

Bald Eagle Management Plan for the Hanford Site, South-Central Washington

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management



United States
Department of Energy
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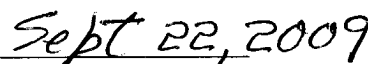
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Foreword

Bald eagles (*Haliaeetus leucocephalus*) occur annually during winter and early spring on the U.S. Department of Energy Hanford Site in south-central Washington. The 1994 version of the *Bald Eagle Site Management Plan for the Hanford Site, South-Central Washington* guided Hanford Site contractors conducting work in proximity to bald eagles for almost 15 years. The primary management tool employed to protect bald eagles and their habitat for planning and conducting activities on the Hanford Site related to the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) and/or *Resource Conservation and Recovery Act of 1976* (RCRA) were seasonal restrictions of work activities within a buffer zone around known eagle use areas. Because the bald eagle was removed from the federal threatened and endangered species list on 9 July 2007, the bald eagle management plan published in 1994 has been revised to reflect current management guidance.

Although the bald eagle has been removed from the federal endangered and threatened species list and downlisted from threatened to sensitive in the state of Washington, federal laws, including the *Bald and Golden Eagle Protection Act of 1940* and the *Migratory Bird Treaty Act of 1918*, as well as the Washington Administrative Code, still provide protection for eagles, their nest trees, and communal night roosts. Following delisting, new management guidelines for bald eagles were published by the U.S. Fish and Wildlife Service to advise landowners on how to comply with the regulations associated with the new status.

This document describes the ecology of bald eagles on the Hanford Site. It also addresses recent changes in the status and management of the bald eagle and the implications of these changes to Hanford Site operations. If Hanford Site activities in the vicinity of documented bald eagle use areas are carried out in accordance with this plan (Table 1), such actions are not likely to adversely affect eagles or their habitat. Formal or informal consultation (whichever is most appropriate) with the U.S. Fish and Wildlife Service (USFWS) or the Washington Department of Fish and Wildlife (WDFW) or both the USFWS and WDFW is required for activities that cannot be conducted in compliance with these guidelines.

Table 1. Spatial and Temporal Restrictions Recommended to Protect Bald Eagles on the Hanford Site

Bald Eagle Use Area	Buffer Zone Size	Temporal Restrictions
Night roost	0.25 mi (400 m)	Restricted access from 15 November to 15 March. Work-related access granted between 10 a.m. and 2 p.m. after notification of Hanford Site ecological compliance staff.
Perch	No restrictions	No restrictions.
Forage	No restrictions	No restrictions unless major foraging areas are identified.
Nest	0.25 mi (400 m)	Restricted access from 15 November until nest becomes unoccupied.
Nest	0.25 mi (400 m) + conditioned zone	Project impact review required, and outside agency consultation advised within protected and conditioned zones around a nest site during all months.

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1.0 The Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*), our national symbol, represents freedom and democracy in the United States. The listing of the eagle on the federal threatened and endangered species list and its subsequent recovery in the lower 48 contiguous states is one of the most visible success stories for wildlife management and the *Endangered Species Act of 1973*. Identification and distribution, breeding ecology, and foraging ecology, important to understanding the protection and management issues on the Hanford Site, are discussed in the following sections. Biology of the bald eagle on the Hanford Site also is reviewed.

1.1 Identification and Distribution

Adult bald eagles are easily identified by their dark bodies, white head and tail, and bright yellow bill. However, young eagles do not attain this distinctive plumage until the fifth or sixth year of life (Buehler 2000). Before this change, juveniles are dark brown with dark bills that gradually turn to yellow and are sometimes mistaken for mature golden eagles (*Aquila chrysaetos*).

Bald eagles historically occurred throughout North America. Widespread and fairly abundant, bald eagles are associated with aquatic habitats and are typically more numerous in coastal areas where food resources are most abundant (Buehler 2000). Alaska has the most bald eagles, but many are found also along the Atlantic coast, in the Chesapeake Bay region and the Northeast, in the Great Lakes states, and in the Pacific Northwest. Eagles residing in the north are often migratory and may be concentrated in areas where seasonal food is readily abundant, while southern eagles may be largely resident (Buehler 2000).

Bald eagles occur throughout Washington State during all parts of the year. During spring and summer, most are west of the Cascade Mountains because more than 80% of the active bald eagle nest sites in the state are located there (Stinson et al. 2001; Watson et al. 2002). Migration during winter swells the Washington State eagle population to nearly 10% of the total bald eagle population of the lower 48 states when many eagles move south from Alaska and Canada (Fielder and Starkey 1987). As in summer, most bald eagles (about 75%) reside west of the Cascades during winter (Fielder and Starkey 1987; Stinson et al. 2001, 2007). In eastern Washington, many bald eagles winter along the mainstem of the Columbia River from Pasco upstream to Kettle Falls, around Banks Lake, and along the lower Spokane and Pend Oreille rivers. Almost 10% of this bald eagle population can be found along the Hanford Reach of the Columbia River (Fielder and Starkey 1987); up to 40 individuals were observed in mid-winter during the 1990s (Pacific Northwest National Laboratory, unpublished data).

1.2 Breeding and Foraging Ecology

Bald eagle pairs often bond for life and occupy territories around a favorite nest location high in a large tree or other structure having a clear view of a nearby water body that supports abundant fish, their preferred prey. Reproductive chronology varies throughout their range. In Washington State, nest building may begin as early as December, and young may fledge as late as August. A typical nest will result in a single chick fledged annually, although one to three eggs may be laid. Eagles are most sensitive to human activity and disturbance during the nesting season, although disturbance to eagles during winter may also exacerbate physiological stresses typical during the winter season.

Although fish are the preferred prey, bald eagles are opportunistic and may target waterfowl during winter and colonial waterbirds during spring and summer. Bald eagles are also known to eat carrion, aquatic and terrestrial mammals, and crustaceans (Buehler 2000). Large concentrations of salmon and waterfowl attract bald eagles to the Hanford Reach during winter.

1.3 Biology of the Bald Eagle on the Hanford Site

Bald eagles occur primarily during the winter months on the Hanford Reach. They usually begin to arrive in mid-November to take advantage of the abundance of upriver bright fall Chinook salmon (*Oncorhynchus tshawytscha*) carcasses that wash up along the shoreline, islands, and various flats. Wintering eagles use different habitats for various daily activities, including perching, foraging, and roosting. Although bald eagles may be observed far from water, they typically occupy habitats within 0.25 mi (400 m) of the Columbia River and use trees growing along the shoreline for perching and roosting. During daylight, eagles are often observed perching in trees, usually near foraging sites. Trees selected for perching may grow singly or in groves and may be along the river or inland as far as a few kilometers. Foraging sites are found where food is concentrated and where there is little human disturbance. In early winter, salmon carcasses that wash up on shallow-sloped shoreline areas downstream of spawning sites are the eagles' primary food source. When salmon carcasses become less numerous later in the winter, eagles begin to prey upon wintering waterfowl that congregate in the region. Waterfowl concentrate on shorelines, islands, and slower-moving water where there is little human disturbance. On the U.S. Department of Energy (DOE) Hanford Site, these areas generally occur from the old Hanford town site upstream to the Vernita Bridge. This stretch is closed to hunting and fishing from 23 October through 31 January and receives little recreational boat traffic during winter months. Large waterfowl concentrations are found offsite as well, on reservoir pools above McNary, Priest Rapids, and Wanapum dams.

Communal or night roosts are an important and protected habitat resource because they provide shelter from winter weather and may also serve a social function. A roost site is defined by the Washington Department of Fish and Wildlife (WDFW) as a tree or a group of trees in which at least three eagles roost for at least two nights during more than one year (WDFW 2008a). This definition differentiates communal roosts from a perch used by a territorial pair of eagles. Six primary night roosts previously were identified along the Hanford Reach (DOE/RL 1994; Figure 1). A clump of black locust (*Robinia pseudoacacia*) growing on the river shore immediately upstream of the 100-K Area perimeter fence was the most upstream roost, while an isolated Siberian elm (*Ulmus pumila*) on the shore near the Hanford town site was the farthest downstream roost. Four additional roosts were located from just upstream of the 100-H Area to immediately downstream of the 100-F Area. Surveys conducted during the winters of 2005–2006 and 2006–2007 indicated five of the six historic roosts were still active (Pacific Northwest National Laboratory, unpublished data). The sixth roost, located in a clump of white poplar (*Populus alba*) on the White Bluffs peninsula, has become an active nest site and is defended by an eagle pair annually. Two new roost sites were identified during recent surveys. One occurs in the Hanford town site, and the second is located in a clump of black cottonwood (*Populus trichocarpa*) growing adjacent to Wooded Island about 1.5 mi (2.4 km) downstream from the Columbia Generating Station water intake. Preferred roost locations may change through winter as eagles switch from eating salmon to waterfowl and redistribute to be near waterfowl concentration areas off the Hanford Site.

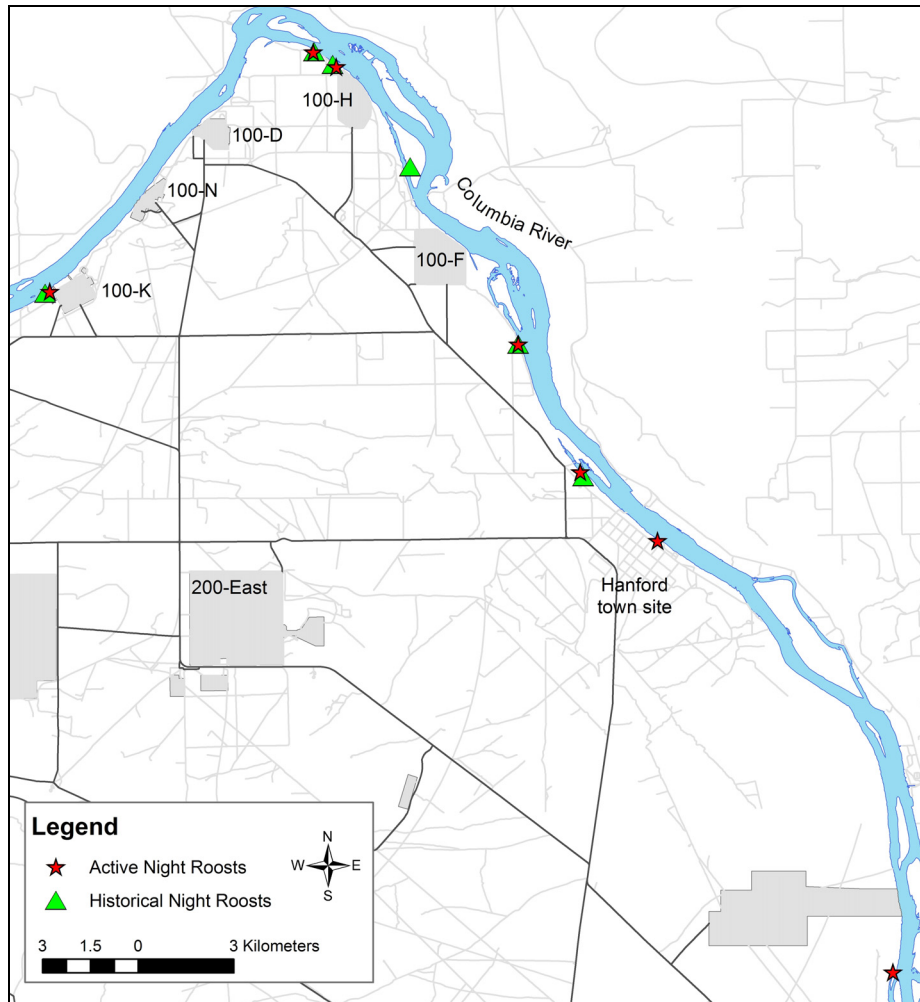


Figure 1. Historical and Current Active Bald Eagle Communal Night Roosts on the Hanford Site

Bald eagles have occupied nest sites on the Hanford Site as far back as the 1960s (William Rickard, Pacific Northwest National Laboratory, personal communication). In 1991, two pairs were observed attempting to nest, one near the White Bluffs boat launch and another south-southwest of the 100-F Area and more than 3 mi (5 km) from the river (DOE-RL 1994). To date, all nest attempts are believed to have been unsuccessful, as no young have been observed in a nest. A pair of bald eagles has returned annually to tend a nest located on the White Bluffs peninsula between the 100-F and 100-H areas (Figure 1), former site of an historic communal night roost (DOE-RL 1994). The eagles build the nest throughout the winter but eventually depart the Hanford Site and their nest territory in mid-March. Although all nesting attempts have failed, this pattern has been occurring annually at the same nest site. The nearest successful bald eagle nesting attempt was a nest discovered along the Yakima River near Granger, Washington (Livingston and Hames 2001), approximately 25 mi (40 km) from the Hanford Site, that fledged a single eagle in 2000. It is believed subsequent nesting has occurred at or near this location.

2.0 Status and Historical Management

Unlike all other wildlife species, protection and management of the bald eagle dates far back into the history of the United States. The bald eagle was accepted as our national emblem in 1782 (Table 2) when the Great Seal of the United States was adopted: an eagle clutching a bundle of arrows in one talon and an olive branch in the other. Although the bald eagle was removed from the federal list of endangered and threatened species, federal and state regulations and guidelines continue to provide protection for these birds.

Table 2. Management Chronology of the Bald Eagle

Year	Event
1782	Bald eagle accepted as the U.S. national emblem.
1900	<i>Lacey Act of 1900</i> adopted to aid restoration of game and other wild birds.
1918	<i>Migratory Bird Treaty Act of 1918</i> defined protections for all migratory birds listed.
1940	<i>Bald and Golden Eagle Protection Act of 1940</i> defined specific bald eagle protections.
1967	Southern bald eagle populations listed under the <i>Endangered Species Preservation Act of 1966</i> .
1973	<i>Endangered Species Act of 1973</i> enacted by Congress.
1978	Bald eagle listed as endangered in 43 of lower 48 states.
1979	Winter eagle surveys initiated in Washington State.
1980	Eagle nest surveys initiated in Washington State.
1984	“Protection of bald eagles and their habitats – Cooperation required” (RCW 77.12.650) and “Habitat buffer zones for bald eagles – Rules” (RCW 77.12.655) enacted by Washington State.
1986	Bald eagle protection plan rule approved by the Washington Fish and Wildlife Commission.
1994	Hanford Site bald eagle management plan (DOE/RL-94-150) published by DOE Richland Operations Office.
1995	Bald eagle downgraded from endangered to threatened.
1999	Bald eagle proposed for delisting by the U.S. Fish and Wildlife Service.
2001	Washington <i>Bald Eagle Status Report</i> published and habitat protection rules revised.
2007	May – <i>National Bald Eagle Management Guidelines</i> published by the U.S. Fish and Wildlife Service.
2007	June – Proposed rules for take published by the U.S. Fish and Wildlife Service.
2007	July – Bald eagle delisted federally by the U.S. Fish and Wildlife Service.
2008	January – Bald eagle downgraded to sensitive in Washington State by the Washington Fish and Wildlife Commission.
2009	September – Rules for take adopted and published by the U.S. Fish and Wildlife Service.

2.1 Federal Protection

Bald eagles garnered legal protection beginning with the *Lacey Act of 1900* (16 U.S.C. 701), which was adopted to aid in the restoration of game and other wild birds where populations had declined. The *Migratory Bird Treaty Act of 1918* (16 U.S.C. 703) made it illegal to

pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird.

The bald eagle was classified as migratory under this act and thus afforded protection in addition to the Lacey Act. The bald eagle was again protected under the *Bald and Golden Eagle Protection Act of 1940* (16 U.S.C. 668–668d), which specifically prohibited take, possession, selling, purchasing, bartering, offering to sell or purchase or barter, transport, export, or import at any time or in any manner a bald or golden eagle, alive or dead; or any part, nest, or egg of these eagles with limited exceptions. In spite of these protections, bald eagle populations declined throughout the 1900s from various human-related activities, including habitat destruction, persecution, and pesticide use. In 1967, southern bald eagle populations were listed under the *Endangered Species Preservation Act of 1966* (P.L. 89/669, 80 Stat. 926), the predecessor to the *Endangered Species Act of 1973* (16 U.S.C. 1531). Population declines continued into the 1970s when levels reached their lowest point. In 1978, the bald eagle was listed as endangered in the lower 48 contiguous states except in five states (including Washington) where it was listed as threatened (43 FR 6233). The ban of the pesticide DDT, which was implicated as a causative factor of raptor population declines, coupled with protections afforded by the Endangered Species Act listing, allowed eagle populations to recover sufficiently by 1995 to be reclassified to threatened status in the lower 48 states (60 FR 36000).

Eagles have reestablished territories in each of the lower 48 states and have continued to recover beyond established goals. As a result, the U.S. Fish and Wildlife Service (USFWS) proposed to delist the bald eagle in 1999 (64 FR 36454); on 9 July 2007, the bald eagle was delisted (72 FR 37346). There are now almost 10,000 nesting pairs in the lower 48 states, including 840 in Washington State during 2005 (Stinson et al. 2007). Following the lead of the USFWS, the Washington Fish and Wildlife Commission reclassified the bald eagle as a Washington State sensitive species in early 2008.

Although the bald eagle has been removed from the federal endangered and threatened species list, the species is still protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act at the federal level. In May 2007, the USFWS published the *National Bald Eagle Management Guidelines* to publicize eagle act provisions, advise landowners, land managers, and public of the potential for eagle disturbance, and encourage nonbinding land-management practices that benefit bald eagles (USFWS 2007). Within these guidelines, the term *disturb* was defined as

To agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in

its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

Impacts to habitat that occur when eagles are not present that result in decreased productivity are also considered disturbance. To avoid disturbance of bald eagles at nest sites, three administrative protection strategies were offered:

1. limited-access buffers of varying size and shape, depending on activity, topography, and historical human tolerance
2. landscape barriers (natural vegetation) to screen eagles from human activity
3. avoidance of certain activities during the seasons when eagles are present.

The USFWS acknowledges that a great amount of uncertainty exists with respect to nesting eagle disturbance and that size and shape of protective buffers will vary, depending on topography, cover, nest height, and historical tolerances of eagles when exposed to potentially disturbing human activities (USFWS 2007). Bald eagles in one location may be accustomed to activities such as routine vehicle or pedestrian traffic on roadways near the nest, yet other eagles may be sensitive to the same or similar activities that are intermittent, occasional, or irregular. Visibility of activities or structures to eagles is often a factor when evaluating disturbance potential.

Federal guidance recommends seasonal restrictions around nest sites for activities that are temporary in nature. For activities conducted within sight of eagles at the nest, a minimum 660-ft (200-m) seasonal protective buffer is recommended. This includes off-road vehicle traffic, construction, and equipment installation. Loud and disruptive activities should be conducted during the non-breeding season. Activities not as potentially disruptive, such as nonmotorized human entry or motorized boat traffic passing by, should be restricted within 330 ft (100 m).

Recommendations for avoiding disturbance at communal roost sites includes restricting explosive use within 1 mi (1.6 km) and locating aircraft corridors no closer than 1000 ft (305 m) when eagles are congregating. The USFWS also acknowledges that many states may have regulations more protective of bald eagles and their habitats.

2.2 Washington State Protection

Although the Washington Fish and Wildlife Commission has reclassified the bald eagle from threatened to sensitive, the same laws that protected threatened species still apply to species classified as sensitive. The Revised Code of Washington (RCW) Section 77.12.655 established the need for protection buffers for bald eagles, and the extent of those buffers may vary by case. The Washington Administrative Code (WAC 232-12-292) established the Bald Eagle Protection Rules to protect habitat through cooperative efforts and thereby maintain the population of the bald eagle in Washington State. These rules require a management plan for land development, forest practices, or other potentially disturbing activities on state and private lands near eagle nests and roosts (Stinson et al. 2007).

Washington State laws still provide protection for eagles, their nest trees, and communal night roosts. The standard bald eagle management plan provides guidelines for activities greater than 400 ft (122 m)

but less than 800 ft (244 m) away from an eagle nest, as well as for activities within 250 ft (76 m) of the shoreline and within 0.25 mi (400 m) of an eagle nest (RCW 77.12.655). All known perch trees greater than or equal to 24 in. (61 cm) in diameter and all cottonwoods (*Populus* spp.) at least 20 in. (51 cm) in diameter must be retained within a 250-ft (76-m) shoreline buffer. A site-specific bald eagle management plan is required for specific activities within 400 ft (122 m) of an eagle nest or for other activities within 0.25 mi (400 m) of a communal roost (WDFW 2008b).

3.0 Hanford Site Bald Eagle Protection Guidelines

3.1 Historical Protection

From 1994 through 2008, management actions and guidelines that pertain to bald eagles on the Hanford Site were prescribed in the *Bald Eagle Site Management Plan for the Hanford Site, South-Central Washington* (DOE-RL 1994). This document provided Hanford Site contractors with guidance under which to conduct work activities in proximity to bald eagles. The plan followed the federal guidelines that existed at the time of publication and set temporal and spatial restrictions on Hanford Site operations to protect the eagles and their habitats on the site. Human activities were restricted from 15 November to 15 March within 0.5 mi (800 m) in line-of-sight and 0.25 mi (400 m) not in line-of-sight of all active nest sites and communal night roosts. An exception was made to shorten this distance at the communal roost site near 100-K Area. Eagles at that site were tolerant of human presence. This was demonstrated by the continued use of the area by eagles in proximity to increasing human activities over a number of years. Under the previous management guidelines, no administrative controls were placed on perch and forage sites. However, intrusive activities involving prolonged use of heavy machinery were evaluated on a case-by-case basis.

3.2 Current Protection

This document, Revision 1 of the *Bald Eagle Management Plan for the Hanford Site, South-Central Washington*, now will serve as the site-specific management plan for the DOE Hanford Site. Because the guidance provided within the state of Washington is more protective of bald eagles than is federal guidance, Washington State buffer restrictions were used to form the basis of the Hanford Site guidance for activities near bald eagles and within their habitats. To avoid the potential for disturbance of nesting and wintering bald eagles on the Hanford Site as defined in the USFWS bald eagle management guidelines, the following restrictions were implemented.

Two protection zones were established in proximity to the known active bald eagle nest. Seasonal access within a *protected* or primary zone represented by a 0.25-mi (400-m) buffer surrounding the nest is prohibited beginning on 15 November and ending when the nest is no longer occupied, which historically has been around 15 March the following year (Table 3). A *conditioned* or secondary zone was established to protect habitat such as perches, roosts, and alternative nest sites. The conditioned zone includes the protected zone, and the shape and size were determined by the distribution of perches, roosts, and other known alternative nest locations (Figure 2). Projects having potential impact on resources within the conditioned zone are subject to an ecological review to determine potential adverse impacts. Informal consultation with the USFWS and the WDFW may be warranted if potential impacts exist.

Table 3. Restrictions Recommended to Protect Bald Eagles on the Hanford Site

Bald Eagle Use Area	Buffer Zone Size	Temporal Restrictions
Night roost	0.25 mi (400 m)	Restricted access from 15 November to 15 March. Work-related access granted between 10 a.m. and 2 p.m. after notification of Hanford Site ecological compliance staff.
Perch	No restrictions	No restrictions.
Forage	No restrictions	No restrictions unless major foraging areas are identified.
Nest	0.25 mi (400 m)	Restricted access from 15 November to 15 March, or until nest abandonment or fledging of young, whichever is later.
Nest	0.25 mi (400 m) + conditioned zone	Project impact review required, and outside agency consultation advised within protected and conditioned zones around a nest site during all months.

Communal night roosts also are protected with a 0.25-mi (400-m) buffer around each roost. Recent and historical surveys identified seven known communal night roosts used by bald eagles on the Hanford Site (Figure 2). Seasonal closure of these buffers is from 15 November to 15 March. However, during the seasonal closure, work-related access could be permitted within the communal roost buffers between the daytime hours of 10:00 a.m. and 2:00 p.m. In addition, road use within the 100-K Area perimeter fence line within the 0.25-mi (400-m) buffer of the nearby communal night roost should not be restricted. Eagles using this roost have demonstrated a high tolerance for human activities within the 100-K Area fence (Becker 2002).

Bald eagle foraging occurs throughout the Hanford Reach. There are no restrictions on activities occurring near foraging or daytime perching sites if they occur outside the 0.25-mi (400-m) buffers established for nesting/roosting unless major foraging sites are identified outside existing protection buffers by qualified individuals with knowledge of eagle behavior. Additional protection buffers may be warranted to limit work activities within 0.25 mi (400 m) of these major foraging sites. Management of bald eagle habitat, including protection of trees within 0.25 mi (400 m) of the Columbia River shoreline, would fall under guidance of the *Hanford Reach National Monument Final Comprehensive Conservation Plan and Environmental Impact Statement* (USFWS 2008).

Access restriction signs are located at each major road access point into roost or nest buffer zones between 15 November and 15 March each year and provide information about entry restrictions and point of contact. All Hanford Site personnel must notify the point of contact prior to entry into roost buffer zones. Access is restricted near occupied nest sites until the nest is no longer occupied.

Because the USFWS generally recognizes that a bald eagle nest site is considered active for 5 years following occupation by a pair of eagles during the breeding season, the 0.25-mi (400-m) buffer will be maintained for that period if the nest is no longer occupied annually. Active nest locations and preferred communal night roost locations may change over time. Eagle use of habitats on the site will be reassessed on a regular basis, and site guidance and access restrictions will be modified as needed to avoid disturbance of eagles and to protect their habitats.

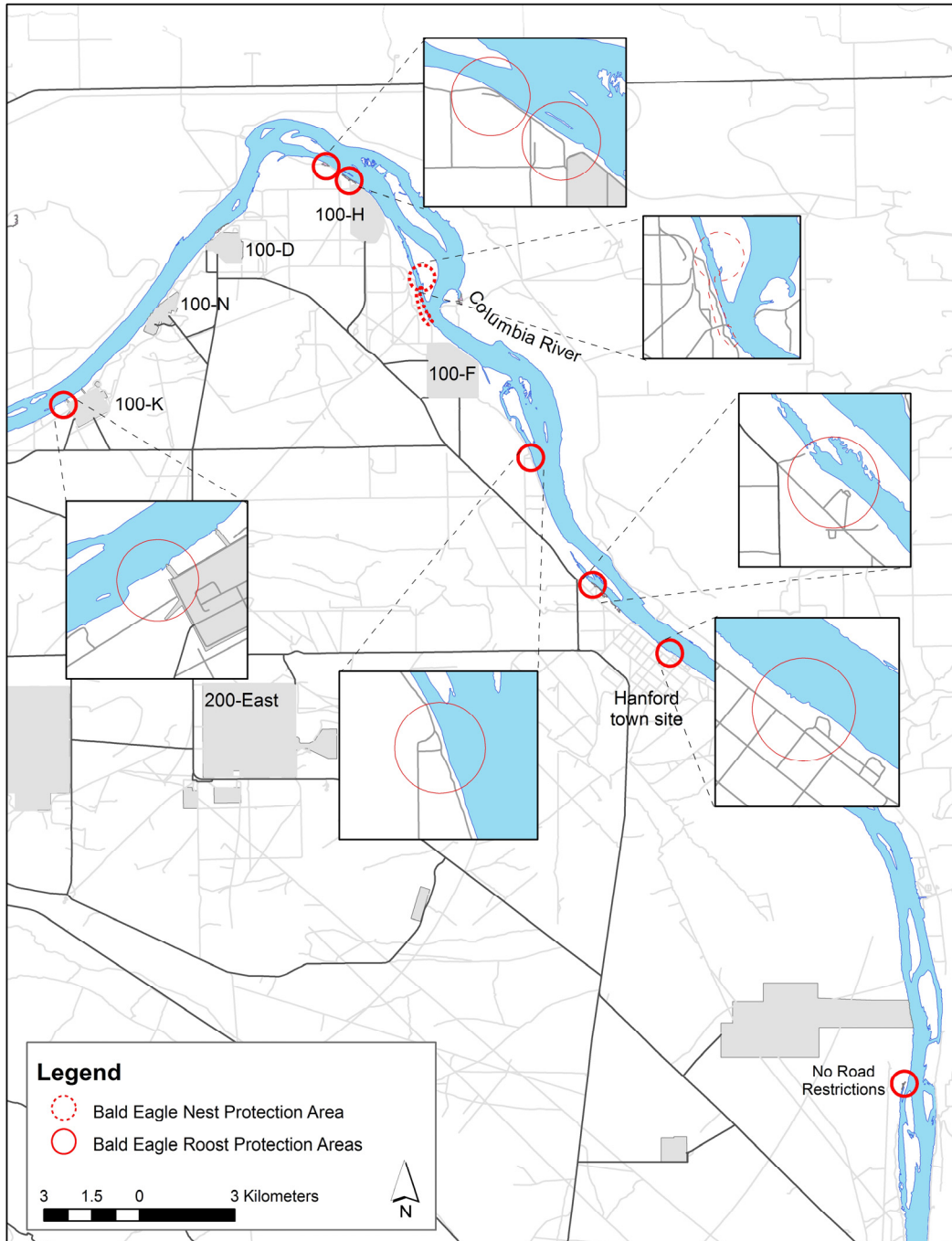


Figure 2. Seasonal Bald Eagle Protection Buffers on the Hanford Site

If Hanford Site activities in the vicinity of documented bald eagle use areas are carried out in accordance with this plan, such actions are not likely to adversely affect eagles or their habitat. Formal or informal consultation (whichever is most appropriate) with the USFWS or the WDFW, or both the USFWS and WDFW, is required for activities that cannot be conducted in compliance with this management plan.

4.0 References

- Becker JM. 2002. “Response of wintering bald eagles to industrial construction in southeastern Washington.” *Wildlife Society Bulletin* 2002 30(3):875–878.
- Buehler DA. 2000. “Bald Eagle (*Haliaeetus leucocephalus*).” In *The Birds of North America*, No. 506, A Poole and F Gill (eds). The Birds of North America, Inc., Philadelphia, Pennsylvania.
- DOE-RL. 1994. *Bald Eagle Site Management Plan for the Hanford Site, South-Central Washington*. DOE/RL-94-105, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- Fielder PC and RG Starkey. 1987. “Bald Eagle Winter Abundance and Distribution in Eastern Washington.” *Northwest Science* 61(4):226–232.
- Livingston MF and TR Hames. 2001. “Successful Bald Eagle Nesting and Fledging on Lower Yakima River, Washington.” *Northwest Science* 75(4):417–418.
- Stinson DW, JW Watson, and KR McAllister. 2001. *Washington State Status Report for the Bald Eagle*. Washington Department of Fish and Wildlife, Olympia, Washington.
- Stinson DW, JW Watson, and KR McAllister. 2007. *Status Report for the Bald Eagle*. Washington Department of Fish and Wildlife, Olympia, Washington. Available at <http://wdfw.wa.gov/wlm/diversty/soc/status/baldeagle/index.htm> (September 2009).
- USFWS. 2007. *National Bald Eagle Management Guidelines*. U.S. Fish and Wildlife Service, Midwest Region. Available at <http://www.fws.gov/Midwest/eagle/guidelines/guidelines.html> (September 2009).
- USFWS. 2008. *Hanford Reach National Monument Final Comprehensive Conservation Plan and Environmental Impact Statement*. U.S. Fish and Wildlife Service, Mid-Columbia River National Wildlife Refuge Complex, Burbank, Washington. Available at <http://www.fws.gov/hanfordreach/planning.html#ccp>.
- Watson JW, D Stinson, KR McAllister, and TE Owens. 2002. “Population Status of Bald Eagles Breeding in Washington at the End of the 20th Century.” *Journal of Raptor Research* 36:161–169.
- WDFW. 2008a. “What is a Communal Roost Bald Eagle Management Plan?” Washington Department of Fish and Wildlife, Olympia, Washington. Available at http://wdfw.wa.gov/wlm/diversty/soc/baldeagle/07communal_roost.htm (September 2009).
- WDFW. 2008b. *Bald Eagle Management and Protection in Washington State*. Washington Department of Fish and Wildlife, Olympia, Washington. Available at http://wdfw.wa.gov/wlm/diversty/soc/baldeagle/baldeagle_mngt_faqs.pdf (September 2009).

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Supplement to the Bald Eagle Management Plan for the Hanford Site:
Site Specific Plan for the 100-K Area

July 26, 2010

Bald eagles (*Haliaeetus leucocephalus*) commonly winter along the Hanford Reach of the Columbia River. The Bald Eagle Management Plan for the Hanford Site, South-Central Washington (DOE/RL-94-150, Rev. 1) prescribes 400-m seasonal buffer zones surrounding communal night roosts. General access is restricted within the buffers from 15 November to 15 March. Some work-related access is permitted between the daytime hours of 10:00am and 2:00pm. A known communal bald eagle night roost is located near the 100-K Area, just outside the fenced boundary at the northwest corner, and a portion of the 100-K Area lies within this 400-m buffer (Figure 1). Because eagles using this roost have historically demonstrated tolerance of limited human disturbance, road use by vehicles and pedestrians within the 100-K Area perimeter that is within the buffer has been exempted from the seasonal restriction (DOE-RL 2009).

Recently, human activity within and near the 100-K Area has increased substantially as efforts to decommission and demolish the buildings and facilities within the area have expanded and remediation of nearby contaminated waste sites has begun. This increased activity includes sampling and removal of contaminated soil, construction and occupancy of new office and shop buildings, construction and use of new parking and laydown areas, and demolition of buildings and structures. These types of activities, and their increased level, are not addressed in the Hanford Site bald eagle management plan, or the 100-K Area exemption. There is concern that this increased activity may have negative impacts on bald eagles using the nearby communal roost site. Monitoring conducted during construction of the Cold Vacuum Drying Facility (CVDF), which is located just beyond the 400-m buffer, in 1997 and 1998 indicated that bald eagles using this roost during daytime hours were not negatively affected by construction activity (Becker 2002). However, several newly proposed activities are located at or within the 400-m buffer distance and the potential effects on bald eagles from activities located closer to the roost site have not been studied.

In order to both accommodate the needs of project work in the 100-K Area and protect Hanford Site biological resources of concern, specific guidelines for work activities within and around the communal night roost buffer area are being established. Information from the Bald Eagle Management Plan for the Hanford Site, surveys conducted by Pacific Northwest National Laboratory (PNNL) staff, and informal consultation with Washington Department of Fish and Wildlife (WDFW) biologist, Mike Livingston, were used to develop this 100-K Area Site Specific Bald Eagle Management Plan. Recommendations for project activities within the 400-m buffer zone will be implemented as described in the following section. In addition, evaluation of the effects of project activities on bald eagles using the communal roost will be conducted.

The following temporal and spatial guidelines will be implemented within the 400-m buffer at the 100-K Area communal night roost:

- 181KW Demolition: This pump house structure is located within the 400-m buffer zone; it lies 90 m from the roost tree grove and is in direct line-of-sight. Decommissioning and demolition of this structure is planned in the near future, but should be scheduled between March 16 and November 14 (outside of the seasonal closure). Decommissioning activities involving limited numbers of personnel performing non-noisy and non-disruptive tasks (such as removing equipment, piping, wiring, or asbestos from inside, and minor exterior modifications) may be permitted between November 15 and March 15 between 10:00am and 2:00pm with prior notification to DOE Environmental Management and staff of the Public Safety and Resource Protection Project. Demolition activities must be performed only between March 16 and November 14 (outside of the seasonal closure).
- 100-K-63 Floodplain Remediation: The west half of the floodplain lies within the 400-m buffer zone. Soil remediation activities are being initiated in July 2010, starting at the west end and proceeding east. Heavy equipment (e.g., trackhoe, backhoe, dozer) use within the west half of the floodplain should be limited to the period between March 16 and November 14 (outside of the seasonal closure). Heavy equipment use in the east half of the floodplain, beyond the 400-m buffer distance, may take place with no seasonal restrictions. Haul trucks used for transporting excavated material should be routed eastward along Winlock Street in order to limit their presence within the buffer zone. Ideally, an access route for haul trucks should be developed at the east end of the floodplain for use during the seasonal closure period (November 15 to March 15).
- Proposed Parking Lots: Two proposed parking/laydown lots (one inside and one outside the 100-K perimeter fence) are located west of 105KW, and are wholly or partially inside the 400-m buffer zone. Container shipping/storage boxes (CONEX) are proposed to be placed in these lots. Construction of these lots must be conducted between March 16 and November 14 (outside of the seasonal closure period). In both lots, it is recommended that the proposed CONEX boxes be positioned along the northern edge of the lot (with access doors facing south) to help screen the roost from human activity. The railroad tracks located near the north boundaries of both lots will be considered the northern limit of development.
- 105KW Demolition: The northwest corner of the 105KW building is approximately 420 m from the edge of the roost tree grove, and a portion of the surrounding gravel and facility support area is within the 400-m buffer. Any new trailers or structures needed to support demolition should be placed beyond the 400-m buffer area. Work should be planned to avoid the area to the northwest of 105KW to the maximum extent practicable, and no project activities will be allowed north of the railroad tracks north of the 105KW facility during the seasonal closure period (November 15 to March 15).

There is also concern of light trespass adversely affecting the function of the communal night roost. To minimize potential impacts, temporary and permanent lighting located within the 400-m buffer should preferably utilize low-pressure sodium fixtures. Lighting should be fully shielded and installed so that no light is emitted above a horizontal plane running through the bottom of the fixture.

A plan for regular monitoring surveys, similar to that done during the construction of the CVDF, shall be developed and implemented. Surveys shall be conducted on a regular basis during weekdays (during project activities) and on weekends (no project activities) beginning in fall 2010. Public Safety and Resource Protection Project staff shall review the monitoring plan for DOE-RL, and are available to develop and conduct the monitoring surveys, if desired. If monitoring results indicate that eagles are being affected by project activities occurring within the 400-m buffer zone, additional restrictions may be warranted up to and including closure of parking lots, laydown areas, and other facilities during the eagle wintering period.

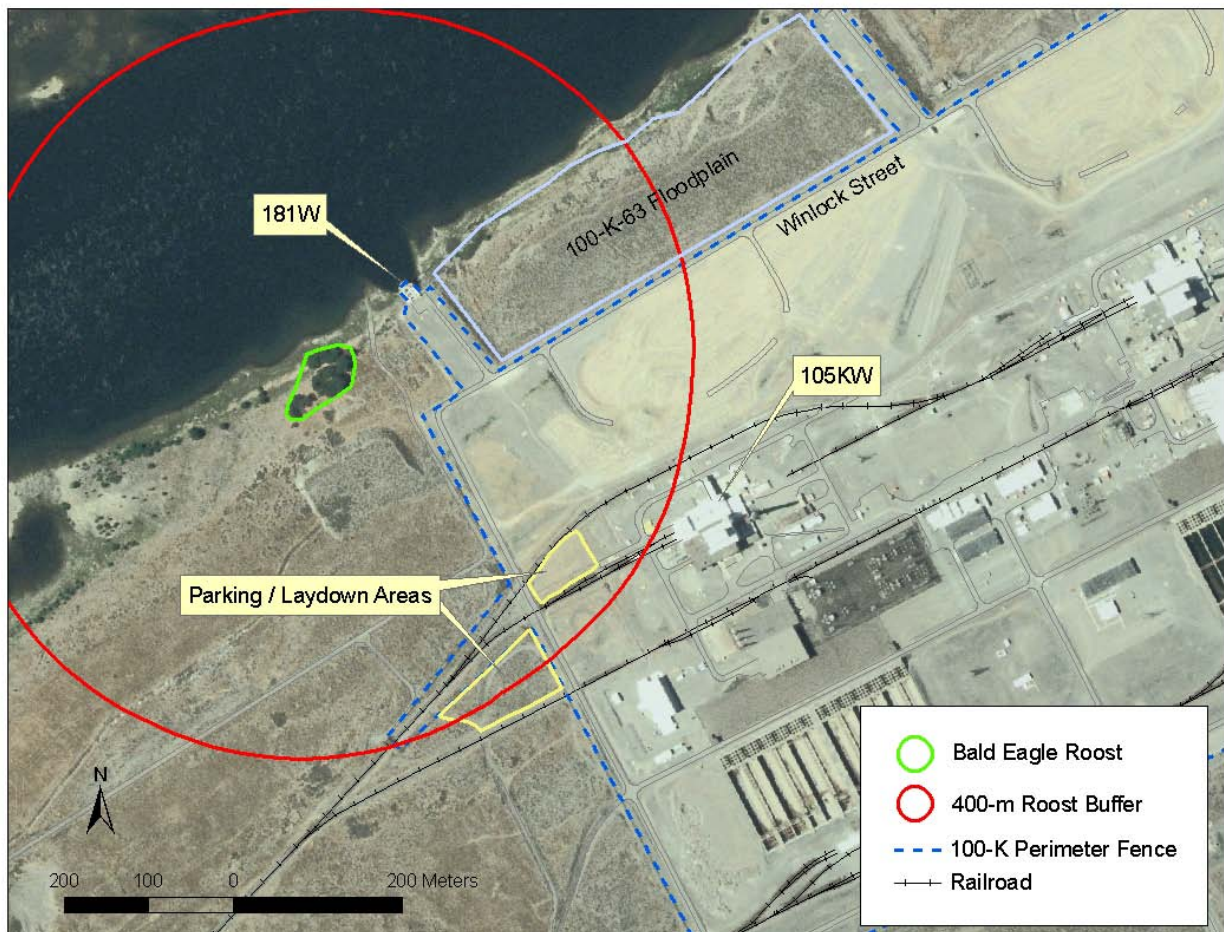


Figure 1. Bald eagle communal night roost and buffer zone in relation to 100-K Area facilities.

References

Becker JM. 2002. "Response of wintering bald eagles to industrial construction in southeastern Washington." *Wildlife Society Bulletin* 2002, 30(3):875-878.

DOE/RL-94-150, Rev. 1. 2009. *Bald Eagle Management Plan for the Hanford Site, South-Central Washington*. DOE/RL-94-150, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.