

## Peregrine Falcon

**OBJECTIVE:** Monitor peregrine falcon occupancy and productivity in the Bitterroot drainage.

**DATA SOURCE:** BNF peregrine surveys.

**FREQUENCY:** Annually.

**REPORTING PERIOD:** 2014 - 2015.

**VARIABILITY:** Data that indicate significant trends in populations or occupied habitat.

### PEREGRINE FALCON (Delisted 1999)

Following their remarkable sustained population recovery across the country, USFWS removed peregrine falcons from the Endangered Species List in August 1999. They were added to the Regional Forester's Sensitive Species List in 2000.

Peregrine falcons occupy a wide variety of habitats, but need adequate cliff ledges or rock outcrops for nesting. Peregrines prefer dominant high open cliff faces. Habitat surveys for the Bitterroot NF identified suitable nesting sites along the west side of the valley on cliffs in or adjacent to the Selway-Bitterroot Wilderness. USFWS considers peregrines as a migratory species for this area.

The Forest, in partnership with The Peregrine Fund, the Liz Claiborne/Art Ortenberg Foundation and Patagonia, Inc., released (hacked) juvenile peregrine falcons in the Painted Rocks area in 1989, 1990, and 1991. In 1992 birds returned to the area, selecting lands along the river for nesting. Peregrine falcons were also hacked in the Canyon Creek drainage in 1992, and in the Little Rock Creek drainage in 1993. Further hacking was curtailed on the Bitterroot NF after wild adults harassed the recent fledglings at both these sites, indicating that nearby territories were already occupied. Since we now have a number of established breeding pairs, there is no need to continue reintroduction efforts.

### MONITORING RESULTS:

The Bitterroot NF participates in the statewide peregrine monitoring program coordinated by the Montana Peregrine Institute and the Montana Department of Fish, Wildlife, and Parks. Bitterroot NF personnel and/or volunteers from Bitterroot Audubon monitored all the known eyries on the Forest in 2010 through 2013 to determine productivity. They also inventoried several canyons that contain good habitat in an effort to find new eyries (nests). We found one new eyrie in 2010, one new eyrie in 2012, and another new eyrie in 2013. As of 2013, we know of 17 canyons in the Bitterroot drainage that have had active peregrine eyries at least once since 1992.

Table 1 summarizes the total number of known eyries, active eyries, known peregrines fledged and the average number of young fledged per active nest since 1992.

**Table 1 - Peregrine Falcon Productivity on the Bitterroot National Forest**

Year	# of Known Eyries	# of Active Eyries	# Known Young Fledged	# Young/Active Eyrie
1992	1	1	0	0
1993	1	1	0	0
1994	2	1	2	2
1995	2	1	2	2
1996	3	3	4	1.33

Year	# of Known Eyries	# of Active Eyries	# Known Young Fledged	# Young/Active Eyrie
1997	3	Unknown	Unknown	Unknown
1998	4	3	4	1.33
1999	5	4	9	2.25
2000	7	7	14	2
2001	11	10	18	1.8
2002	11	9	17	1.89
2003	11	8	13	1.63
2004	11	9	12	1.33
2005	12	11	15	1.36
2006	13	10	21	2.1
2007	14	11	14	1.27
2008	14	11	22	2
2009	14	11	22	2
2010	15	13	31	2.2
2011	15	13	24	1.85
2012	16	14	31	2.21
2013	17	15	33	2.2
2014	17	12	19	1.58
2015	18	13	28	2.15

Thirteen known eyries were occupied by peregrines in 2015, and produced at least 28 fledged peregrines. This equates to a known productivity of 2.15 fledged peregrines per active eyrie, well above the national average of about 1 per active eyrie. This known productivity rate is only slightly below the highest on record for the BNF in 1999, and indicates that peregrines in the Bitterroot are doing well. We were unable to detect any fledglings at three of our eyries that had appeared active, although some may have been present. The number of young produced indicates the largest number we could positively distinguish at one time, but is likely an underestimate of the actual number of young present, so should be considered a minimum count.

#### **EVALUATION:**

Peregrine falcons were widespread and common raptors across much of North America until the 1950s, but they were one of the species most affected by DDT. Peregrine populations declined precipitously throughout most of the United States, and by the early 1980s not a single peregrine eyrie was known to exist in Montana. Following a ban on DDT and intensive reintroduction efforts across the west and in Montana, peregrine numbers have recovered dramatically. The east face of the Bitterroot Mountains now contains the highest known density of peregrine falcon eyries in Montana. The BNF accounted for about 18% of the 82 known active territories and about 27.3% of the known production of 121 juvenile peregrines in Montana in 2013 (Sumner 2013). Documented peregrine productivity in Montana in 2013 was down about 31% from the 2009 record of 176 young, largely due to reduced survey effort.

Known eyries on the Bitterroot NF are typically located on ledges on tall, vertical cliff faces, and most are within or near the Selway-Bitterroot Wilderness. The Blodgett fire burned near peregrine nest cliffs in Blodgett and Mill Creeks in August of 2000, but juveniles had left those nests at least a month earlier. The Kootenai Creek fire burned near peregrine nesting cliffs in Kootenai Creek in 2009, and there was smoke and helicopter flights in the area while juveniles were at or near the nest. The eyrie still fledged at least three juveniles. There is no indication

that the fires negatively affected peregrine occupancy or breeding success at these eyries. In fact, adult peregrines from territories within or near the 2000 fires appear to forage above the burned areas quite frequently.

The Forest has permitted a number of helicopter flights up occupied peregrine canyons to transport equipment and supplies for dam maintenance and repair at several dams in the Selway-Bitterroot Wilderness. Mitigations typically include limiting the helicopter flight path to the side of the canyon furthest from the nesting cliffs. To date, we have seen no indication that these flights have affected peregrine productivity.

Recreational rock climbing has been suspected of disturbing peregrine falcons and other cliff nesting raptors at sites in other parts of the country. We have documented climbing activity near some of our known peregrine eyries. Some of our peregrines have changed the location of their eyrie dramatically since we first started to monitor them. We suspect, but cannot prove, that repeated disturbance by climbers may have caused these shifts in eyrie locations to sites that are less popular for climbing. However, productivity in the canyons where eyrie locations have changed has stayed fairly consistent, indicating that in most cases the peregrines have been able to adapt to the presence of climbers by moving to other sites.

MDFWP classifies the peregrine falcon as a Montana Species of Concern. The international network of Natural Heritage Programs employs a standardized ranking system to denote global (G — range-wide) and state (S) status. Species are assigned numeric ranks ranging from 1 (critically imperiled) to 5 (demonstrably secure), reflecting the relative degree to which they are “at-risk.” The Montana Natural Heritage Program and MDFWP rank the peregrine falcon as a G4 S3 species (MDFWP 2016). This means that across its range the species is considered uncommon but not rare (although it may be rare in parts of its range), and usually widespread. It is apparently not vulnerable across most of its range, but there is possibly cause for long term concern. In Montana, the breeding population is considered to be potentially at risk because of limited and potentially declining numbers, extent and/or habitat, even though they may be abundant in some areas.

