



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office  
510 Desmond Dr. SE, Suite 102  
Lacey, Washington 98503



AUG 25 2014

In Reply Refer to:  
13410-2009-I-0385-R001

Michelle Walker, Chief Regulatory Branch  
Seattle District, Corps of Engineers  
ATTN: Regulatory Branch (Baird)  
P.O. Box 3755  
Seattle, Washington 98124-3755

Dear Ms. Walker:

Subject: Extension and Revision of the June 25, 2009, Concurrence for Selected Activities in Lake Washington/Lake Sammamish Basins

On June 25, 2009, the U.S. Fish and Wildlife Service (Service) sent the U.S. Army Corps of Engineers – Seattle District (Corps) a preemptive programmatic letter of concurrence for certain activities within Lake Washington, Lake Sammamish, and the Lake Washington Ship Canal (Enclosure). The programmatic consultation covered future proposed actions that are “not likely to adversely affect” bull trout (*Salvelinus confluentus*) and bull trout critical habitat for a period of 5 years. A total of 306 Corps permits have been issued under this programmatic to date (Table 1).

Table 1: The total number of permits issued each year under the Lake Washington/Lake Sammamish Basins programmatic between 2009 and 2014.

Year	No. of Permits
2009	27
2010	63
2011	62
2012	59
2013	58
2014	37

This letter extends the use of the June 25, 2009, Lake Washington/Lake Sammamish programmatic until any of the following occur: 1) new information reveals that activities or the effects of activities to listed species or critical habitat are different than those considered in this consultation, 2) if any of the activities are subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this consultation, and 3) a new species is listed or critical habitat designated that may be affected by the activities. All activities described in the June 25, 2009, letter and the rationale for concurrence to bull trout and bull trout critical habitat remain the same.

This extension of the programmatic also includes impact installation of steel piles up to 12 inches and concrete piles up to 24 inches in diameter. Conservation measures (CM) applicable to this activity (see June 25, 2009, letter) include CM 1, CM 8, CM 9, and CM 20 through 27. Our concurrence for this activity is based on the following rationale.

#### *Bull Trout*

1. The proposed work occurs in Lake Washington, Lake Sammamish, or the Lake Washington Ship Canal, where, at the present time, bull trout occurrence is rare. Additionally, the construction would occur during the recommended work window when bull trout are less likely to be present in the project area. Therefore, direct effects to bull trout associated with elevated underwater sound pressure levels would be discountable.
2. Indirect effects to bull trout via their prey resources and habitat are not expected to be measurable because the proposed action would occur during the recommended work window for the project area when juvenile salmonids, prey species of bull trout, are extremely unlikely to be present in the project area. Operation and maintenance of the proposed action is also not anticipated to appreciably reduce the forage base for bull trout in the action area, due to the inclusion of conservation measures and Best Management Practices for the project. Therefore, effects to bull trout via reduced forage fish abundance and habitat impacts would be insignificant.

#### *Bull Trout Critical Habitat*

The final revised rule designating bull trout critical habitat (75 FR 63898 [October 18, 2010]) identifies nine Primary Constituent Elements (PCEs) essential for the conservation of the species. Of the nine bull trout critical habitat PCEs described in the final revised rule, eight PCEs are present in the action area. With the exception of the use of an impact pile driver for installation and/or proofing of piles, effects to the applicable PCEs from the proposed project were addressed under our previous concurrence letter (Service reference 13410-2009-I-0386). We have examined the anticipated effects of the use of an impact pile driver on the applicable PCEs below.

*PCE # 2: Migration habitats with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and freshwater and marine foraging habitats, including but not limited to permanent, partial, intermittent, or seasonal barriers.* The proposed activity may affect this PCE by the generation of underwater sound pressure impacts during pile installation, which could affect bull trout migration. However, the generation of underwater sound pressure is not anticipated to occur during bull trout migration through the action area, based on the use of the recommended work window and extremely low likelihood of bull trout presence in action area. The proposed action would not create barriers or measurably affect movement of bull trout through the action area during or after project implementation. Therefore, effects of the proposed action on this PCE are considered to be insignificant.

*PCE # 3: An abundant food base, including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish.* The proposed activity may affect this PCE through the generation of underwater sound pressure impacts during pile installation, which could affect bull prey. The proposed work would occur during the recommended work window for the project area, which would reduce the potential for underwater sound impacts to out-migrating juvenile salmonids, part of the prey base for bull trout in the action area. Although other prey individuals may be affected, we do not anticipate that the effects to the bull trout food base from such impacts will be measurable. Therefore, effects of the proposed action on this PCE are considered to be insignificant.

The final revised rule for bull trout critical habitat identified one additional PCE that was not in the original 2005 designation and therefore, was not analyzed in the June 25, 2009, concurrence letter. We have examined the anticipated effects of all programmatic activities to this PCE.

*PCE # 9: Sufficiently low levels of occurrence of nonnative predatory (e.g., lake trout, walleye, northern pike, smallmouth bass); interbreeding (e.g., brook trout); or competing (e.g., brown trout) species that, if present, are adequately temporally and spatially isolated from bull trout. (Check all that apply.).* The proposed action will not result in the introduction of additional nonnative predatory, interbreeding, or competitive species. Therefore, the anticipated effects of the proposed action on this PCE are considered to be insignificant.

If you have any questions about this letter or our joint responsibilities under the Endangered Species Act, please contact Jim Muck at (206) 526-4740 or Martha Jensen at (360) 753-9000, of this office.

Sincerely,

*Martha L. Jensen*

for Thomas L. McDowell, Acting Manager  
Washington Fish and Wildlife Office

Enclosure(s)





# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office  
510 Desmond Dr. SE, Suite 102  
Lacey, Washington 98503

In Reply Refer To:  
13410-2009-1-0386

JUN 25 2009

Michelle Walker, Chief Regulatory Branch  
Seattle District, Corps of Engineers  
ATTN: Regulatory Branch (Reed)  
P.O. Box 3755  
Seattle, Washington 98124-3755

Dear Ms. Walker:

Subject: Concurrence for Selected Activities in Lake Washington/Lake  
Sammamish Basins

As you are probably aware, we have experienced a significant decline in staffing over the past few years, resulting in a backlog for review of projects and re-prioritization of work within our office. We would like to take this opportunity to thank you for your past and ongoing efforts to coordinate with us during the past several years as we have worked to improve our efficiencies and response time for consultation with you under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act). We look forward to working with you to further improve both the quality and review time of the consultation process. To this end, we are providing you with a preemptive programmatic letter of concurrence for certain activities as described below.

During the past several years, we have consulted on a large number of routine projects in Lake Washington, the Lake Washington Ship Canal (upstream of the Chittenden Locks to the east end of the Montlake Cut), and Lake Sammamish for which you have made "may affect, not likely to adversely affect" determinations for bull trout (*Salvelinus confluentus*) and bull trout critical habitat. In part, these determinations have been based on project- and/or category-specific conservation measures agreed to through collaboration between both of our agencies, the National Marine Fisheries Service, and the Washington Department of Fish and Wildlife. Many of these conservation measures have been included in individual and/or programmatic consultations, such as Regional General Permits (RGP) 1 (Watercraft Lifts in Washington State, Ref #1-3-05-PI-0032) and RGP 3 (Construction of New or Modification of Existing Residential

Overwater Structures and Installation of Moorage Piling in Lake Washington, Lake Sammamish, the Sammamish River and Lake Union, Including the Lake Washington Ship Canal Ref #: 1-3-04-PI-0560).

We believe that the use of applicable conservation measures (as described below) and various programmatic consultation processes (e.g., RGPs 1 and 3) have been beneficial for the conservation of listed species, their prey, and their habitat in these geographic areas. The use of programmatic consultations significantly reduces our review time for certain proposed actions. These actions have included 1) projects that fully meet a given programmatic, and 2) projects that do not contain substantial design modifications from the conditions and effects in the programmatic and for which the consultation process requires minimal review.

In the interest of further improving the efficiency of the consultation process for a number of routine activities, we would like to take this opportunity to provide concurrence on several categories of activities programmatically. This programmatic consultation covers future proposed actions that are "not likely to adversely affect" bull trout and bull trout critical habitat for a period of five years from the date of this letter, and are limited to the categories of activities listed below for projects in Lake Washington, Lake Sammamish, Lake Union, Union Bay, and the Lake Washington Ship Canal upstream of the Ballard/Hiram Chittenden Locks in King County, Washington.

This consultation does not cover projects in the Cedar River or in the Sammamish River. This programmatic consultation also does not cover any actions that have the potential to result in adverse effects to bull trout and/or bull trout critical habitat, nor does it cover proposed actions that are not included in the categories listed below. This programmatic consultation only covers proposed actions for which the U.S. Army Corps of Engineers (Corps) is the lead Federal agency.

The categories covered by this letter of concurrence are:

1. Overwater Structures: Repairs or modifications to existing overwater structures (piers, ramps, floats, and/or docks), including, but not limited to, replacement or repair of decking, installation of grating, splicing or other repair of pilings, or other similar activities.

Construction of new overwater structures or modifications to existing overwater structures that do not include impact pile driving and/or proofing of steel pilings. The proposed action may include vibratory installation of wood<sup>1</sup>, composite, concrete, or steel pilings, or impact pile driving of wood, concrete, or composite piling (no steel).

2. Boatlift/Jet Ski Lift Installation or Relocation: Installation and/or relocations of free-standing boatlifts or Jet Ski lifts (with or without a canopy).

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<sup>1</sup>The use of creosote or pentachlorophenol treatments for wood pilings or other wood components in aquatic or riparian habitats is not covered under this consultation.

3. Fill Placement: Placement of fill and/or fish mix gravels that is 1) related to Washington Department of Fish and Wildlife Hydraulic Project Approval requirements, and/or 2) are part of shoreline enhancement action.
4. Shoreline Stabilization: Repair or modification of existing shoreline stabilization projects. Such projects may include beach enhancement or creation of a cove or other soft stabilization techniques or gravel placement.
5. Shoreline/Riparian Enhancement: Enhancement of the shoreline and/or the riparian buffer zone through the planting of native emergent or riparian vegetation, removal of nonnative invasive species. Such activities would not include the use of chemicals (such as fertilizers or pesticides).
6. Irrigation Withdrawals: Withdrawal of water from Lake Washington, Lake Sammamish, and the embayments within the Washington Ship Canal for the purposes of residential irrigation under permit from Washington Department of Ecology. Withdrawal of water for any other purpose or for commercial use is not included in this category.

Based on previous consultations, we anticipate that proposed actions or combinations of proposed actions would include conservation measures that are applicable to the project type to avoid, reduce, or mitigate the potential for impacts to bull trout or bull trout critical habitat. A list of these conservation measures are provided in Enclosure 1. This consultation covers activities that have implemented the conservation measures applicable measures for each project type. The following table lists the activity types and the conservation measures applicable for each type of project.

Activity Type	Applicable Conservation Measures (CM)
Repair or Modification of Existing Overwater Structures	CM 1 through 17, CM 21, CM 24 through 29, CM 32
New Construction or Replacement of Overwater Structures	
Boatlift/Jet Ski Lift Installation or Relocation	CM 1, CM 8 through 17, CM 29
Fill Placement	CM 1, CM 18 through 27, CM 30, CM 31
Shoreline Stabilization	CM 1, CM 13 through 28, CM 30 through 32
Shoreline/Riparian Enhancement	CM 1, CM 19 through 22, CM 27, CM 30 through 32
Irrigation Withdrawals	CM 1, CM 18 through 27, CM 32 through 34

Based on the project types, locations, and implementation of the conservation measures listed above, we have concluded that effects to the federally listed bull trout and designated bull trout critical habitat associated with the aforementioned activities would be insignificant and/or discountable. Specifically, our concurrence is based on the following rationale.

### *Bull Trout*

- The proposed work will occur during the recommended work window for the project location, when bull trout and juvenile salmonids, prey species of bull trout, are extremely unlikely to be present in the project area or exposed to potential impacts from the proposed action construction and/or installation. Furthermore, the use of the conservation measures listed above for each category of proposed action would further decrease the exposure risk of the proposed activities to bull trout. Consequently, we anticipate that bull trout would be extremely unlikely to be exposed to construction and/or installation impacts, and any exposure that does occur would not be expected to result in measurable impacts to bull trout. Therefore, direct effects to bull trout and indirect effects via their prey species from the proposed actions would be insignificant or discountable.
- The proposed actions would not result in significant long-term impacts to habitat for bull trout in the project area, due to the inclusion of the conservation measures listed above for each category of proposed action. While we anticipate that activities included in the proposed action categories listed above may result in impacts to the forage base for bull trout, we do not anticipate that these impacts would measurably affect bull trout. Therefore, direct effects to bull trout and indirect effects via their habitat and/or prey resources are considered insignificant.

### *Bull Trout Critical Habitat*

The final rule designating bull trout critical habitat (70 FR 56212 [September 26, 2005]) identifies eight Primary Constituent Elements (PCEs) essential for the conservation of the species. Of the eight bull trout critical habitat PCEs described, six PCEs are present in the action area. We have examined the anticipated effects of the project on the PCEs below.

*PCE #1: Water temperatures that support bull trout use.* The proposed actions are not expected to result in any appreciable changes in existing water temperatures because none of the covered activities include significant diversions or extraction of water (irrigation withdrawal for residential use is minor), removal of riparian vegetation or other activities that would measurably affect water temperature. Therefore, effects of the proposed action on this PCE are expected to be insignificant.

*PCE #4: A natural hydrograph, including peak, high, low, and base flows within historic ranges, or, if regulated, currently operate under a biological opinion that addresses bull trout, or a hydrograph that demonstrates the ability to support bull trout populations by minimizing daily and day-to-day fluctuations and minimizing departures from the natural cycle of flow levels corresponding with seasonal variation.* The proposed actions would not affect this PCE. The actions do not involve significant diversion or removal/addition of water and are not expected to alter the natural hydrograph of the large lakes and or associated waterbodies in the action area. Therefore, no effects to this PCE are anticipated.

*PCE #5: Springs, seeps, groundwater sources, and subsurface flows to contribute to water quality and quantity as a cold water source.* The proposed actions do not include any activities



that would interrupt or suspend cold water inputs from springs, seeps, groundwater sources, and/or subsurface flows to the action area. Therefore, effects of the proposed action on this PCE are expected to be insignificant.

*PCE #6: Migratory corridors with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and foraging habitats, including intermittent or seasonal barriers induced by high water temperatures or low flows.* The proposed actions may affect this PCE. None of the proposed activities will create barriers or measurably affect movement of bull trout through the action area during or after project implementation. Water quality would not be appreciably affected during construction, as the required sediment control measures will eliminate or significantly reduce the amount of construction-related turbidity. Therefore, effects of the proposed action on this PCE are expected to be insignificant.

*PCE #7: An abundant food base including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish.* The proposed actions may affect this PCE through construction or operation/maintenance of the proposed actions. While some of the projects (e.g. overwater structures) may result in impacts to juvenile salmonids or aquatic invertebrates, other activities (e.g. riparian enhancement) are expected to improve habitat for terrestrial and aquatic prey organisms. Because we do not anticipate that the effects to the bull trout food base will be measurable, effects of the proposed action on this PCE are considered insignificant.

*PCE #8: Permanent water of sufficient quantity and quality such that normal reproduction, growth, and survival are not inhibited.* The proposed actions may impact water quality in the short-term through minor releases of sediment during construction or through other activities, but would not inhibit the normal reproduction, growth, and/or survival of bull trout. Therefore, effects of the proposed actions on this PCE are expected to be insignificant.

This concludes informal consultation pursuant to the regulations implementing the Act (50 CFR 402.13). The project(s) should be reanalyzed if new information reveals effects of the action(s) that may affect listed species or critical habitat in a manner, or to an extent, not considered in this consultation. The project(s) should also be reanalyzed if the action(s) is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this consultation, and/or a new species is listed or critical habitat is designated that may be affected by a proposed action(s).

#### Project Tracking and Reporting

Under this programmatic letter of concurrence, we request the Corps provide a semiannual summary of the actions that have been permitted under this consultation no later than March 31 and August 15 of each year. Reporting by these dates will allow the U.S. Fish and Wildlife Service to include this information in our fiscal-year-end reporting of projects authorized by this consultation. At the end of the 5-year-period we would like to discuss whether a subsequent programmatic letter of concurrence for these activities is warranted.

### Recommendations

The following recommendations are provided to assist you in meeting your obligation, under sections 7(a)(1) and 2(c) of the Act, to use your authorities to promote the conservation of listed species and their habitats. We also make these recommendations based on our respective responsibilities under the Fish and Wildlife Coordination Act, the Clean Water Act, the Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act.

- Canopies for boat lifts or other structures should be made of translucent material to reduce shading impacts to the nearshore habitat and biota in the action area of this project.
- Components of in-water or overwater structures should not include treated wood, coal tar epoxy coatings, or other substances that may result in exposure of aquatic biota to toxic materials.
- No piles should be installed in documented or suitable sockeye/kokanee spawning habitat. If piers and ramps need to be constructed over documented or suitable spawning habitat for these species, they should span the spawning habitat.
- Any proposed actions to repair, replace, or modify bulkhead should incorporate measures to avoid or reduce impacts to shoreline processes. We recommend that, where possible, existing armoring (i.e., hard structures) should be eliminated or replaced with a cove, beach, bioengineered structure, or soft shoreline feature. We recognize that these alternatives may not be appropriate or feasible at every site based on existing conditions and/or geological characteristics of all sites. However, where site conditions and characteristics do not preclude the use of softer, less habitat-impacting options, their use should be encouraged to reduce impacts to habitat and biota.

We recommend that, where possible, any shoreline stabilization structures be sited above the Ordinary High Water Mark to reduce impacts to aquatic species and nearshore habitat. While impacts to listed species are often assumed to be insignificant on a project-specific level, as more bulkheads are repaired or replaced, the accumulative effects from these projects become significant at a basin-wide scale for many aquatic biota populations and communities.

- If chemicals are used, they should be applied according to label specifications and should not be used within 10 ft of the shoreline to reduce the risk of contaminants contacting aquatic habitat.
- Actions that result in new or expanded overwater structures, increased vessel use, or shoreline protection features, should incorporate riparian or shoreline enhancement/restoration measures to improve the habitat conditions at or adjacent to the site. This system has experienced a significant loss of riparian vegetation due to shoreline development. Where vegetation can be planted, we recommend that the planting plan include native trees (including conifers) and shrubs to provide increased natural resource function (e.g., shade, woody material, insects and detrital input) to the aquatic system.

Planting plans should include the following as part of the project design: 1) replacement of dead or stressed trees and shrubs as needed each year, and 2) ensure 100 percent survival annually for all shrubs and trees during the first 3 years and at least 80 percent survival at the end of 5 years.

If the project site does not provide opportunities for planting, we recommend that other shoreline enhancement opportunities at or near the site be identified, and restoration or enhancement activities be incorporated into the project description.

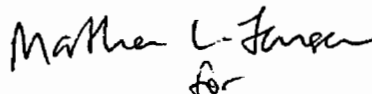
If restoration or enhancement opportunities are not identified or available at the project site, we recommend that the Corps establish a method of assisting their permit applicants in implementing shoreline enhancement projects at other locations in the watershed to offset or reduce the long-term effects of the project on shoreline functions and/or aquatic habitat. One example of such a method might be coordination with a local jurisdiction or other partners to identify areas within the watershed that could be used as conservation banks.

- If the proposed action includes bank modification, removal of trees, shrubs, or structures, the applicant/contractor should make a reasonable effort to ensure that any active bird nests are identified (e.g., those with eggs and/or nestlings) and that clearing/removal activities would not occur while the nest is active.

Trees that contain a bald eagle nest are protected and may not be removed, even if the nest is not active. Please refer to our National Bald Eagle Management Guidelines (enclosed) for additional considerations for bald eagles.

If you have any questions about this letter or our joint responsibilities under the Act, please contact Karen Myers at (360) 753-9098 or Martha Jensen at (360) 753-9000, of this office.

Sincerely,



for  
Ken S. Berg, Manager  
Washington Fish and Wildlife Office

Enclosures:  
Conservation Measures for activities  
National Bald Eagle Management Guidelines

cc:  
WDFW, Region 4, Mill Creek, WA  
WDOE, Bellevue, WA (R. Padgett)  
NMFS, Seattle, WA (T. Sibley)  
USFWS, Lacey, WA (J. Muck)

**Enclosure 1. Conservation Measures (CM) for activities covered under the Lake Washington Programmatic Consultation Letter of Concurrence**

- CM 1. Construction and in-water work of the covered activity will comply with the appropriate recommended work windows and timing restrictions for the project site for the protection of species listed under the Federal ESA and the species they forage upon, as listed on the Corps website.
- CM 2. Repair/replacement of decking or other above-water components of overwater structures performed outside of the recommended work window would not include in-water work or the use of a barge or other vessel. All such work would be performed from the overwater structure using hand tools, and would implement Best Management Practices (e.g., tarps) to prevent any contaminant or materials releases from the proposed action into the aquatic environment.
- CM 3. To reduce shading impacts on the aquatic environment, grating will be installed on fixed and floating structure surfaces greater than 4 ft in width during replacement of decking material to provide light transmission through the overwater structure and reduce shading impacts. Floatation materials, if used, would be positioned so that they do not block the grating and associated light transmission.
- CM 4. Treated wood pilings associated with the float(s) must incorporate design features (e.g., plastic or metal bands) to minimize abrasion from the contact between the treated wood and the float(s) or attachments to the float(s). The design features must cover the entire portion of the piling in contact with the float or attachments during all lake level fluctuations.
- CM 5. New or replacement skirting will not be installed.
- CM 6. Watercraft and their grids or lifts will not rest on the substrate at any time during or after construction. The bottom of any vessel, watercraft grid or watercraft lift shall be at least one foot above the level of the substrate during all lake level fluctuations.
- CM 7. Floats used on a seasonal basis and removed during the off-season will be stored either on land (beach or upland area) or in water (sheltered cove or boathouse) in a location that is secure from storm events, to protect nearshore areas.
- CM 8. The minimum number of piles necessary for structural support will be included in the project design and implementation.
- CM 9. A bubble curtain or other noise attenuation method (wood blocks or mircata blocks) will be used during impact installation or proofing of steel piling. For steel piling greater than or equal to 12 inches in diameter, a bubble curtain and wood/mircata block must be used when impact proofing or driving the piling.
- CM 10. If creosote or pentachlorophenol-treated wood piles are removed as part of the project, vibratory pile extraction equipment will be used instead of pulling of piles (e.g., with a crane) to reduce the potential for exposure of listed resources to the wood treatment contaminants.

- CM 11. Existing piling will be either removed completely, cut a minimum of two ft below the substrate elevation, or partially cut with a new piling secured to the existing piling. Hydraulic water jets will not be used to remove piling.
- CM 12. The holes left by removed piling that are treated with creosote and are either fully or partially removed will be capped with an appropriate material, such as clean sand or gravel, and will match the existing substrate at the site, unless the applicant demonstrates that the hole would be immediately filled in by the surrounding substrate materials.
- CM 13. All treated wood will be contained during and after removal to preclude sediments and any contaminated materials from re-entering the aquatic environment.
- CM 14. Removed creosote-treated piling will be cut into maximum lengths of 4 ft prior to disposal at an approved facility. All contaminated materials will be disposed of at an approved and permitted disposal facility that is in compliance with the Act. No reuse of treated wood will occur.
- CM 15. All creosote-treated material, pile stubs, and associated sediments will be disposed of by the contractor in a landfill which meets the liner and leachate standards of the Minimum Functional Standards, Chapter 173-304 WAC.
- CM 16. No creosote- or pentachlorophenol-treated timber piles or coal-tar treated steel piles will be used.
- CM 17. If treated wood is deemed necessary for the proposed action, ACZA treatment would be used. Such wood treatment would be in accordance with the April 17, 2002 revised Amendment to Best Management Practices for the Use of Treated Wood in Aquatic Environments; USA Version – Revised July 1996 – Western Wood Preservers Institute. If treated wood is used, measures will be implemented to (e.g., plastic, dense rubber or steel) to prevent abrasion damage of treated wood to reduce the potential for the release of arsenic, copper, and other treatment contaminants.
- CM 18. Concrete shall be sufficiently cured prior to contact with water to prevent leaching. Uncured concrete shall not be allowed to come into contact with surface waters.
- CM 19. Any imported material (e.g., ballast, armoring rock, gravel) will be clean/washed and commercially obtained from an approved source.
- CM 20. During all sediment-generating activities, a site-appropriate water quality Best Management Practices (e.g., sediment curtain) will be deployed and maintained prior to commencing work.
- CM 21. Heavy equipment will be operated from the uplands or from a barge during construction. If a construction barge is used, it will not ground or rest on the substrate at any time.
- CM 22. All equipment used for work below the Ordinary High Water mark (OHWM) will be cleaned of accumulated grease, oil, mud, etc. and leaks will be repaired prior to arriving at the project site. Thereafter, all equipment will be inspected daily for leaks, accumulations of grease, etc. and any identified problems will be fixed before using the equipment below OHWM.

- CM 23. Equipment used for work in a riparian corridor will be fueled and serviced in an established staging area. When not in use, equipment and vehicles will be stored in the staging area. Staging areas will be located a minimum of 150 ft from surface waters or other sensitive habitats, such as wetlands.
- CM 24. Two oil absorbing floating booms appropriate for the size of the work area will be available onsite during all phases of work whenever land-based heavy equipment operates within 150 ft of the OHWM, and when there is potential for hazardous materials to enter surface waters. The booms will be placed in a location that facilitates an immediate response to potential petroleum leakage or spill.
- CM 25. The contractor will implement a written spill prevention, control, and countermeasures (SPCC) plan. The SPCC plan will describe measures to prevent or reduce impacts from potential accidental spills (fuel, hydraulic fluid, etc.). In addition, the SPCC plan will contain a description of all hazardous materials that will be used, including inventory, proper storage and handling, and monitoring methods. The contractor will maintain a spill kit onsite during construction in order to respond to accidental spills in a timely manner.
- CM 26. All man-made debris will be removed from the beach and riparian zone, and will be transported and disposed of at an appropriate upland location.
- CM 27. The contractor will retrieve any floating debris generated during construction. Debris will be disposed of at an approved upland location.
- CM 28. Whenever activities will generate sawdust, drill tailings or wood chips from treated timber, tarps or other containment material will be used to prevent debris from entering the water. If tarps cannot be used (because of the location or type of structure) a containment boom will be placed around the work area to capture debris and cuttings.
- CM 29. No solvents or other chemicals shall be used in or over the water during boat cleaning or other maintenance during construction or operation of the proposed action.
- CM 30. Depressions or trenches in beach areas waterward of OHWM, created during construction shall be immediately restored to the original pre-project conditions (e.g., elevation and substrate material type).
- CM 31. Only existing roads and access routes will be used to deliver material and equipment to the project site. No new temporary or permanent access roads or routes would be used to transport equipment or supplies to the project site.
- CM 32. Any vegetation removed as part of the proposed action will be replanted with appropriate native vegetation upon completion of the project. Vegetation replanted in association with a covered activity will be monitored once per year for a period of five years to ensure planting success, and will meet the following minimum requirements:
- a. Years 1 through 3 – survival of 100 percent of the vegetation planted
  - b. Year 5 – survival of 80 percent, of the vegetation planted

- CM 33. Irrigation withdrawal pipes will be screened according to Washington Department of Fish and Wildlife requirements to prevent entrainment of fish during intake of water.
- CM 34. No discharge into the waterbody will result from operation of the proposed irrigation withdrawal. Irrigation water will be applied at a rate and in a manner that allows for complete infiltration and will not result in runoff or stormwater discharge from the property or into the aquatic environment.

# **NATIONAL BALD EAGLE MANAGEMENT GUIDELINES**

**U.S. Fish and Wildlife Service**

**May 2007**



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## INTRODUCTION

The bald eagle (*Haliaeetus leucocephalus*) is protected by the Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act (MBTA). The MBTA and the Eagle Act protect bald eagles from a variety of harmful actions and impacts. The U.S. Fish and Wildlife Service (Service) developed these National Bald Eagle Management Guidelines to advise landowners, land managers, and others who share public and private lands with bald eagles when and under what circumstances the protective provisions of the Eagle Act may apply to their activities. A variety of human activities can potentially interfere with bald eagles, affecting their ability to forage, nest, roost, breed, or raise young. The Guidelines are intended to help people minimize such impacts to bald eagles, particularly where they may constitute "disturbance," which is prohibited by the Eagle Act.

The Guidelines are intended to:

- (1) Publicize the provisions of the Eagle Act that continue to protect bald eagles, in order to reduce the possibility that people will violate the law,
- (2) Advise landowners, land managers and the general public of the potential for various human activities to disturb bald eagles, and
- (3) Encourage additional nonbinding land management practices that benefit bald eagles (see Additional Recommendations section).

While the Guidelines include general recommendations for land management practices that will benefit bald eagles, the document is intended primarily as a tool for landowners and planners who seek information and recommendations regarding how to avoid disturbing bald eagles. Many States and some tribal entities have developed state-specific management plans, regulations, and/or guidance for landowners and land managers to protect and enhance bald eagle habitat, and we encourage the continued development and use of these planning tools to benefit bald eagles.

Adherence to the Guidelines herein will benefit individuals, agencies, organizations, and companies by helping them avoid violations of the law. However, the Guidelines themselves are not law. Rather, they are recommendations based on several decades of behavioral observations, science, and conservation measures to avoid or minimize adverse impacts to bald eagles.

The U.S. Fish and Wildlife Service strongly encourages adherence to these guidelines to ensure that bald and golden eagle populations will continue to be sustained. The Service realizes there may be impacts to some birds even if all reasonable measures are taken to avoid such impacts. Although it is not possible to absolve individuals and entities from liability under the Eagle Act or the MBTA, the Service exercises enforcement discretion to focus on those individuals, companies, or agencies that take migratory birds without regard for the consequences of their actions and the law, especially when conservation measures, such as these Guidelines, are available, but have not been implemented. The Service will prioritize its enforcement efforts to focus on those individuals or entities who take bald eagles or their parts, eggs, or nests without implementing appropriate measures recommended by the Guidelines.

The Service intends to pursue the development of regulations that would authorize, under limited circumstances, the use of permits if "take" of an eagle is anticipated but unavoidable. Additionally, if the bald eagle is delisted, the Service intends to provide a regulatory mechanism to honor existing (take) authorizations under the Endangered Species Act (ESA).

During the interim period until the Service completes a rulemaking for permits under the Eagle Act, the Service does not intend to refer for prosecution the incidental "take" of any bald eagle under the MBTA or Eagle Act, if such take is in full compliance with the terms and conditions of an incidental take statement issued to the action agency or applicant under the authority of section 7(b)(4) of the ESA or a permit issued under the authority of section 10(a)(1)(B) of the ESA.

The Guidelines are applicable throughout the United States, including Alaska. The primary purpose of these Guidelines is to provide information that will minimize or prevent violations only of *Federal* laws governing bald eagles. In addition to Federal laws, many states and some smaller jurisdictions and tribes have additional laws and regulations protecting bald eagles. In some cases those laws and regulations may be more protective (restrictive) than these Federal guidelines. If you are planning activities that may affect bald eagles, we therefore recommend that you contact both your nearest U.S. Fish and Wildlife Service Field Office (see the contact information on p.16) and your state wildlife agency for assistance.

## LEGAL PROTECTIONS FOR THE BALD EAGLE

### The Bald and Golden Eagle Protection Act

The Eagle Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from taking bald eagles, including their parts, nests, or eggs. The Act provides criminal and civil penalties for persons who take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof. The Act defines take as pursue, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. "Disturb means:

"Disturb means 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."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

A violation of the Act can result in a criminal fine of \$100,000 (\$200,000 for organizations), imprisonment for one year, or both, for a first offense. Penalties increase substantially for additional offenses, and a second violation of this Act is a felony.

### **The Migratory Bird Treaty Act**

The MBTA (16 U.S.C. 703-712), prohibits the taking of any migratory bird or any part, nest, or egg, except as permitted by regulation. The MBTA was enacted in 1918; a 1972 agreement supplementing one of the bilateral treaties underlying the MBTA had the effect of expanding the scope of the Act to cover bald eagles and other raptors. Implementing regulations define "take" under the MBTA as "pursue, hunt, shoot, wound, kill, trap, capture, possess, or collect."

Copies of the Eagle Act and the MBTA are available at: <http://permits.fws.gov/ltr/ltr.shtml>.

### **State laws and regulations**

Most states have their own regulations and/or guidelines for bald eagle management. Some states may continue to list the bald eagle as endangered, threatened, or of special concern. If you plan activities that may affect bald eagles, we urge you to familiarize yourself with the regulations and/or guidelines that apply to bald eagles in your state. Your adherence to the Guidelines herein does not ensure that you are in compliance with state laws and regulations because state regulations can be more specific and/or restrictive than these Guidelines.

## **NATURAL HISTORY OF THE BALD EAGLE**

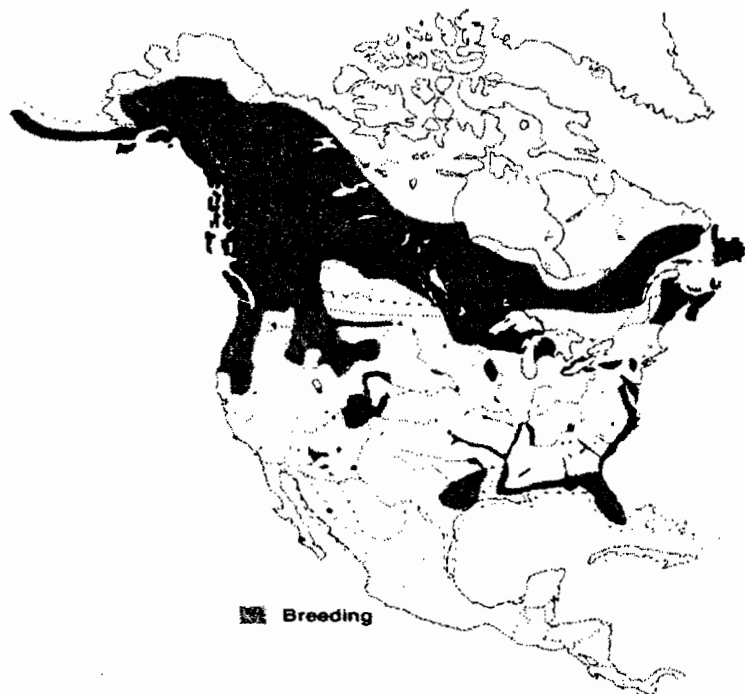
Bald eagles are a North American species that historically occurred throughout the contiguous United States and Alaska. After severely declining in the lower 48 States between the 1870s and the 1970s, bald eagles have rebounded and re-established breeding territories in each of the lower 48 states. The largest North American breeding populations are in Alaska and Canada, but there are also significant bald eagle populations in Florida, the Pacific Northwest, the Greater Yellowstone area, the Great Lakes states, and the Chesapeake Bay region. Bald eagle distribution varies seasonally. Bald eagles that nest in southern latitudes frequently move northward in late spring and early summer, often summering as far north as Canada. Most eagles that breed at northern latitudes migrate southward during winter, or to coastal areas where waters remain unfrozen. Migrants frequently concentrate in large numbers at sites where food is abundant and they often roost together communally. In some cases, concentration areas are used year-round: in summer by southern eagles and in winter by northern eagles.

Juvenile bald eagles have mottled brown and white plumage, gradually acquiring their dark brown body and distinctive white head and tail as they mature. Bald eagles generally attain adult plumage by 5 years of age. Most are capable of breeding at 4 or 5 years of age, but in healthy populations they may not start breeding until much older. Bald eagles may live 15 to 25 years in the wild. Adults weigh 8 to 14 pounds (occasionally reaching 16 pounds in Alaska) and have wingspans of 5 to 8 feet. Those in the northern range are larger than those in the south, and females are larger than males.

**Where do bald eagles nest?**

Breeding bald eagles occupy "territories," areas they will typically defend against intrusion by other eagles. In addition to the active nest, a territory may include one or more alternate nests (nests built or maintained by the eagles but not used for nesting in a given year). The Eagle Act prohibits removal or destruction of both active and alternate bald eagle nests. Bald eagles exhibit high nest site fidelity and nesting territories are often used year after year. Some territories are known to have been used continually for over half a century.

Bald eagles generally nest near coastlines, rivers, large lakes or streams that support an adequate food supply. They often nest in mature or old-growth trees; snags (dead trees); cliffs; rock promontories; rarely on the ground; and with increasing frequency on human-made structures such as power poles and communication towers. In forested areas, bald eagles often select the tallest trees with limbs strong enough to support a nest that can weigh more than 1,000 pounds. Nest sites typically include at least one perch with a clear view of the water where the eagles usually forage. Shoreline trees or snags located in reservoirs provide the visibility and accessibility needed to locate aquatic prey. Eagle nests are constructed with large sticks, and may be lined with moss, grass, plant stalks, lichens, seaweed, or sod. Nests are usually about 4-6 feet in diameter and 3 feet deep, although larger nests exist.



Copyright Birds of North America, 2000

The range of breeding bald eagles in 2000 (shaded areas). This map shows only the larger concentrations of nests; eagles have continued to expand into additional nesting territories in many states. The dotted line represents the bald eagle's wintering range.

**When do bald eagles nest?**

Nesting activity begins several months before egg-laying. Egg-laying dates vary throughout the U.S., ranging from October in Florida, to late April or even early May in the northern United States. Incubation typically lasts 33-35 days, but can be as long as 40 days. Eaglets make their first unsteady flights about 10 to 12 weeks after hatching, and fledge (leave their nests) within a few days after that first flight. However, young birds usually remain in the vicinity of the nest for several weeks after fledging because they are almost completely dependent on their parents for food until they disperse from the nesting territory approximately 6 weeks later.

The bald eagle breeding season tends to be longer in the southern U.S., and re-nesting following an unsuccessful first nesting attempt is more common there as well. The following table shows the timing of bald eagle breeding seasons in different regions of the country. The table represents the range of time within which the majority of nesting activities occur in each region and does not apply to any specific nesting pair. Because the timing of nesting activities may vary within a given region, you should contact the nearest U.S. Fish and Wildlife Service Field Office (see page 16) and/or your state wildlife conservation agency for more specific information on nesting chronology in your area.

## Chronology of typical reproductive activities of bald eagles in the United States.

Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.
SOUTHEASTERN U.S. (FL, GA, SC, NC, AL, MS, LA, TN, KY, AR, eastern 2 of TX)											
Nest Building											
Egg Laying/Incubation											
Hatching/Rearing Young											
Fledging Young											
CHESAPEAKE BAY REGION (NC, VA, MD, DE, southern 2 of NJ, eastern 2 of PA, panhandle of WV)											
Nest Building											
Egg Laying/Incubation											
Hatching/Rearing Young											
Fledging Young											
NORTHERN U.S. (ME, NH, MA, RI, CT, NY, northern 2 of NJ, western 2 of PA, OH, WV exc. panhandle, IN, IL, MI, WI, MN, IA, MO, ND, SD, NB, KS, CO, UT)											
Nest Building											
Egg Laying/Incubation											
Hatching/Rearing Young											
Fledging Young											
PACIFIC REGION (WA, OR, CA, ID, MT, WY, NV)											
Nest Building											
Egg Laying/Incubation											
Hatching/Rearing Young											
Fledging Young											
SOUTHWESTERN U.S. (AZ, NM, OK panhandle, western 2 of TX)											
Nest Building											
Egg Laying/Incubation											
Hatching/Rearing Young											
Fledging Young											
ALASKA											
Nest Building											
Egg Laying/Incubation											
Hatching/Rearing Young											
Ing Young						Fledg-					
Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.

**How many chicks do bald eagles raise?**

The number of eagle eggs laid will vary from 1-3, with 1-2 eggs being the most common. Only one eagle egg is laid per day, although not always on successive days. Hatching of young occurs on different days with the result that chicks in the same nest are sometimes of unequal size. The overall national fledging rate is approximately one chick per nest, annually, which results in a healthy expanding population.

**What do bald eagles eat?**

Bald eagles are opportunistic feeders. Fish comprise much of their diet, but they also eat waterfowl, shorebirds/colonial waterbirds, small mammals, turtles, and carrion. Because they are visual hunters, eagles typically locate their prey from a conspicuous perch, or soaring flight, then swoop down and strike. Wintering bald eagles often congregate in large numbers along streams to feed on spawning salmon or other fish species, and often gather in large numbers in areas below reservoirs, especially hydropower dams, where fish are abundant. Wintering eagles also take birds from rafts of ducks at reservoirs and rivers, and congregate on melting ice shelves to scavenge dead fish from the current or the soft melting ice. Bald eagles will also feed on carcasses along roads, in landfills, and at feedlots.

During the breeding season, adults carry prey to the nest to feed the young. Adults feed their chicks by tearing off pieces of food and holding them to the beaks of the eaglets. After fledging, immature eagles are slow to develop hunting skills, and must learn to locate reliable food sources and master feeding techniques. Young eagles will congregate together, often feeding upon easily acquired food such as carrion and fish found in abundance at the mouths of streams and shallow bays and at landfills.

**The impact of human activity on nesting bald eagles**

During the breeding season, bald eagles are sensitive to a variety of human activities. However, not all bald eagle pairs react to human activities in the same way. Some pairs nest successfully just dozens of yards from human activity, while others abandon nest sites in response to activities much farther away. This variability may be related to a number of factors, including visibility, duration, noise levels, extent of the area affected by the activity, prior experiences with humans, and tolerance of the individual nesting pair. The relative sensitivity of bald eagles during various stages of the breeding season is outlined in the following table.



**Nesting Bald Eagle Sensitivity to Human Activities**

Phase	Activity	Sensitivity to Human Activity	Comments
I	Courtship and Nest Building	Most sensitive period; likely to respond negatively	Most critical time period. Disturbance is manifested in nest abandonment. Bald eagles in newly established territories are more prone to abandon nest sites.
II	Egg laying	Very sensitive period	Human activity of even limited duration may cause nest desertion and abandonment of territory for the breeding season.
III	Incubation and early nestling period (up to 4 weeks)	Very sensitive period	Adults are less likely to abandon the nest near and after hatching. However, flushed adults leave eggs and young unattended; eggs are susceptible to cooling, loss of moisture, overheating, and predation; young are vulnerable to elements.
IV	Nestling period, 4 to 8 weeks	Moderately sensitive period	Likelihood of nest abandonment and vulnerability of the nestlings to elements somewhat decreases. However, nestlings may miss feedings, affecting their survival.
V	Nestlings 8 weeks through fledging	Very sensitive period	Gaining flight capability, nestlings 8 weeks and older may flush from the nest prematurely due to disruption and die.

If agitated by human activities, eagles may inadequately construct or repair their nest, may expend energy defending the nest rather than tending to their young, or may abandon the nest altogether. Activities that cause prolonged absences of adults from their nests can jeopardize eggs or young. Depending on weather conditions, eggs may overheat or cool too much and fail to hatch. Unattended eggs and nestlings are subject to predation. Young nestlings are particularly vulnerable because they rely on their parents to provide warmth or shade, without which they may die as a result of hypothermia or heat stress. If food delivery schedules are interrupted, the young may not develop healthy plumage, which can affect their survival. In addition, adults startled while incubating or brooding young may damage eggs or injure their young as they abruptly leave the nest. Older nestlings no longer require constant attention from the adults, but they may be startled by loud or intrusive human activities and prematurely jump from the nest before they are able to fly or care for themselves. Once fledged, juveniles range up to ¼ mile from the nest site, often to a site with minimal human activity. During this period, until about six weeks after departure from the nest, the juveniles still depend on the adults to feed them.

**The impact of human activity on foraging and roosting bald eagles**

Disruption, destruction, or obstruction of roosting and foraging areas can also negatively affect bald eagles. Disruptive activities in or near eagle foraging areas can interfere with feeding, reducing chances of survival. Interference with feeding can also result in reduced productivity (number of young successfully fledged). Migrating and wintering bald eagles often congregate at specific sites for purposes of feeding and sheltering. Bald eagles rely on established roost sites because of their proximity to sufficient food sources. Roost sites are usually in mature trees where the eagles are somewhat sheltered from the wind and weather. Human activities near or within communal roost sites may prevent eagles

from feeding or taking shelter, especially if there are not other undisturbed and productive feeding and roosting sites available. Activities that permanently alter communal roost sites and important foraging areas can altogether eliminate the elements that are essential for feeding and sheltering eagles.

Where a human activity agitates or bothers roosting or foraging bald eagles to the degree that causes injury or substantially interferes with breeding, feeding, or sheltering behavior and causes, or is likely to cause, a loss of productivity or nest abandonment, the conduct of the activity constitutes a violation of the Eagle Act's prohibition against disturbing eagles. The circumstances that might result in such an outcome are difficult to predict without detailed site-specific information. If your activities may disturb roosting or foraging bald eagles, you should contact your local Fish and Wildlife Service Field Office (see page 16) for advice and recommendations for how to avoid such disturbance.

### **RECOMMENDATIONS FOR AVOIDING DISTURBANCE AT NEST SITES**

In developing these Guidelines, we relied on existing state and regional bald eagle guidelines, scientific literature on bald eagle disturbance, and recommendations of state and Federal biologists who monitor the impacts of human activity on eagles. Despite these resources, uncertainties remain regarding the effects of many activities on eagles and how eagles in different situations may or may not respond to certain human activities. The Service recognizes this uncertainty and views the collection of better biological data on the response of eagles to disturbance as a high priority. To the extent that resources allow, the Service will continue to collect data on responses of bald eagles to human activities conducted according to the recommendations within these Guidelines to ensure that adequate protection from disturbance is being afforded, and to identify circumstances where the Guidelines might be modified. These data will be used to make future adjustments to the Guidelines.

To avoid disturbing nesting bald eagles, we recommend (1) keeping a distance between the activity and the nest (distance buffers), (2) maintaining preferably forested (or natural) areas between the activity and around nest trees (landscape buffers), and (3) avoiding certain activities during the breeding season. The buffer areas serve to minimize visual and auditory impacts associated with human activities near nest sites. Ideally, buffers would be large enough to protect existing nest trees and provide for alternative or replacement nest trees.

The size and shape of effective buffers vary depending on the topography and other ecological characteristics surrounding the nest site. In open areas where there are little or no forested or topographical buffers, such as in many western states, distance alone must serve as the buffer. Consequently, in open areas, the distance between the activity and the nest may need to be larger than the distances recommended under Categories A and B of these guidelines (pg. 12) if no landscape buffers are present. The height of the nest above the ground may also ameliorate effects of human activities; eagles at higher nests may be less prone to disturbance.

In addition to the physical features of the landscape and nest site, the appropriate size for the distance buffer may vary according to the historical tolerances of eagles to human activities in particular localities, and may also depend on the location of the nest in relation

to feeding and roosting areas used by the eagles. Increased competition for nest sites may lead bald eagles to nest closer to human activity (and other eagles).

Seasonal restrictions can prevent the potential impacts of many shorter-term, obtrusive activities that do not entail landscape alterations (e.g. fireworks, outdoor concerts). In proximity to the nest, these kinds of activities should be conducted only outside the breeding season. For activities that entail both short-term, obtrusive characteristics and more permanent impacts (e.g., building construction), we recommend a combination of both approaches: retaining a landscape buffer *and* observing seasonal restrictions.

For assistance in determining the appropriate size and configuration of buffers or the timing of activities in the vicinity of a bald eagle nest, we encourage you to contact the nearest U.S. Fish and Wildlife Service Field Office (see page 16).

### **Existing Uses**

Eagles are unlikely to be disturbed by routine use of roads, homes, and other facilities where such use pre-dates the eagles' successful nesting activity in a given area. Therefore, in most cases *ongoing* existing uses may proceed with the same intensity with little risk of disturbing bald eagles. However, some *intermittent, occasional, or irregular* uses that pre-date eagle nesting in an area may disturb bald eagles. For example: a pair of eagles may begin nesting in an area and subsequently be disturbed by activities associated with an annual outdoor flea market, even though the flea market has been held annually at the same location. In such situations, human activity should be adjusted or relocated to minimize potential impacts on the nesting pair.

## **ACTIVITY-SPECIFIC GUIDELINES**

The following section provides the Service's management recommendations for avoiding bald eagle disturbance as a result of new or intermittent activities proposed in the vicinity of bald eagle nests. Activities are separated into 8 categories (A – H) based on the nature and magnitude of impacts to bald eagles that usually result from the type of activity. Activities with similar or comparable impacts are grouped together.

In most cases, impacts will vary based on the visibility of the activity from the eagle nest and the degree to which similar activities are already occurring in proximity to the nest site. Visibility is a factor because, in general, eagles are more prone to disturbance when an activity occurs in full view. For this reason, we recommend that people locate activities farther from the nest structure in areas with open vistas, in contrast to areas where the view is shielded by rolling topography, trees, or other screening factors. The recommendations also take into account the existence of similar activities in the area because the continued presence of nesting bald eagles in the vicinity of the existing activities indicates that the eagles in that area can tolerate a greater degree of human activity than we can generally expect from eagles in areas that experience fewer human impacts. To illustrate how these factors affect the likelihood of disturbing eagles, we have incorporated the recommendations for some activities into a table (categories A and B).

First, determine which category your activity falls into (between categories A – H). If the activity you plan to undertake is not specifically addressed in these guidelines, follow the recommendations for the most similar activity represented.

If your activity is under A or B, our recommendations are in table form. The vertical axis shows the degree of visibility of the activity from the nest. The horizontal axis (header row) represents the degree to which similar activities are ongoing in the vicinity of the nest. Locate the row that best describes how visible your activity will be from the eagle nest. Then, choose the column that best describes the degree to which similar activities are ongoing in the vicinity of the eagle nest. The box where the column and row come together contains our management recommendations for how far you should locate your activity from the nest to avoid disturbing the eagles. The numerical distances shown in the tables are the closest the activity should be conducted relative to the nest. In some cases we have included additional recommendations (other than recommended *distance* from the nest) you should follow to help ensure that your activity will not disturb the eagles.

### **Alternate nests**

For activities that entail permanent landscape alterations that may result in bald eagle disturbance, these recommendations apply to both active and alternate bald eagle nests. Disturbance becomes an issue with regard to alternate nests if eagles return for breeding purposes and react to land use changes that occurred while the nest was inactive. The likelihood that an alternate nest will again become active decreases the longer it goes unused. If you plan activities in the vicinity of an alternate bald eagle nest and have information to show that the nest has not been active during the preceding 5 breeding seasons, the recommendations provided in these guidelines for avoiding disturbance around the nest site may no longer be warranted. The nest itself remains protected by other provisions of the Eagle Act, however, and may not be destroyed.

If special circumstances exist that make it unlikely an inactive nest will be reused before 5 years of disuse have passed, and you believe that the probability of reuse is low enough to warrant disregarding the recommendations for avoiding disturbance, you should be prepared to provide all the reasons for your conclusion, including information regarding past use of the nest site. Without sufficient documentation, you should continue to follow these guidelines when conducting activities around the nest site. If we are able to determine that it is unlikely the nest will be reused, we may advise you that the recommendations provided in these guidelines for avoiding disturbance are no longer necessary around that nest site.

This guidance is intended to minimize disturbance, as defined by Federal regulation. In addition to Federal laws, most states and some tribes and smaller jurisdictions have additional laws and regulations protecting bald eagles. In some cases those laws and regulations may be more protective (restrictive) than these Federal guidelines.

### **Temporary Impacts**

For activities that have temporary impacts, such as the use of loud machinery, fireworks displays, or summer boating activities, we recommend seasonal restrictions. These types of activities can generally be carried out outside of the breeding season without causing disturbance. The recommended restrictions for these types of activities can be lifted for alternate nests within a particular territory, including nests that were attended during the current breeding season but not used to raise young, after eggs laid in another nest within the territory have hatched (depending on the distance between the alternate nest and the active nest).

In general, activities should be kept as far away from nest trees as possible; loud and disruptive activities should be conducted when eagles are not nesting; and activity between the nest and the nearest foraging area should be minimized. If the activity you plan to undertake is not specifically addressed in these guidelines, follow the recommendations for the most similar activity addressed, or contact your local U.S. Fish and Wildlife Service Field Office for additional guidance.

If you believe that special circumstances apply to your situation that increase or diminish the likelihood of bald eagle disturbance, or if it is not possible to adhere to the guidelines, you should contact your local Service Field Office for further guidance.

#### **Category A:**

Building construction, 1 or 2 story, with project footprint of ½ acre or less.  
Construction of roads, trails, canals, power lines, and other linear utilities.  
Agriculture and aquaculture – new or expanded operations.  
Alteration of shorelines or wetlands.  
Installation of docks or moorings.  
Water impoundment.

#### **Category B:**

Building construction, 3 or more stories.  
Building construction, 1 or 2 story, with project footprint of more than ½ acre.  
Installation or expansion of marinas with a capacity of 6 or more boats.  
Mining and associated activities.  
Oil and natural gas drilling and refining and associated activities.

	<i><b>If there is no similar activity within 1 mile of the nest</b></i>	<i><b>If there is similar activity closer than 1 mile from the nest</b></i>
<i><b>If the activity will be visible from the nest</b></i>	660 feet. Landscape buffers are recommended.	660 feet, or as close as existing tolerated activity of similar scope. Landscape buffers are recommended.
<i><b>If the activity will not be visible from the nest</b></i>	Category A: 330 feet. Clearing, external construction, and landscaping between 330 feet and 660 feet should be done outside breeding season.  Category B: 660 feet.	330 feet, or as close as existing tolerated activity of similar scope. Clearing, external construction and landscaping within 660 feet should be done outside breeding season.

The numerical distances shown in the table are the closest the activity should be conducted relative to the nest.

**Category C. Timber Operations and Forestry Practices**

- Avoid clear cutting or removal of overstory trees within 330 feet of the nest at any time.
- Avoid timber harvesting operations, including road construction and chain saw and yarding operations, during the breeding season within 660 feet of the nest. The distance may be decreased to 330 feet around alternate nests within a particular territory, including nests that were attended during the current breeding season but not used to raise young, after eggs laid in another nest within the territory have hatched.
- Selective thinning and other silviculture management practices designed to conserve or enhance habitat, including prescribed burning close to the nest tree, should be undertaken outside the breeding season. Precautions such as raking leaves and woody debris from around the nest tree should be taken to prevent crown fire or fire climbing the nest tree. If it is determined that a burn during the breeding season would be beneficial, then, to ensure that no take or disturbance will occur, these activities should be conducted only when neither adult eagles nor young are present at the nest tree (i.e., at the beginning of, or end of, the breeding season, either before the particular nest is active or after the young have fledged from that nest). Appropriate Federal and state biologists should be consulted before any prescribed burning is conducted during the breeding season.
- Avoid construction of log transfer facilities and in-water log storage areas within 330 feet of the nest.

**Category D. Off-road vehicle use** (including snowmobiles). No buffer is necessary around nest sites outside the breeding season. During the breeding season, do not operate off-road vehicles within 330 feet of the nest. In open areas, where there is increased visibility and exposure to noise, this distance should be extended to 660 feet.

**Category E. Motorized Watercraft use** (including jet skis/personal watercraft). No buffer is necessary around nest sites outside the breeding season. During the breeding season, within 330 feet of the nest, (1) do not operate jet skis (personal watercraft), and (2) avoid concentrations of noisy vessels (e.g., commercial fishing boats and tour boats), except where eagles have demonstrated tolerance for such activity. Other motorized boat traffic passing within 330 feet of the nest should attempt to minimize trips and avoid stopping in the area where feasible, particularly where eagles are unaccustomed to boat traffic. Buffers for airboats should be larger than 330 feet due to the increased noise they generate, combined with their speed, maneuverability, and visibility.

**Category F. Non-motorized recreation and human entry** (e.g., hiking, camping, fishing, hunting, birdwatching, kayaking, canoeing). No buffer is necessary around nest sites outside the breeding season. If the activity will be visible or highly audible from the nest, maintain a 330-foot buffer during the breeding season, particularly where eagles are unaccustomed to such activity.

**Category G. Helicopters and fixed-wing aircraft.**

Except for authorized biologists trained in survey techniques, avoid operating aircraft within 1,000 feet of the nest during the breeding season, except where eagles have demonstrated tolerance for such activity.

**Category H. Blasting and other loud, intermittent noises.**

Avoid blasting and other activities that produce extremely loud noises within 1/2 mile of active nests, unless greater tolerance to the activity (or similar activity) has been demonstrated by the eagles in the nesting area. This recommendation applies to the use of fireworks classified by the Federal Department of Transportation as Class B explosives, which includes the larger fireworks that are intended for licensed public display.

**RECOMMENDATIONS FOR AVOIDING DISTURBANCE AT FORAGING AREAS AND COMMUNAL ROOST SITES**

1. Minimize potentially disruptive activities and development in the eagles' direct flight path between their nest and roost sites and important foraging areas.
2. Locate long-term and permanent water-dependent facilities, such as boat ramps and marinas, away from important eagle foraging areas.
3. Avoid recreational and commercial boating and fishing near critical eagle foraging areas during peak feeding times (usually early to mid-morning and late afternoon), except where eagles have demonstrated tolerance to such activity.
4. Do not use explosives within 1/2 mile (or within 1 mile in open areas) of communal roosts when eagles are congregating, without prior coordination with the U.S. Fish and Wildlife Service and your state wildlife agency.
5. Locate aircraft corridors no closer than 1,000 feet vertical or horizontal distance from communal roost sites.

### **ADDITIONAL RECOMMENDATIONS TO BENEFIT BALD EAGLES**

The following are additional management practices that landowners and planners can exercise for added benefit to bald eagles.

1. Protect and preserve potential roost and nest sites by retaining mature trees and old growth stands, particularly within ½ mile from water.
2. Where nests are blown from trees during storms or are otherwise destroyed by the elements, continue to protect the site in the absence of the nest for up to three (3) complete breeding seasons. Many eagles will rebuild the nest and reoccupy the site.
3. To avoid collisions, site wind turbines, communication towers, and high voltage transmission power lines away from nests, foraging areas, and communal roost sites.
4. Employ industry-accepted best management practices to prevent birds from colliding with or being electrocuted by utility lines, towers, and poles. If possible, bury utility lines in important eagle areas.
5. Where bald eagles are likely to nest in human-made structures (e.g., cell phone towers) and such use could impede operation or maintenance of the structures or jeopardize the safety of the eagles, equip the structures with either (1) devices engineered to discourage bald eagles from building nests, or (2) nesting platforms that will safely accommodate bald eagle nests without interfering with structure performance.
6. Immediately cover carcasses of euthanized animals at landfills to protect eagles from being poisoned.
7. Do not intentionally feed bald eagles. Artificially feeding bald eagles can disrupt their essential behavioral patterns and put them at increased risk from power lines, collision with windows and cars, and other mortality factors.
8. Use pesticides, herbicides, fertilizers, and other chemicals only in accordance with Federal and state laws.
9. Monitor and minimize dispersal of contaminants associated with hazardous waste sites (legal or illegal), permitted releases, and runoff from agricultural areas, especially within watersheds where eagles have shown poor reproduction or where bioaccumulating contaminants have been documented. These factors present a risk of contamination to eagles and their food sources.



## CONTACTS

The following U.S. Fish and Wildlife Service Field Offices provide technical assistance on bald eagle management:

<u>Alabama</u>	Daphne	(251) 441-5181	<u>New Hampshire</u>	Concord	(603) 223-2541
<u>Alaska</u>	Anchorage	(907) 271-2888	<u>New Jersey</u>	Pleasantville	(609) 646-9310
	Fairbanks	(907) 456-0203	<u>New Mexico</u>	Albuquerque	(505) 346-2525
	Juneau	(907) 780-1160	<u>New York</u>	Cortland	(607) 753-9334
<u>Arizona</u>	Phoenix	(602) 242-0210		Long Island	(631) 776-1401
<u>Arkansas</u>	Conway	(501) 513-4470	<u>North Carolina</u>	Raleigh	(919) 856-4520
<u>California</u>	Arcata	(707) 822-7201		Asheville	(828) 258-3939
	Barstow	(760) 255-8852	<u>North Dakota</u>	Bismarck	(701) 250-4481
	Carlsbad	(760) 431-9440	<u>Ohio</u>	Reynoldsburg	(614) 469-6923
	Red Bluff	(530) 527-3043	<u>Oklahoma</u>	Tulsa	(918) 581-7458
	Sacramento	(916) 414-6000	<u>Oregon</u>	Bend	(541) 383-7146
	Stockton	(209) 946-6400		Klamath Falls	(541) 885-8481
	Ventura	(805) 644-1766		La Grande	(541) 962-8584
	Yreka	(530) 842-5763		Newport	(541) 867-4558
<u>Colorado</u>	Lakewood	(303) 275-2370		Portland	(503) 231-6179
	Grand Junction	(970) 243-2778		Roseburg	(541) 957-3474
<u>Connecticut</u>	(See New Hampshire)		<u>Pennsylvania</u>	State College	(814) 234-4090
<u>Delaware</u>	(See Maryland)		<u>Rhode Island</u>	(See New Hampshire)	
<u>Florida</u>	Panama City	(850) 769-0552	<u>South Carolina</u>	Charleston	(843) 727-4707
	Vero Beach	(772) 562-3909	<u>South Dakota</u>	Pierre	(605) 224-8693
	Jacksonville	(904) 232-2580	<u>Tennessee</u>	Cookeville	(931) 528-6481
<u>Georgia</u>	Athens	(706) 613-9493	<u>Texas</u>	Clear Lake	(281) 286-8282
	Brunswick	(912) 265-9336	<u>Utah</u>	West Valley City	(801) 975-3330
	Columbus	(706) 544-6428	<u>Vermont</u>	(See New Hampshire)	
<u>Idaho</u>	Boise	(208) 378-5243	<u>Virginia</u>	Gloucester	(804) 693-6694
	Chubbuck	(208) 237-6975	<u>Washington</u>	Lacey	(306) 753-9440
<u>Illinois/Iowa</u>	Rock Island	(309) 757-5800		Spokane	(509) 891-6839
<u>Indiana</u>	Bloomington	(812) 334-4261		Wenatchee	(509) 665-3508
<u>Kansas</u>	Manhattan	(785) 539-3474	<u>West Virginia</u>	Elkins	(304) 636-6586
<u>Kentucky</u>	Frankfort	(502) 695-0468	<u>Wisconsin</u>	New Franken	(920) 866-1725
<u>Louisiana</u>	Lafayette	(337) 291-3100	<u>Wyoming</u>	Cheyenne	(307) 772-2374
<u>Maine</u>	Old Town	(207) 827-5938		Cody	(307) 578-5939
<u>Maryland</u>	Annapolis	(410) 573-4573			
<u>Massachusetts</u>	(See New Hampshire)				
<u>Michigan</u>	East Lansing	(517) 351-2555			
<u>Minnesota</u>	Bloomington	(612) 725-3548			
<u>Mississippi</u>	Jackson	(601) 965-4900			
<u>Missouri</u>	Columbia	(573) 234-2132			
<u>Montana</u>	Helena	(405) 449-5225			
<u>Nebraska</u>	Grand Island	(308) 382-6468			
<u>Nevada</u>	Las Vegas	(702) 515-5230			
	Reno	(775) 861-6300			

### National Office

U.S. Fish and Wildlife Service  
Division of Migratory Bird Management  
4401 North Fairfax Drive, MBSP-4107  
Arlington, VA 22203-1610  
(703) 358-1714  
<http://www.fws.gov/migratorybirds>

### State Agencies

To contact a state wildlife agency, visit the Association of Fish & Wildlife Agencies' website at [http://www.fishwildlife.org/where\\_us.html](http://www.fishwildlife.org/where_us.html)

## GLOSSARY

The definitions below apply to these National Bald Eagle Management Guidelines:

**Communal roost sites** – Areas where bald eagles gather and perch overnight – and sometimes during the day in the event of inclement weather. Communal roost sites are usually in large trees (live or dead) that are relatively sheltered from wind and are generally in close proximity to foraging areas. These roosts may also serve a social purpose for pair bond formation and communication among eagles. Many roost sites are used year after year.

**Disturb** – 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.

In addition to immediate impacts, this definition also covers impacts that result from human-caused alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle=s return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

**Fledge** – To leave the nest and begin flying. For bald eagles, this normally occurs at 10-12 weeks of age.

**Fledgling** – A juvenile bald eagle that has taken the first flight from the nest but is not yet independent.

**Foraging area** – An area where eagles feed, typically near open water such as rivers, lakes, reservoirs, and bays where fish and waterfowl are abundant, or in areas with little or no water (i.e., rangelands, barren land, tundra, suburban areas, etc.) where other prey species (e.g., rabbit, rodents) or carrion (such as at landfills) are abundant.

**Landscape buffer** – A natural or human-made landscape feature that screens eagles from human activity (e.g., strip of trees, hill, cliff, berm, sound wall).

**Nest** – A structure built, maintained, or used by bald eagles for the purpose of reproduction. An **active** nest is a nest that is attended (built, maintained or used) by a pair of bald eagles during a given breeding season, whether or not eggs are laid. An **alternate** nest is a nest that is not used for breeding by eagles during a given breeding season.

**Nest abandonment** – Nest abandonment occurs when adult eagles desert or stop attending a nest and do not subsequently return and successfully raise young in that nest for the duration of a breeding season. Nest abandonment can be caused by altering habitat near a nest, even if the alteration occurs prior to the breeding season. Whether the eagles migrate during the non-breeding season, or remain in the area throughout the non-breeding season, nest abandonment can occur at any point between the time the eagles return to the nesting site for the breeding season and the time when all progeny from the breeding season have

dispersed.

**Project footprint** – The area of land (and water) that will be permanently altered for a development project, including access roads.

**Similar scope** – In the vicinity of a bald eagle nest, an existing activity is of similar scope to a new activity where the types of impacts to bald eagles are similar in nature, and the impacts of the existing activity are of the same or greater magnitude than the impacts of the potential new activity. Examples: (1) An existing single-story home 200 feet from a nest is similar in scope to an additional single-story home 200 feet from the nest; (2) An existing multi-story, multi-family dwelling 150 feet from a nest has impacts of a greater magnitude than a potential new single-family home 200 feet from the nest; (3) One existing single-family home 200 feet from the nest has impacts of a lesser magnitude than three single-family homes 200 feet from the nest; (4) an existing single-family home 200 feet from a communal roost has impacts of a lesser magnitude than a single-family home 300 feet from the roost but 40 feet from the eagles' foraging area. The existing activities in examples (1) and (2) are of similar scope, while the existing activities in example (3) and (4) are not.

**Vegetative buffer** – An area surrounding a bald eagle nest that is wholly or largely covered by forest, vegetation, or other natural ecological characteristics, and separates the nest from human activities.

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