threatened status. The Service used only biological information in determining to reclassify the bald eagle; political considerations were not a factor in the decision.

*Issue 12:* The Service acknowledges a high level of mortality due to illegal use of pesticides, yet states that pesticides in recent times have not impacted the bald eagle on a population level. How high is this mortality?

Service Response: The Service, with this rule, recognizes only one population of bald eagles in the lower 48 States and five recovery areas. Although full recovery may be faster if the Service were able to reduce all forms of mortality, the population and all management zones clearly have experienced significant improvement since completion of the recovery plans. The Service is using all available tools to minimize mortality to bald eagles from legal and illegal use of pesticides. Estimates of mortalities from illegal pesticide use cannot accurately be made, as many cases remain unreported.

*Issue 13:* The remnant population of Baja California, Mexico, bald eagles and possibly those of Sonora, Mexico, should be classified as endangered.

Service Response: The recent moratorium on listing new species prevents us from including the bald eagles of Mexico in this rule (PL 104-6, April 10, 1995). However, Mabie, et al. (1994) indicates the possibility that bald eagles of Texas may be emigrating to Sonora and other areas in the southwest. The numbers of nesting bald eagles in Baja, though low, appear stable. Current information does not indicate the bald eagles of Mexico are a distinct population, and thus may not warrant a separate listing as endangered. Following removal of the listing moratorium, all available data will be re-examined prior to making a final determination on Mexican bald eagles.

*Issue 14:* Recently, several bald eagles have died in Arkansas and Wisconsin from unknown causes.

Service Response: In the winter of 1994–95, 29 bald eagles died in Arkansas and 9 died in Wisconsin from unknown causes. Infectious disease has been ruled out as a likely cause. It is believed that the Arkansas mortalities were caused by a toxic agent different from that of Wisconsin. These mortalities are too few in number to impact recovery. Although it is disturbing that the agents have not yet been identified, the causes of these deaths do not appear to be common diseases which might spread widely to other eagles.

*Issue 15:* The new information regarding the successful nesting at Luna

Lake, Arizona, which included a male from southeast Texas, does not constitute definitive proof that genetic interaction occurs between desert nesting bald eagle populations and wintering populations. The Service should retain the endangered status for these southwestern bald eagles.

Service Response: The significance of the Luna Lake nesting pair was that the male was documented as originating in a different recovery region, i.e. the Southeastern Recovery Region. This supported existing genetic data indicating the southwestern birds are not experiencing inbreeding problems. We are not aware of Arizona nesting birds interbreeding with wintering birds, although it is possible that a wintering bird might replace the lost mate of a pair. Though many threats remain, the Southwestern eagles have far exceeded the criteria for threatened status as outlined in the Southwestern Recovery Plan.

## Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the bald eagle should be classified as a threatened species throughout the lower 48 States. Procedures found in section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 et seq.) and regulations implementing the provisions of the Act (50 CFR Part 424) were followed. A species may be determined to be listed or reclassified as threatened or endangered due to one or more of the five factors described in section 4(a)(1). These five factors and their application to the bald eagle (Haliaeetus *leucocephalus*) are as follows.

## A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

The bald eagle is associated with aquatic ecosystems throughout most of its range. Nesting almost never occurs farther than 3 km (2 miles) from water (Gerrard and Bortolotti 1988). Fish predominate in the typical diet of eagles. Many other types of prey are also taken, including waterfowl and small mammals, depending on location, time of year, and population cycles of prey species. Dead animals or carrion, especially in the wintering areas, are also taken when available (Lincer et al. 1979).

Nest sites are usually in large trees along shorelines in relatively remote areas. The trees must be sturdy and open to support a nest that is often 2– 3 m (6–9 ft) across and more than a meter (3 ft) thick (Bent 1938). Bald eagles also select cliffs or rock outcrops for nest sites where large trees are not available. This dependence upon very large trees associated with water makes the eagle vulnerable to water-associated development pressures.

One of the two major threats to the bald eagle at present and for the foreseeable future is destruction and degradation of its habitat (the other major threat is environmental contaminants—see Factor E below). This occurs through direct cutting of trees for shoreline development, human disturbance associated with recreational use of shorelines and waterways, and contamination of waterways from point and non-point sources of pollution.

Steps to reduce these threats are underway by all levels of government and numerous private conservation organizations nationwide. Increased protection of nesting habitat and winter roost sites has occurred in many areas throughout the country. Guidelines to minimize human disturbance around nesting and winter roost sites have been developed in all parts of the country. Areas of contamination continue to be identified and reduced. Rehabilitation, captive propagation, reintroduction, and transplanting programs have all worked toward increasing the viability of the U.S. bald eagle population.

Current threats to the bald eagle's habitat and range in the United States by recovery region are as follows:

Chesapeake Bay Region—Buehler et al. (1991) reported that the bald eagle feeding and resting use of Chesapeake Bay shoreline was directly related to the distance of development from the shoreline. Eagles tended to avoid shorelines with nearby pedestrian or boat traffic. With human activity and development increasing, preferred bald eagle habitat is diminishing. Associated land clearing reduces bald eagle nesting and perching sites.

To offset these impacts, the Service has expanded its National Wildlife Refuge System around the Chesapeake Bay area to protect bald eagle habitat. For example, the Service acquired 3,500 acres of nesting and roosting habitat in the James River area of Chesapeake Bay in 1991 to be protected and managed for bald eagles. Acquisition of an additional 600 acres is planned. The Blackwater National Wildlife Refuge, which provides important eagle habitat on Chesapeake Bay, is also proposing to acquire more land. Nickerson (1989) estimates that enough suitable unoccupied nesting habitat remains that, if unaltered, it could sustain continued growth of the bald eagle population through the remainder of the 20th century.