

Bald Eagles in Idaho



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Uniquely North American, the bald eagle (*Haliaeetus leucocephalus*) has a long and noteworthy history as the symbol of the United States. It first appeared on an American coin in 1776, and became the national emblem in 1782 (not without competition from the wild turkey). Ever since, bald eagle insignia have expressed our nation's strength and freedom. Eagle emblems have topped military standards, adorned the noses of warplanes and even gone to the moon on spacecraft. In our country, the bald eagle undoubtedly enjoys wider public recognition and symbolism than any other animal.

Despite its high repute, this species has been hunted as vermin in every state, forced out of breeding areas, and allowed to dwindle almost to the point of extinction. Scientists estimate populations at first European settlement totaled some 25,000 birds. By 1970, only 1,500 breeding pairs could be found nationwide. In Idaho, the number of known, occupied bald eagle nesting territories has gradually increased from 11 in 1979 to 234 in 2007!

Description

The adult bald eagle is easy to recognize because its white head and tail contrast sharply with its dark body. However, a bald eagle in its first 4 years of life wears mostly dark brown plumage with varying amounts of white, especially on its undersurface. Immature bald eagles are often mistaken for golden eagles (*Aquila chrysaetos*) because the birds are similar in size. Not until its 4th or 5th year does the bald eagle's head and tail become all white, indicating the bird has reached sexual maturity.

The bald eagle stands 2 1/2 to 3 1/2 feet tall and has an impressive 6-8 foot wingspan. The female is usually 30 percent larger than the male, averaging 10-14 pounds compared to a male's 8-10.5 pounds. The adult's bright yellow feet are strong, unfeathered and equipped with long, sharp black talons for grasping and penetrating prey. The powerful, bright yellow hooked bill is used to tear and dismember prey. The eagle's keen eyesight is eight times more powerful than a human's. The species' average life span in the wild is unknown, but 30 years is a reasonable estimate. Eagles have been known to survive in captivity for nearly 50 years!



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A History of Milestones

1918: first protected under the Migratory Bird Treaty Act.

1940: additional protection was given by the later named Bald and Golden Eagle Protection Act.

1940-1970: populations declined mainly due to the effects of the pesticide DDT.

1967: listed as an Endangered Species in all but 5 of the lower 48 states.

1979: 11 known nesting territories in Idaho.

1995: status reduced from Endangered to Threatened (same protection remained, but the bald eagle was no longer considered on the brink of extinction).

1996: 90 known bald eagle nesting territories in Idaho

2007: August 8, bald eagle delisted

2007: 234 known bald eagle nesting territories in Idaho

Food

Most people picture this majestic bird skimming along the surface of a lake or river and suddenly snatching an unsuspecting fish. Bald eagles frequently feed this way, but they also are quick to exploit nourishment more easily obtained. Although fish are the bald eagle's primary food, a fish need not be alive to attract a bird's attention. Winter die-offs of salmon at some of Idaho's lakes and rivers, such as Lake Coeur d'Alene in northern Idaho, attract bald eagles. Eagle Watch is an annual event near Coeur d'Alene where people gather to view hundreds of bald eagles feeding on salmon.

Other important winter foods include waterfowl, small mammals, winter-killed deer and, occasionally, upland birds or mammals when severe winter weather causes dependable sources to become unreliable.

During the nesting season, eagles usually carry prey to a perch or deliver it to the nest to feed their young. Adults feed chicks by tearing off pieces of food and holding the pieces to the beaks of the eaglets. The nestlings begin to feed themselves at about seven weeks of age.

Habitat

Like all wildlife, bald eagles require four habitat elements to survive and reproduce: food, shelter, water and space. All are necessary—if even one of these essential components is missing, the habitat is not adequate to maintain life. In addition, for habitat to be suitable for survival, bald eagles require nesting structures, foraging perches, resting/preening perches and security from disturbance.

As the suitable habitat in an area becomes occupied by eagles, its carrying capacity is eventually met and the addition of new nesting pairs is limited. At this point, bald eagle numbers level off. Thus, the species' full recovery will depend on maintaining occupied habitat and securing unoccupied habitat—for both nesting and wintering—to expand populations. Securing future and replacement habitat must be addressed before land management practices are adopted. Often, this aspect of habitat management is overlooked in managing for the long-term needs of a species.

Nesting

Bald eagle nests are among the largest in the bird world—up to seven feet across and 10 feet deep. Most are built in either mature or old-growth timber along water sources that support an adequate food supply.

Nest sites are usually located in the tallest trees (sometimes on cliffs or rock outcroppings), from which the birds have a clear view of their surroundings. Eagles generally use the same nests year after year. In Idaho, if wintering conditions permit, pairs remain on their territories year-round, constructing new nests or adding to existing ones between October and the end of February. Females lay one to four eggs (usually just one or two) in late February to early April. After 35 days of incubation, eaglets hatch in mid-April or early May.

Roosting

In winter, large groups of eagles gather at roosts—perching sites where birds spend the night. Stands selected for roosting are usually made up of mature trees with strong limbs high above the ground and well-developed canopies. Roosts provide physical protection, views of the surrounding area and any approaching danger, and serve various social functions.

Wintering

Migrant bald eagles begin to appear on their traditional Idaho wintering grounds in October. Populations peak during January and February. In winter, the birds are primarily concerned with feeding and conserving energy. Bald eagles generally gather near sources of food—rivers, lakes and shorelines. When not actively feeding or searching for food, they perch in favorite trees.

In Idaho, large concentrations of wintering bald eagles are found along Lake Coeur d'Alene, Lake Pend Oreille, and sections of the Snake, Salmon and Boise Rivers. Although some nesting pairs remain in Idaho year-round, the winter population is supplemented by migrants from Canada. Many sub-adult and young bald eagles born in Idaho, and other transient bald eagles, migrate through Idaho and winter in the Klamath Basin of Oregon/California. Every year, volunteers and agency biologists participate in a mid-winter statewide survey counting eagles along specific routes. Intended to monitor bald eagle numbers throughout the state, the count's total has ranged from 480 to 832 birds.

Threats

Despite the successful recovery of bald eagle populations over the last decades, these birds still face many challenges. As the top predator in the food chain, the bald eagle has suffered from pesticide contamination as well as shooting, human infringement on its space, and habitat loss. The nationwide decline of bald eagles from the 1940s into the early 1970s was related directly to the agricultural and industrial use of pesticides and chemicals. Residues, especially from DDT, were found in adult birds, eggs and nestlings, as well as in the eagles' food sources. This poisoning resulted in abnormal breeding behavior, thin eggshells and dead embryos. Other pesticides, such as Endrin, most often caused direct poisonings that resulted in immediate death of individual birds.

Habitat destruction and human-related disturbance of wintering and nesting eagles are still major contributors to the eagle's decline. Bald eagle numbers are directly related to quality and quantity of habitat. As our human population grows and expands, available wildlife habitat becomes scarcer. It becomes even more important to manage this habitat for the highest level of productivity, in addition to securing new and future habitat. To keep bald eagles from being re-listed as Threatened or Endangered, we must consider the consequences of permanent wildlife habitat changes in land management practices.

Poisoning from the ingestion of spent lead shot has been identified as a serious mortality factor in waterfowl. Eagles often develop lead poisoning after feeding on dead or crippled waterfowl with lead pellets imbedded in their flesh or gizzard.

Although it has been illegal to shoot bald eagles since the 1940s, shooting remains a major cause of death. In spite of the substantial fines and jail time for a convicted offender, eagles killed by gunshots are discovered and reported to the Idaho Department of Fish and Game each year.

Electrocution from touching power lines, and death from automobiles or trains when eagles are attracted to road-killed animals, are other direct causes of bald eagle mortality in Idaho and throughout the country.



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Bald Eagles and Human Activity

Human presence can disturb and, at least temporarily, displace bald eagles. Displacement during the nesting season can cause adults to change nest sites or allow eggs to become so chilled that they fail to hatch. If disturbed too much, parent eagles will abandon a nest site, but are less likely to leave after their young hatch.

Although bald eagles aren't as sensitive to human disturbance during migration and the winter, they still face threats. Since they rely heavily on specific sites year-after-year for purposes of feeding and sheltering, human development along rivers results in loss of foraging, perching, and roosting sites. These sites have become important areas for sufficient food sources. In Idaho, the maintenance of healthy rivers, lakes, riparian areas, and cottonwood stands are important to bald eagles year-round.

Protection and Management of Bald Eagles

PROTECTION

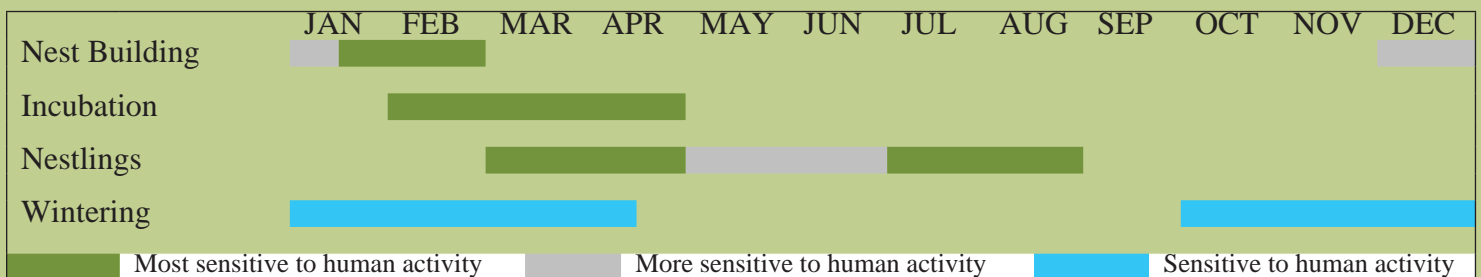
In 1940, concern over the decreasing number of bald eagles in the contiguous 48 states prompted the passage of the Eagle Protection Act (16 U.S.C. 668-688c). In its current form, this federal law prohibits anyone, except those who have permits authorized by the Secretary of the Interior, from "taking" bald eagles, their eggs, nests or any part of these birds. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagles...golden eagle, alive or dead, or any part, nest, or egg thereof... or whoever violates any permit or regulations issued pursuant to this subchapter..." The Act defines "taking" as "to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb." A violation of the Eagle Protection Act can result in fines of up to \$250,000 or imprisonment for up to two years, or both.

Though no longer protected under the Endangered Species Act of 1973, the bald eagle remains protected under the law mentioned above and by the Migratory Bird Treaty Act of 1918 (U.S.C. 703-712).

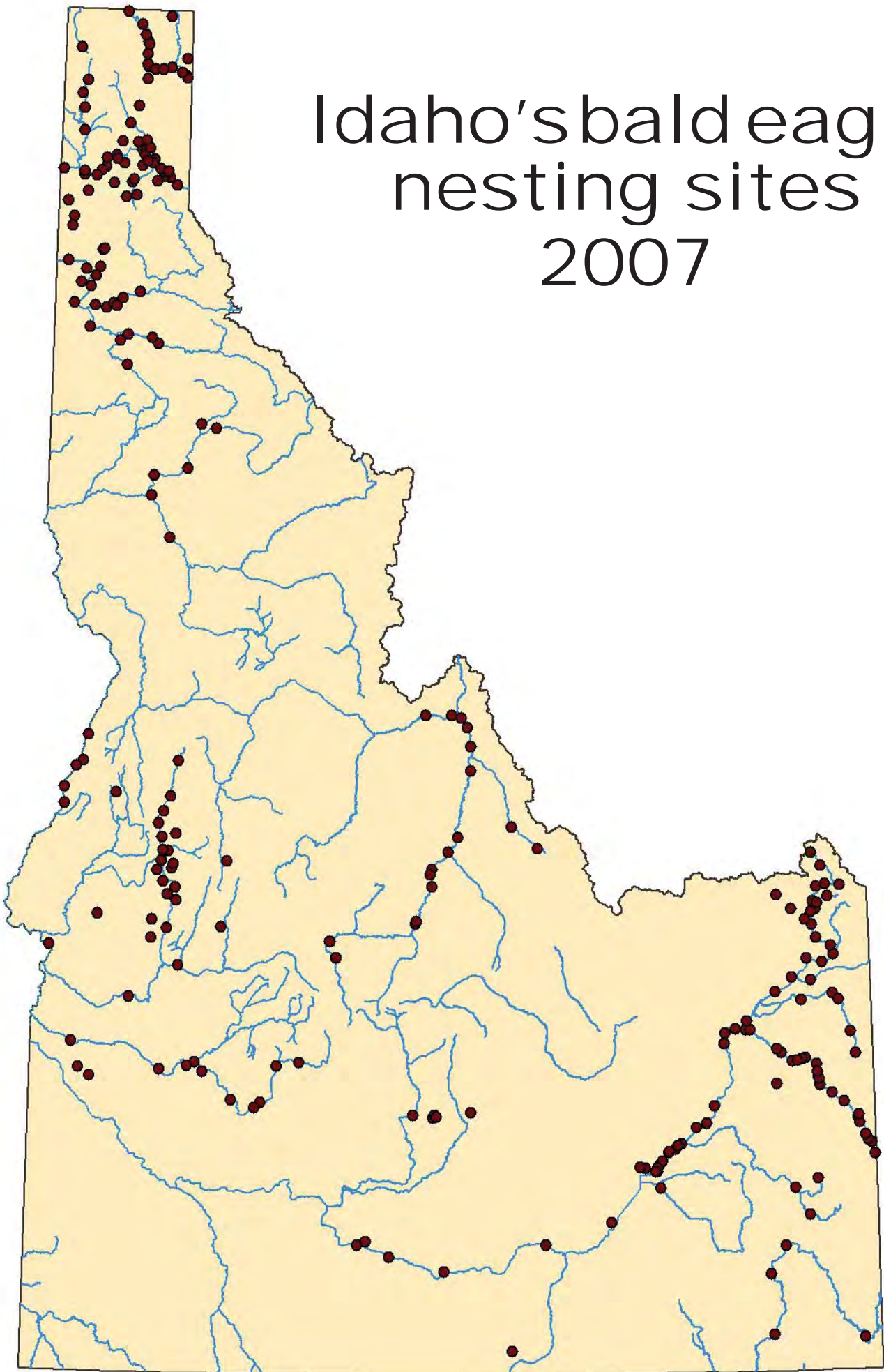


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Sensitivity of bald eagles to human activity throughout annual cycle



Idaho's bald eagle nesting sites 2007



MANAGEMENT

Research and management efforts often are more efficient and effective if focused on bald eagle habitat rather than directed at individual breeding pairs or their territories. Successful bald eagle management depends on understanding habitat needs and specific threats to survival. When they develop nest territory management plans, biologists and land managers consider the availability of nesting and perching habitat, security and protection from disturbance and depredation, and abundance and availability of prey.

Humans' use of land around nest territories may be modified to provide protection for eagles. For instance, timber sales or road construction may be planned to avoid disturbing birds and to save important perching and nesting trees. Recreational activities may be curtailed during critical nesting periods. Wintering eagles are limited by the energy required to keep warm and to hunt, so they depend on protection from disturbance and easy access to prey.

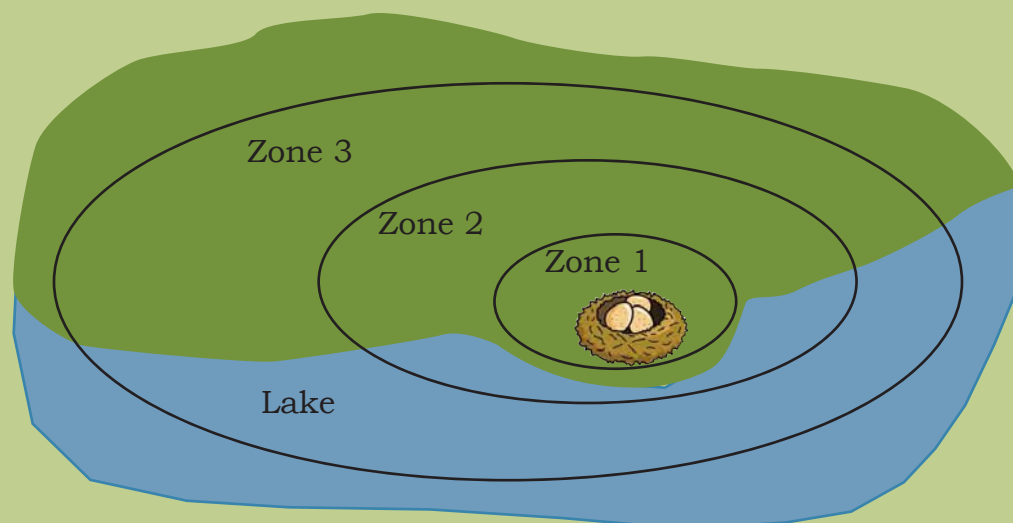
Like other long-lived animals, individual bald eagles vary greatly in their behavior, so management decisions should be based on good local information. Bald eagles vary in their tolerance of human disturbance; some birds become quite accustomed to human activity, while other individuals tolerate very little. Human presence can disturb, and at least temporarily, move eagles.

MANAGEMENT ZONES

Bald eagle managers have developed recommended management zones to define the space and privacy required by a nesting pair. If these zones were symmetrical, they could be drawn as a target with the nest at the bull's eye and with 1/4-mile to 2½-mile-wide concentric rings around it. The zones within the home range are ultimately determined by observation of the bald eagle use in the area. Size and shape of the zones may be influenced by topography and vegetation, as well as food sources.

- Zone 1 - Nest site zone. An area of about 1/4 -mile radius around the nest.
- Zone 2 - Primary use area. An area of about ½-mile radius around the nest.
- Zone 3 - Home range. All potential foraging habitat within 2½ miles of the nest site.

Bald eagles can live with human activities if land managers consider the birds' needs. Appropriate timing and location of farming, logging, construction and recreation can be essential to nesting success. A pair of bald eagles may become accustomed to a tractor working in a field near the nest site or may tolerate traffic moving along a nearby road. However, they may become disturbed during the most sensitive part of the reproductive period (courtship through incubation) if human activities intensify, become unpredictable, or come too close to the nest site or feeding area.



Voluntary Landowner Protection

In Idaho, more than one hundred private property owners are fortunate enough to have eagles nesting on their land. Experience has shown that people and eagles can successfully share the same land, so long as landowners understand the birds' needs. Practices landowners can adopt to support the continued recovery of bald eagles include:

- Protecting nest or perch trees from wind damage and other loss by maintaining a buffer of other vegetation around them. This also helps shield birds from human activity.
- Providing visual buffers (vegetative and/or topographical) to mitigate the effects of human activity. Eagles often tolerate higher activity levels in closer proximity when those activities are not in their line of sight.
- Avoiding widespread use of toxic chemicals such as pesticides or fertilizers in areas used by bald eagles. If applied, do so only in accordance with instructions provided by a local pesticide expert.
- Removing road-killed animals from road and railway edges. Eagles attracted to carrion are vulnerable to oncoming high-speed traffic.
- Identifying power lines and poles that pose an electrocution or collision threat, such as where lead and/or ground lines are placed so eagles may touch both simultaneously, where transformers are in elevated terrain, and where lines cross flight paths. Power companies should be contacted and requested to modify the poles in question.
- Encouraging forestry practices that leave roost sites in appropriate habitat and managing wood lots in seasons when eagles aren't present.
- Delaying rodent control until after April 30 to provide safe passage for migrant eagles. During spring migration, bald eagles prey on ground squirrels recently emerged from hibernation. Strychnine (now banned for above-ground use) and organophosphate poisons used to control ground squirrels are hazards to eagles if they eat animals that have ingested poisons.

Landowners can volunteer to provide permanent protection for eagle habitat by entering into conservation easements or long-term leases, or by establishing protective covenants for the portions of their property used by eagles. Contact your local Idaho Department of Fish and Game office for additional information on landowner habitat protection programs.

- **Conservation Easements**

A conservation easement is a recorded deed that restricts certain uses of a piece of land. The easement binds current and all future owners. The benefits to the landowner are two-fold. Because land use is restricted, property values and property taxes are reduced. In addition, the landowner may claim a charitable income tax deduction if the easement is donated to a public agency or private land trust. The amount of the deduction is the difference between the value of the land before and after restrictions are placed on the deed.

- **Long-term Leases**

Leases allow landowners to retain title to their property while being compensated for restricting the use of that land to protect eagles. Compared to purchase, leasing minimizes annual costs to the Idaho Department of Fish and Game. Another benefit is that leases do not continue in perpetuity (unlike easements), but are entered into only for the natural lifespan of a particular nesting or roosting site.

- **Mutual Covenants**

Mutual covenants are like conservation easements in that they restrict certain uses of the land for the benefit of eagles, but they differ in three major respects. They are enforced by the landowner or owners rather than by a conservation agency or organization. They are not as permanent as easements. And although covenants receive the same treatment as easements when property, estate and gift taxes are calculated, a landowner may not claim the imposition of a covenant restriction as a charitable income tax deduction.

3 Events to Celebrate bald eagles in Idaho

Eagle Watch

December 26-January 1 in
Coeur d'Alene



© Scott Robinson, BLM

Eagle Watch participant views bald eagles near Wolf Lodge Bay, in Coeur d'Alene.

Bald Eagle Days

Last Saturday in January in Boise



© IDFG

Jane Cantwell from Birds of Prey Northwest shows students Liberty, a bald eagle ambassador.



© IDFG

International Migratory Bird Day

Second Saturday in May, statewide.

left- Greg Kaltenecker from Idaho Bird Observatory shows kids a red-winged blackbird at a bird banding booth at the MK Nature Center's International Migratory Bird Day event in Boise.



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