

Cooperative Management of the Bald Eagle in South Coastal Alaska

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Wildlife is abundant in the south coastal forests of Alaska and the Bald Eagle (*Haliaeetus leucocephalus*) is among the most prominent species. Most forests in south coastal Alaska are managed by the U.S. Department of Agriculture, Forest Service, for multiple use. Timber harvested from the Tongass National Forest in Southeast Alaska supports local economies and contributes to the economies of Pacific Rim nations. Recreation and commercial fishing are important on both the Chugach National Forest in southcentral Alaska and the Tongass and both industries impact regional economies and those of other nations. More than 12,000 adult eagles are thought to reside on the Tongass National Forest and their distribution and abundance is believed to be very similar to what it was in pre-settlement times. Eagle nesting densities in the Tongass, about one nest per 1.25 miles of saltwater shoreline, are the highest reported in North America. Less is known about eagles on the Chugach National Forest, but summer populations may range from 2000 to 3000 adults and winter concentrations total about 2500 eagles (P. Schempf U.S. Fish and Wildl. Serv., pers. comm.).

As mandated in the National Forest Management Act of 1976 and its implementing regulations, the Forest Service has primary responsibility for managing wildlife habitat on National Forest System lands in south coastal Alaska. That includes habitat for Bald Eagles. In addition, the Forest Service is charged to enforce such federal legislation relating to eagles as the Bald and Golden Eagle Protection Act (1972, 16 US 668) and the Migratory Bird Treaty Act (1918, 16 US 703). Some state legislation also protects Bald Eagles on National Forest Service lands. Title 16 of the Alaska State Statutes 16.4-0, Section 16.05.920 provides for the protection of birds and specifically their nests and eggs, against disturbance.

The U.S. Department of the Interior, Fish and Wildlife Service, like the Forest Service, must meet the requirements of the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act and similar legislation. Unique among all agencies, the Fish and Wildlife Service has authority to issue permits as exceptions to normal protection provided eagles by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Such permits are related to scientific or educational needs and native ceremonial (religious) uses.

Given both shared and unique legal responsibilities for management of the Bald Eagle,

the Forest Service and the Fish and Wildlife Service have cooperated for more than three decades in managing Bald Eagles in south coastal Alaska. This paper reviews the progress of cooperative management since the establishment of the initial Memorandum of Understanding in 1968 and describes current activities to improve eagle management under the Interagency Agreement of 1990.

The 1960s

The Forest Service Manual provides direction and responsibilities for resource management including those efforts that involve cooperation among both state and federal agencies. In 1968, the Alaska Region of the Forest Service initiated a review of Forest Service Manual direction for eagle management. The proposed direction was presented to the Fish and Wildlife Service in 1968 by Sig Olson, then Chief, Branch of Wildlife Management (Olson 1968). A subsequent review of Fish and Wildlife Service eagle management in Alaska by Fred Robards, Eagle Management Studies and John Findley, Regional Director, Portland, Oregon, suggested it would be useful to coordinate the efforts of both agencies. The coordination included the following:

- The Forest Service was to provide to the Fish and Wildlife Service information on the location of proposed land management activities.
- The Fish and Wildlife Service was to map Bald Eagle nest locations.
- Liaison with the State of Alaska was acknowledged as important, although interest in the eagle by the state was minimal.
- Both agencies were to seek information on issuance of permits that would allow cutting of eagle nest trees when necessary to protect agricultural interests such as logging.
- Though it was not included in the Memorandum of Agreement, it was acknowledged that need existed to evaluate the Forest Service 330-foot protective radius around each eagle nest.

In September 1968, a Memorandum of Understanding was signed by the Forest Service and the Fish and Wildlife Service (USFS and USFWS 1968). That document required the Forest Service to provide the Fish and Wildlife Service with information on proposed logging activities; the Fish and Wildlife Service was required to map eagle nest locations and to establish adequate beach markers to mark locations of eagle nest trees. The Forest Service was also required to apply to the Fish and Wildlife Service for a permit if it wished to allow felling a tree containing an eagle nest. A revision of this Memorandum of Understanding required the Fish and Wildlife Service to locate and mark nest trees with "Wildlife Tree" signs provided by the Forest Service.

The 1970s

The 1970s witnessed a series of changes in federal agency cooperative eagle management. Under a 1974 Memorandum of Understanding (USFS and USFWS 1974), the Forest Service was to include clauses and specifications in timber sale contracts to

protect eagle nests. Joint investigations by both agencies were to precede issuance of any permit to disturb or cut an eagle nest tree. Furthermore, contacts between the two agencies on policy and program direction were to be through the Regional Forester and Area Director. The major change in the 1974 Memorandum of Understanding was a provision to maintain a 330-foot radius buffer around each eagle nest tree and to exclude all logging, road building, or other activity within that zone.



Bald Eagle nest trees on the Tongass National are marked by the U.S. Fish and Wildlife Service. Note that this tree still has remnants of ladder rungs nailed to it so the eaglets could be collected for bounty. Photo by Jack Hodges, USFWS.

The mid-1970s began with a judicial opinion of a request to remove 30 eagle nest trees in the right of way for the proposed Juneau to Haines highway (Stevens 1976). The request from the State of Alaska, Commissioner of Highways, was based on the Forest Service and Fish and Wildlife Service Memorandum of Understanding, which, under certain conditions, permits entering the 330-foot buffer surrounding a nest. Section 2 of the , as amended, 16 US 668 et seq. (1970) does allow the Department of Interior "to permit the taking of such eagles for the protection of wildlife or of agricultural or other interests in any particular locality. "The judicial opinion rendered, however, was that "other interests" did not include road building and the Forest Service and Fish and Wildlife Service Memorandum of Understanding could not be used as partial justification for cutting eagle nest trees.

In 1978, another revised Memorandum of Understanding (USFS and USFWS 1978) provided habitat protection to eagle habitat beyond nest trees, specifically including feeding and perching sites. Perch (and presumable feeding) sites were described as dominant trees, over 24 inches in diameter (or largest available if smaller than 24 inches) at breast height and within 40 yards of the high tide line. Protection for the perch sites was to be provided by a cluster of trees in each 100 yards of beach front. Furthermore, this buffer was to be maintained in event the nest on a nest tree became unusable for any reason.

The 1980s

Version 5 of the Memorandum of Understanding (USFS and USFWS 1984) was signed in 1984. In this version, key provisions of the 1978 memorandum were retained. Specific tree size requirements for perch and feeding sites included a definition for a group (i.e., 3-10) of trees. The memorandum also stated such trees should provide good visibility for birds using them, thus they should have open crowns and/or spike tops. The joint analysis that the 1978 memorandum required in cases where the 330-foot radius was to be entered now required the Fish and Wildlife Service to provide a list of habitat recommendations if a variance to the Memorandum of Understanding was requested by the Forest Service. The Fish and Wildlife Service also would be required to state reason(s) why, a variance to the Memorandum of Understanding was denied. Reasons why a variance was denied, including habitat recommendations, were to be addressed in the project Environmental Assessment or Environmental Impact Statement and considered by the Forest Service Interdisciplinary Team in developing alternatives for land use activities. The Fish and Wildlife Service also agreed to provide current field data to the Forest Service and both agencies agreed that "eagle nests properly distributed along the shoreline must be present in perpetuity."

In 1989, the Forest Service conducted a review of Bald Eagle habitat management (USFS 1989) across the Region. Participants in this review included Fish and Wildlife Service personnel and Forest Service biologists from the Tongass National Forest, the Chugach National Forest and the Regional Office.

Key findings of this review included three observations:

- Population estimates based on Fish and Wildlife aerial plot counts show an increase in Bald Eagle numbers from about 7,000 birds in the early 1970s to more than 12,000 in 1987.
- Relatively few variances to the Memorandum of Understanding are requested and fewer are approved.
- Cooperation between the agencies is good.

In addition, the activity review identified several important needs for eagle management on National Forest lands. They included:

- Development of population and habitat goals.
- An increase in field level interchange of information between the two agencies.
- An increase in the awareness of all eagle management requirements, i.e., perching and feeding sites.

The activity review noted that:

- Some state and federal land holding agencies are not aware of the Forest Service/Fish and Wildlife Service cooperative management program.
- The eagle translocation program—shipping young eagles from the Tongass National Forest to assist other states in building eagle populations—should be continued.
- The current Memorandum of Understanding is directed toward the Tongass National Forest. Emphasis is needed for the Chugach National Forest as well.
- Little or no information exists on inland eagle habitat use.

The review further proposed that the two agencies should:

- Amend the revised Tongass Land Management Plan to include protection of wintering habitat.
- Monitoring of eagle populations is needed.
- Initiate a cooperative study to identify sources of disturbance and assess their significance to Bald Eagles.
- Establish an up-to-date approach to inventory and maintenance of the eagle nest tree data base.

- Revise the Memorandum of Understanding, given that the Forest Service will fund the ongoing eagle nest survey and related activities.

Some, but not all, of the recommendations related to cooperative eagle management noted in the 1989 review of Bald Eagle management in south coastal Alaska are underway or completed. The eagle translocation project is continuing, the draft revised Tongass Land Management Plan provides for the protection of wintering habitats and information on eagle habitat use on the Chugach National Forest is becoming increasingly available.

In May 1990, an Interagency Agreement for cooperation in management of the Bald Eagle in south coastal Alaska was signed by the Forest Service and the Fish and Wildlife Service (USFS and USFWS 1990). An Interagency Agreement, in contrast to a Memorandum of Understanding, allows for the transfer of monies from one agency to another. An example of such a transfer is the recent transfer of monies from the Forest Service to the Fish and Wildlife Service for a study of the effects of disturbance on nesting

Bald Eagles-a need first noted in the late 1960s.

Future projects involving transfer of Forest Service monies to the Fish and Wildlife Service include the development of an automated data base (including a Geographic Information System) compatible to both agencies, use of satellite location systems to map eagle nest sites, personnel training and gaining further crucial information on winter eagle habitat needs. These tasks, identified in the 1989 eagle habitat management review, will be given serious consideration in forthcoming years.

The Future

The Fish and Wildlife Service established a committee of Fish and Wildlife Service biologists (Steglietz 1990) to prepare a synthesis document outlining Bald Eagle management zones for eagle habitat and nests in Alaska (USFWS, undated). Other agencies such as the Forest Service will at some future time have an opportunity to comment on those guidelines.

The Interagency Agreement between the Forest Service and Fish and Wildlife Service, however, provides the only current set of established guidelines for eagle management in Alaska. Through two decades, the Memorandum of Understanding, now an Interagency Agreement, has been revised on seven occasions, an average of every 3.1 years. It is generally felt that the process has set high standards for eagle management throughout Alaska.

Despite the successes in cooperative management, there are opportunities to improve eagle management in Alaska. One example would be to consider applying the concept of ecological management. Management of the Northern Spotted Owl (*Strix occidentalis*) throughout the Pacific Northwest is based on ecological provinces. A province is a large area, often a sizable portion of a state and each province differs in vegetation from bordering provinces. Differences in vegetation among provinces, in turn, leads to

differences in prey species, prey distribution and prey abundances. Territory size of spotted owls as well as key life history characteristics is highly dependent on prey availability. Within each province, territory size, mortality and natality rates are monitored, allowing for the estimation of population trends and, over time, viability of the subspecies.

In southeast and southcentral Alaska, little information is available to describe life history characteristics of Bald Eagles or effects of disturbance on eagle nesting success. Such information is needed to more effectively manage eagles. As with many raptors, including the spotted owl, information unique to a province or region is a basic requirement for effective management. The Forest Service is currently funding a study through the Fish and Wildlife Service to determine the effects of disturbance and will continue to provide funding for eagle surveys (Anthony and Bibles, 1997). Information from both an in-depth study and surveys should provide an expanded ecological and scientific basis for developing a Bald Eagle management plan. Such a plan could encompass more than one nest and perhaps an ecological unit such as a watershed, habitat management area, or province-a most useful possibility for future eagle management.

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