

V. Bald Eagle Breeding Areas, Preliminary Key Use Identification, 1997

We provide preliminary habitat use information collected in summer 1997 for two bald eagle breeding areas, Five Ways (18-IS-24) and Clark Hill (18-IS-25). We have not completed intensive observations within these breeding areas, and do not know the complete extent of foraging area and home range use. We do provide a summary of breeding area history and productivity, nesting chronology, occupied nest zones, and comments on known foraging and perching areas and breeding area habitat quality. Our maps (figures 5 and 6) provide a preliminary view of the key use area for each breeding area discussed.

Five Ways 18-IS-24.

Breeding Area History. The only nest in this breeding area was first built in May, 1994, by a new pair. The new nest was first noted 5/28/94, and did not yet have a formed nest pocket; there was no evidence of an incubation attempt in 1994. The female had a few dark feathers on the supraorbital crest above her eyes, indicative of a young adult.

M. Whitfield found this new nest unoccupied on 2/28/95. However, in May, 1995, J. Gardetto and K. Rice saw a brooding adult on the nest. M. Whitfield and M. Maj noted a single large nestling on this nest on 6/18. Both adults were on perches in the nest area. M. Maj monitored the Pine Creek and Five Ways territories for several days in late June, 1995, and verified that there were two complete pairs in the area, an unsuccessful pair at Pine Creek, and a successful pair with one large nestling at Five Ways.

This nest was active, with an incubating adult on the nest on 4/3/96, and a second adult perched nearby in a live cottonwood. M. Whitfield saw two large nestlings on the Five Ways nest on 5/8. On 6/11, both large nestlings were sitting on the nest edge. On 8/23, M. and A. Whitfield saw an adult and one juvenile perched on a cottonwood at the river edge immediately below Five Ways. A second juvenile was perched on a large limb in the nest tree.

On 3/9/97, M. Whitfield skied into the river rim to observe this nest. Both adults were on the only known nest in this breeding area, but neither bird was in incubation posture. On 4/17, an adult was sitting in brooding posture on this nest. On 5/28, two large nestlings were standing on the nest. The unbanded adult female was present at the nest. Two young were seen on the nest on 6/17, and were still on the nest on 7/2, flapping their wings. Both young were fledged from the nest on 7/3. On this date, the adult male was seen eating a trout, which an osprey then appropriated. When the osprey left the fish, the two juvenile bald eagles flew from the nest to feed on the trout. On 7/10 and 7/15, the two fledges were flying about the breeding area and food begging. Neither fledge was seen during a brief observation on 8/18.

Table 7. Known productivity at the Five Ways bald eagle breeding area since re-establishment of nesting pairs.

<u>YEAR</u>	<u>NESTING STATUS</u>	<u>NUMBER YOUNG FLEDGED</u>	<u>NEST NUMBER</u>	<u>COMMENTS</u>
1994	Occupied, inactive	0	1	New nest built late in breeding season.
1995	Active, successful	1	1	First young fledged in breeding area.
1996	Active, successful	2	1	Not banded.
1997	Active, successful	2	1	Not banded.

Nesting Chronology. Incubation within this breeding area begins in the second week of March, with hatching by mid-April. The young nestlings' juvenile plumage has replaced secondary down by late May. Fledging occurs in early July. The young fledges may then be dependent upon the adults for 2-8 weeks.

Occupied Nesting Zone, Zone 1. Zone 1 includes the only known nest within this breeding area in a large, live cottonwood. A designated lunch takeout and camping area is located only about .35 km from the nest tree, but the nest is sheltered by its location away from the river channel in the off-river side of a cottonwood stand.

The adults are less tolerant of human activity west of the nest tree on the Douglas fir covered slope that rises above the nest, and respond defensively to people in this area.

Key Use Areas, Known Foraging and Perching Areas. The Five Ways area is named for its multiple braided channels, and compresses considerable river channel area within a relatively short section of river corridor. Most frequently used perch areas are near the nest in cottonwoods, above the nest on the Douglas fir slope, and the Douglas fir slope immediately upriver of the mouth of Pine Creek. On July 2-3, the adult male roosted for the night in a large, full canopy cottonwood north of the nest tree. Observed forage locations include island edges near the mouth of Pine Creek and opposite the mouth of Granite Creek, and the many river channels northeast of the nest.

Breeding Area Habitat Quality. The Five Ways Breeding Area is notable for multiple braided channels, with abundant fish and waterfowl. Many ungulates winter of the canyon slopes in this vicinity, and sometimes provide food in the way of carrion. The Five Ways area and the river corridor upriver between the mouth of Pine Creek and Granite Creek was formerly an important part of the Pine Creek breeding area, as indicated by extensive monitoring of the Pine Creek pair (Whitfield 1993). The Five Ways pair is relatively restrained in distribution of foraging area by the presence of the established Conant Valley and Pine Creek pairs, but has selected an area of notable prey abundance.

The nest is within 400 meters of a designated lunch/camping area. The pair is tolerant of people in this area. Use by people of the area toward the nest from the takeout should be discouraged.

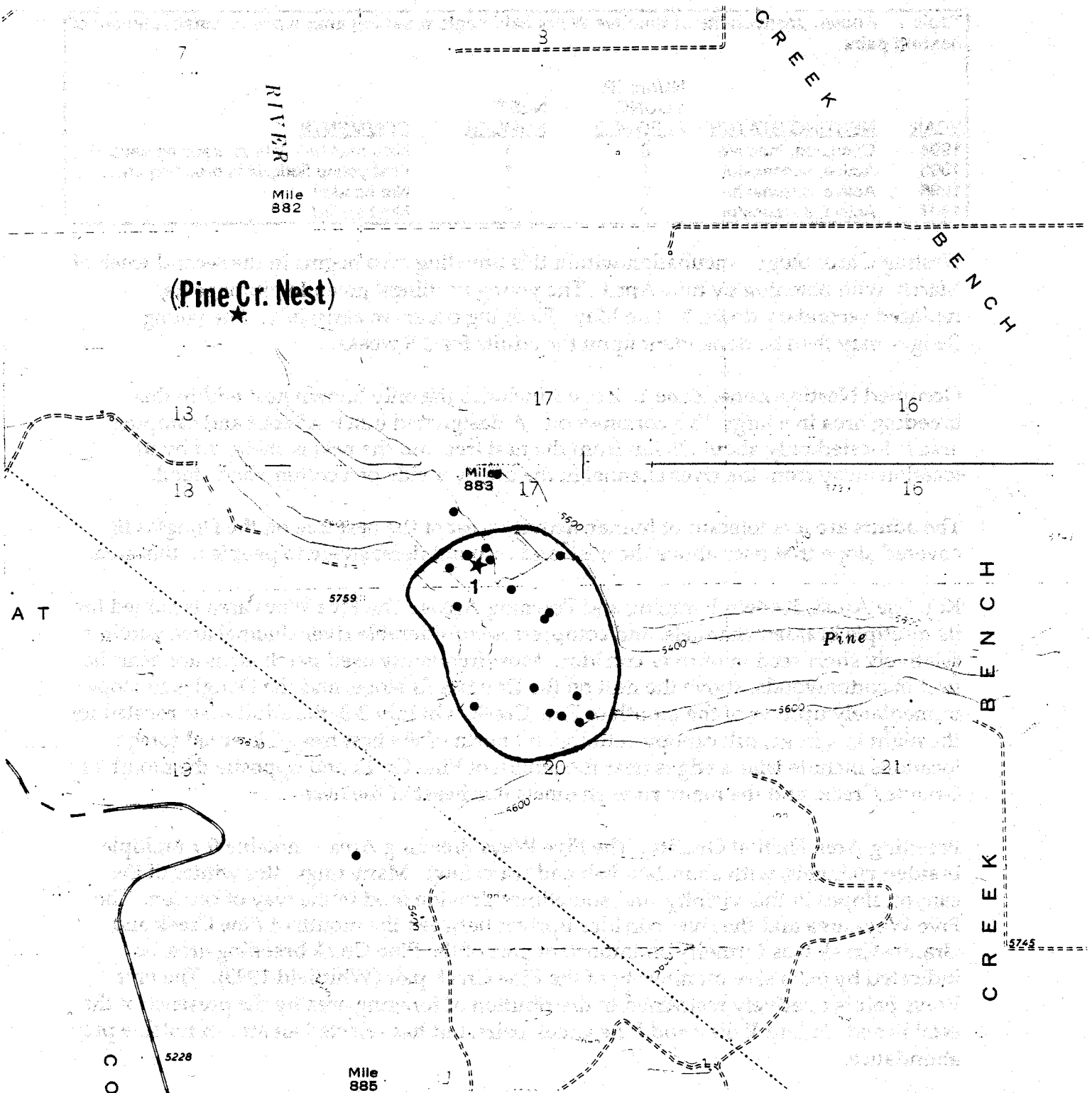


Figure 5. Known key use area within the Five Ways bald eagle breeding area, South Fork Snake River. Intensive monitoring has not occurred at this breeding area, and the information portrayed is preliminary only. The red line encloses the Principal Management Area. The number indicates the only known nest site.

Clark's Hill 18-IS-25

Breeding Area History. K. Rice reported a new nest in cottonwoods below Clark's Hill in mid-March, 1996. Neither adult at this site was banded. Two young successfully fledged in 1996. M. Maj saw an unbanded adult perched in the cottonwood stand upriver of the nest, and another incubating on the nest on 3/21/96. On 4/3, M. Whitfield, K. Rice, and W. Brown observed the nest (and incubating adult) and plotted its location. M. Whitfield and M. Maj saw a brooding adult low on this nest on 5/9. A. Whitfield saw two large young on the nest edge on 6/13. The larger of the two nestlings frequently wing-flapped. A. Whitfield saw a fledged youngster and unbanded adult male in this nesting area on 8/23.

On 3/9/97, the nest was newly built up, but there were no bald eagles within the nest vicinity. A pair of adults was seen perched together about 1 mile downriver. On 3/27, M. Whitfield saw an incubating adult on this nest. An adult was seen in brooding posture on this nest on 4/15. On 6/7, S. Austin monitored this site for five hours. Two large, vigorous young were on the nest. On 6/9, M. Whitfield and J. Gardetto visited the nest for banding, and found that part of the nest and one nestling had fallen out of the tree. The dead nestling was partially consumed. During this observation, the adult female (unbanded) delivered a fish to the youngster on the nest. This juvenile had successfully fledged by 7/7, and was seen in the breeding area begging for food during observations on 7/17, 7/18, and 8/13.

Table 8. Known productivity at the Clark Hill bald eagle breeding area since re-establishment of nesting pairs.

<u>YEAR</u>	<u>NESTING STATUS</u>	<u>NUMBER YOUNG FLEDGED</u>	<u>NEST NUMBER</u>	<u>COMMENTS</u>
1996	Active, successful	2	1	New nest, cottonwood, not banded.
1997	Active, successful	1	1	1 advanced nestling died pre-fledging.

Nesting Chronology. An estimated date of egg laying is derived from observations of adult behavior, from observation of very young nestlings within two weeks post hatching, or from the estimated age at banding. At this site, our chronology estimates are based on less information than at most sites; this is a new breeding area. The estimated date incubation is initiated, judging from juvenile development, is around March 10-15, with hatching by mid-April. By late May the young can survive without brooding. Nestlings are branched outside the nest in late June, and fledge in the first or second week of July. The young fledges may be dependent upon adults for 2-8 weeks.

Occupied Nesting Zone, Zone 1. Zone 1 includes the downriver end of the old growth cottonwood stand near a slough at the edge of Clark's cultivated land below the Clark Hill Overlook (figure). The nest is located on the off-river side of a very densely vegetated island peninsula, and human disturbance at this site is unlikely.

Key Use Areas, Known Foraging and Perching Areas. Figure 6 indicates perches, roosts and foraging locations detected during observations made during the 1997 nesting season. Most of the adult perches were in the nest vicinity in cottonwoods near the river, and Douglas fir and cliff points overlooking the river channel. Noted forage locations were in the river channel that flows in front of the nest island, and downstream of river mile 856 in the cottonwood stand on the northeast side of the river.

Breeding Area Habitat Quality. This breeding area features considerable human activity emanating from the South Fork road on the opposite side of the river, the overlook above the canyon rim south of the nest, and from float traffic in the river channel. The area of the nest tree is not generally accessible to human disturbance because of dense vegetation and backwater sloughs. The river corridor in the nest area and downstream features many braided channels, and is expected to provide an abundant prey base.

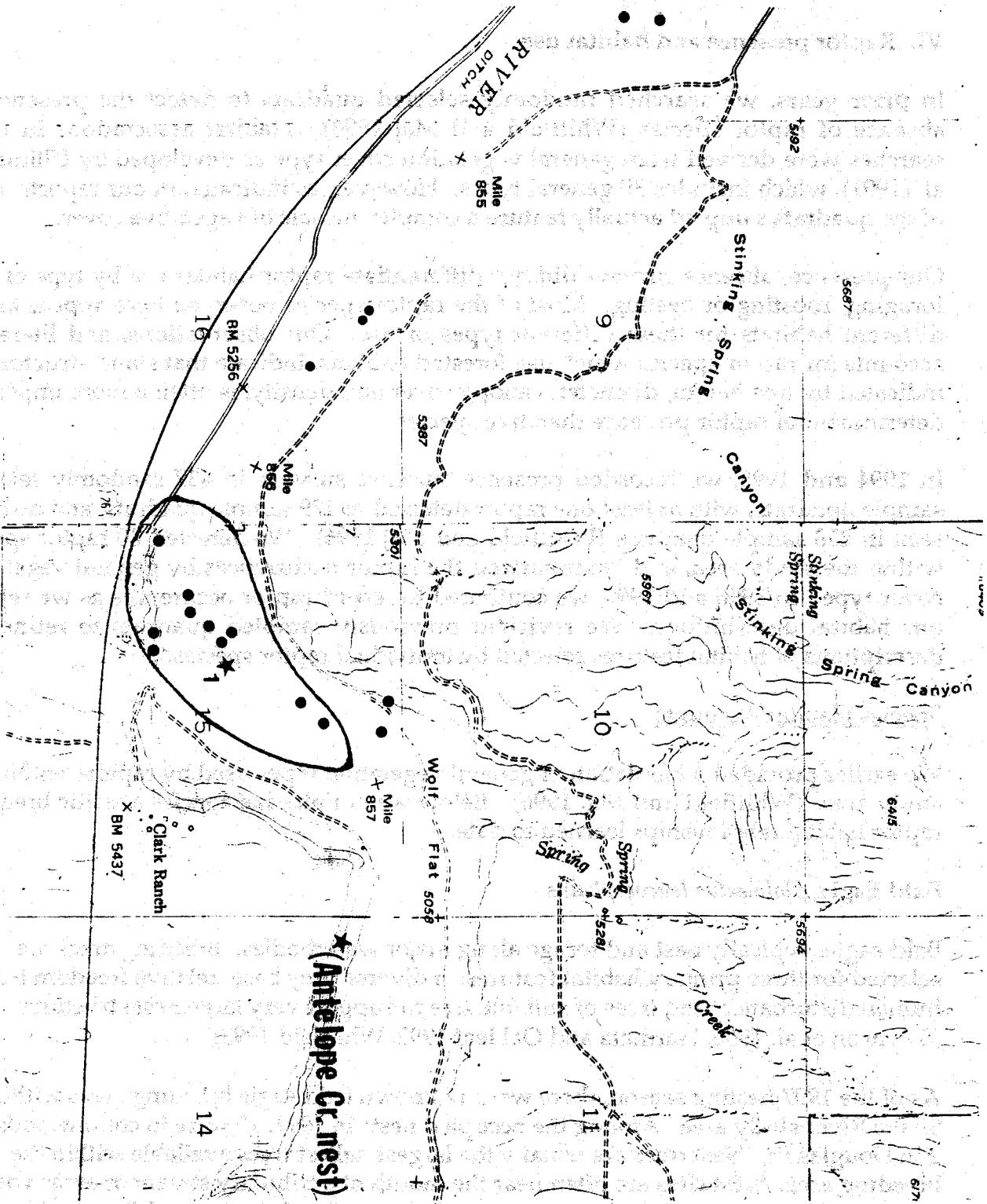


Figure 6. Known key use area within the Clark Hill bald eagle breeding area, South Fork Snake River. Intensive monitoring has not occurred at this breeding area, and the information portrayed is preliminary only. The red line encloses the Principal Management Area. The number indicates the only known nest site.