour. All wooded



riparian habitat was surveyed closely. The locations of bald eagles were recorded using GPS equipment and USGS topographic maps. The start and end times of the survey, temperature, wind speed, cloud cover, substrate, number of adult eagles observed, number of immature eagles observed, and number of unknown-age eagles were documented for each eagle location.

RESULTS and DISCUSSION

Within the PAPA and its one-mile buffer, 61 adult eagles and 17 immature eagles were documented at 46 locations (Table 1). Just outside of the one-mile buffer, an additional 17 adults and zero immature eagles were observed at eight locations. The largest group of birds was observed along the Green River on February 22 and consisted of eight adults and 1 immature eagle.

All of the sightings occurred within riparian areas, in or near the northern half of the PAPA, north of Highway 351. One of the sightings occurred in a conifer, while the rest were all in cottonwood trees. Along the Green River, 37 adults and 4 immature eagles were observed at 21 locations. Along the New Fork River, 36 adults and 13 immature eagles were observed at 29 locations. Eagles were also observed along two tributaries of the New Fork River; three adult eagles were sighted at two locations along Pine Creek, and two adult eagles were sighted at two locations along the East Fork River.

REFERENCES CITED

United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS). 2009. State annual data summaries.
Available at <http://www.wcc.nrcs.usda.gov>

United States Department of the Interior – Bureau of Land Management (USDI-BLM). 2008. Record of decision, Pinedale Anticline Project Area, supplemental environmental impact statement.
Available at <http://www.blm.gov/wy/st/en/info/NEPA/pfodocs/anticline/seis.html>

Table 1. Results of bald eagle winter roost surveys conducted in and around the Pinedale Anticline Project Area during January and February, 2011.

Location ID	Survey Period	Survey Date	Survey Time	Number of Birds Seen		Drainage
				Adult	Immature	
1	1	1-11-2011	0740-0849	1	0	New Fork River
2	1	1-11-2011	0740-0849	1	0	New Fork River
3	1	1-11-2011	0740-0849	1	0	New Fork River
4	1	1-11-2011	0740-0849	1	0	East Fork River
5	1	1-11-2011	0740-0849	2	0	New Fork River
6	1	1-11-2011	0740-0849	2	0	New Fork River
7*	1	1-11-2011	0740-0849	1	0	Green River
8*	1	1-11-2011	0740-0849	2	0	Green River
9*	1	1-11-2011	0740-0849	2	0	Green River
10	1	1-11-2011	0740-0849	0	1	Green River
11	1	1-11-2011	0740-0849	2	0	Green River
12	1	1-11-2011	0740-0849	1	0	Green River
13*	1	1-11-2011	1606-1635	2	0	Pine Creek
14	1	1-11-2011	1606-1635	1	0	Pine Creek
15	1	1-11-2011	1606-1635	3	0	New Fork River
16	1	1-11-2011	1606-1635	1	0	New Fork River
17	1	1-11-2011	1606-1635	1	1	New Fork River
18	2	1-25-2011	0720-0840	2	0	New Fork River
19	2	1-25-2011	0720-0840	2	0	New Fork River
20	2	1-25-2011	0720-0840	0	1	New Fork River
21	2	1-25-2011	0720-0840	0	1	New Fork River
22	2	1-25-2011	0720-0840	1	0	New Fork River
23	2	1-25-2011	0720-0840	1	0	New Fork River
24	2	1-25-2011	0720-0840	0	2	New Fork River
25*	2	1-25-2011	0720-0840	2	0	Green River
26	2	1-25-2011	0720-0840	1	0	Green River
27	2	1-25-2011	0720-0840	2	0	Green River
28	2	1-25-2011	0720-0840	1	0	Green River
29	2	1-25-2011	0720-0840	1	0	New Fork River
30	2	1-25-2011	0720-0840	1	0	New Fork River
31	2	1-25-2011	0720-0840	4	0	New Fork River
32	3	2-22-2011	0700-0825	2	1	New Fork River
33	3	2-22-2011	0700-0825	1	0	New Fork River
34	3	2-22-2011	0700-0825	0	1	New Fork River
35	3	2-22-2011	0700-0825	2	0	New Fork River
36	3	2-22-2011	0700-0825	1	0	East Fork River
37	3	2-22-2011	0700-0825	1	1	New Fork River
38	3	2-22-2011	0700-0825	1	0	New Fork River
39*	3	2-22-2011	0700-0825	2	0	Green River
40*	3	2-22-2011	0700-0825	1	0	Green River
41*	3	2-22-2011	0700-0825	5	0	Green River

Table 1. Continued.

Location ID	Survey Period	Survey Date	Survey Time	Number of Birds Seen		Drainage
				Adult	Immature	
42	3	2-22-2011	0700-0825	0	1	Green River
43	3	2-22-2011	0700-0825	3	0	Green River
44	3	2-22-2011	0700-0825	0	1	Green River
45	3	2-22-2011	0700-0825	1	0	Green River
46	3	2-22-2011	0700-0825	1	0	Green River
47	3	2-22-2011	0700-0825	8	1	Green River
48	3	2-22-2011	0700-0825	1	0	Green River
49	3	2-22-2011	0700-0825	1	0	Green River
50	3	2-22-2011	0700-0825	2	0	New Fork River
51	3	2-22-2011	0700-0825	0	2	New Fork River
52	3	2-22-2011	0700-0825	0	1	New Fork River
53	3	2-22-2011	0700-0825	3	0	New Fork River
54	3	2-22-2011	0700-0825	0	2	New Fork River

*Point is just outside of one-mile survey buffer.