

## NATIONWIDE STANDARD CONSERVATION MEASURES

Listed below are effective measures that should be employed at all project development sites nationwide with the goal of reducing impacts to birds and their habitats. These measures are grouped into three categories: General, Habitat Protection, and Stressor Management. These measures may be updated through time. We recommend checking the Conservation Measures website regularly for the most up-to-date list.

### 1. General Measures

- a. Educate all employees, contractors, and/or site visitors of relevant rules and regulations that protect wildlife. See the Service webpage on [Regulations and Policies](#) for more information on regulations that protect migratory birds.
- b. Prior to removal of an inactive nest, ensure that the nest is not protected under the Endangered Species Act (ESA) or the Bald and Golden Eagle Protection Act (BGEPA). Nests protected under ESA or BGEPA cannot be removed without a valid permit.
  - i. See the [Service Nest Destruction Policy](#)
- c. Do not collect birds (live or dead) or their parts (e.g., feathers) or nests without a valid permit. Please visit the [Service permits page](#) for more information on permits and permit applications.
- d. Provide enclosed solid waste receptacles at all project areas. Non-hazardous solid waste (trash) would be collected and deposited in the on-site receptacles. Solid waste would be collected and disposed of by a local waste disposal contractor. For more information about solid waste and how to properly dispose of it, see the [EPA Non-Hazardous Waste](#) website.
- e. Report any incidental take of a migratory bird, to the [local Service Office of Law Enforcement](#).
- f. Consult and follow applicable [Service industry guidance](#).

### 2. Habitat Protection

- a. Minimize project creep by clearly delineating and maintaining project boundaries (including staging areas).
- b. Consult all local, State, and Federal regulations for the development of an appropriate buffer distance between development site and any wetland or waterway. For more information on wetland protection regulations see the Clean Water Act sections [401](#) and [404](#).
- c. Maximize use of disturbed land for all project activities (i.e., siting, lay-down areas, and construction).
- d. Implement standard soil erosion and dust control measures. For example:
  - i. Establish vegetation cover to stabilize soil
  - ii. Use erosion blankets to prevent soil loss
  - iii. Water bare soil to prevent wind erosion and dust issues

### 3. Stressor Management

#### **Stressor: Vegetation Removal**

Conservation Goal: Avoid direct take of adults, chicks, or eggs.

**Conservation Measure 1:** Schedule all vegetation removal, trimming, and grading of vegetated areas outside of the peak bird breeding season to the maximum extent practicable. Use available resources, such as internet-based tools (e.g., the FWS's Information, Planning and Conservation system and Avian Knowledge Network) to identify peak breeding months for local bird species; or, contact local Service Migratory Bird Program Office for breeding bird information.

**Conservation Measure 2:** When project activities cannot occur outside the bird nesting season, conduct surveys prior to scheduled activity to determine if active nests are present within the area of impact and buffer any nesting locations found during surveys.

- 1) Generally, the surveys should be conducted no more than five days prior to scheduled activity.
- 2) Timing and dimensions of the area to be surveyed vary and will depend on the nature of the project, location, and expected level of vegetation disturbance.
- 3) If active nests or breeding behavior (e.g., courtship, nest building, territorial defense, etc.) are detected during these surveys, no vegetation removal activities should be conducted until nestlings have fledged or the nest fails or breeding behaviors are no longer observed. If the activity must occur, establish a buffer zone around the nest and no activities will occur within that zone until nestlings have fledged and left the nest area. The dimension of the buffer zone will depend on the proposed activity, habitat type, and species present and should be coordinated with the local or regional Service office.
- 4) When establishing a buffer zone, construct a barrier (e.g., plastic fencing) to protect the area. If the fence is knocked down or destroyed, work will suspend wholly, or in part, until the fence is satisfactorily repaired.
- 5) When establishing a buffer zone, a qualified biologist will be present onsite to serve as a biological monitor during vegetation clearing and grading activities to ensure no take of migratory birds occurs. Prior to vegetation clearing, the monitor will ensure that the limits of construction have been properly staked and are readily identifiable. Any associated project activities that are inconsistent with the applicable conservation measures, and activities that may result in the take of migratory birds will be immediately halted and reported to the appropriate Service office within 24 hours.
- 6) If establishing a buffer zone is not feasible, contact the Service for guidance to minimize impacts to migratory birds associated with the proposed project or removal of an active nest. Active nests may only be removed if you receive a permit from your local Migratory Bird Permit Office. A permit may authorize active nest removal by a qualified biologist with bird handling experience or by a permitted bird rehabilitator.

**Conservation Measure 3:** Prepare a vegetation maintenance plan that outlines vegetation maintenance activities and schedules so that direct bird impacts do not occur.

**Stressor: Invasive Species Introduction**

**Conservation Goal:** Prevent the introduction of invasive plants.

**Conservation Measure 1:** Prepare a weed abatement plan that outlines the areas where weed abatement is required and the schedule and method of activities to ensure bird impacts are avoided.

**Conservation Measure 2:** For temporary and permanent habitat restoration/enhancement, use only native and local (when possible) seed and plant stock.

**Conservation Measure 3:** Consider creating vehicle wash stations prior to entering sensitive habitat areas to prevent accidental introduction of non-native plants.

**Conservation Measure 4:** Remove invasive/exotic species that pose an attractive nuisance to migratory birds.

**Stressor: Artificial Lighting**

**Conservation Goal:** Prevent increase in lighting of native habitats during the bird breeding season.

**Conservation Measure 1:** To the maximum extent practicable, limit construction activities to the time between dawn and dusk to avoid the illumination of adjacent habitat areas.

**Conservation Measure 2:** If construction activity time restrictions are not possible, use down shielding or directional lighting to avoid light trespass into bird habitat (i.e., use a 'Cobra' style light rather than an omnidirectional light system to direct light down to the roadbed). To the maximum extent practicable, while allowing for public safety, low intensity energy saving lighting (e.g. low pressure sodium lamps) will be used.

**Conservation Measure 3:** Minimize illumination of lighting on associated construction or operation structures by using motion sensors or heat sensors.

**Conservation Measure 5:** Bright white light, such as metal halide, halogen, fluorescent, mercury vapor and incandescent lamps should *not* be used.

**Stressor: Human Disturbance**

**Conservation Goal:** Minimize prolonged human presence near nesting birds during construction and maintenance actions.

**Conservation Measure 1:** Restrict unauthorized access to natural areas adjacent to the project site by erecting a barrier and/or avoidance buffers (e.g., gate, fence, wall) to minimize foot traffic and off-road vehicle uses.

### **Stressor: Collision**

**Conservation Goal:** Minimize collision risk with project infrastructure and vehicles.

**Conservation Measure 1:** Minimize collision risk with project infrastructure (e.g., temporary and permanent) by increasing visibility through appropriate marking and design features (e.g., lighting, wire marking, etc.).

**Conservation Measure 2:** On bridge crossing areas with adjacent riparian, beach, estuary, or other bird habitat, use fencing or metal bridge poles (Sebastian Poles) that extend to the height of the tallest vehicles that will use the structure.

**Conservation Measure 3:** Install wildlife friendly culverts so rodents and small mammals can travel under any new roadways instead of over them. This may help reduce raptor deaths associated with being struck while tracking prey or scavenging road kill on the roadway.

**Conservation Measure 4:** Remove road-kill carcasses regularly to prevent scavenging and bird congregations along roadways.

**Conservation Measure 5:** Avoid planting “desirable” fruited or preferred nesting vegetation in medians or Rights of Way.

**Conservation Measure 6:** Eliminate use of steady burning lights on tall structures (e.g., >200 ft).

### **Stressor: Entrapment**

**Conservation Goal:** Prevent birds from becoming trapped in project structures or perching and nesting in project areas that may endanger them.

**Conservation Measure 1:** Minimize entrapment and entanglement hazards through project design measures that may include:

1. Installing anti-perching devices on facilities/equipment where birds may commonly nest or perch
2. Covering or enclosing all potential nesting surfaces on the structure with mesh netting, chicken wire fencing, or other suitable exclusion material prior to the nesting season to prevent birds from establishing new nests. The netting, fencing, or other material must have no opening or mesh size greater than 19 mm and must be maintained until the structure is removed.
3. Cap pipes and cover/seal all small dark spaces where birds may enter and become trapped.

**Conservation Measure 2:** Use the appropriate deterrents to prevent birds from nesting on structures where they cause conflicts, may endanger themselves, or create a human health and safety hazard.

1. During the time that the birds are trying to build or occupy their nests (generally , between April and August, depending on the geographic location), potential nesting

- surfaces should be monitored at least once every three days for any nesting activity, especially where bird use of structures is likely to cause take. It is permissible to remove non-active nests (without birds or eggs), partially completed nests, or new nests as they are built (prior to occupation). If birds have started to build any nests, the nests shall be removed before they are completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.
2. If an active nest becomes established (i.e., there are eggs or young in the nest), all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied. Construction activities that may displace birds after they have laid their eggs and before the young have fledged should not be permitted. If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, all netting shall be removed and properly disposed of.

**Stressor: Noise**

**Conservation Goal:** Prevent the increase in noise above ambient levels during the nesting bird breeding season.

**Conservation Measure 1:** Minimize an increase in noise above ambient levels during project construction by installing temporary structural barriers such as sand bags

**Conservation Measure 2:** Avoid permanent additions to ambient noise levels from the proposed project by using baffle boxes or sound walls.

**Stressor: Chemical Contamination**

**Conservation Goal:** Prevent the introduction of chemicals contaminants into the environment.

**Conservation Measure 1:** Avoid chemical contamination of the project area by implementing a Hazardous Materials Plan. For more information on hazardous waste and how to properly manage hazardous waste, see the [EPA Hazardous Waste](#) website.

**Conservation Measure 2:** Avoid soil contamination by using drip pans underneath equipment and containment zones at construction sites and when refueling vehicles or equipment.

**Conservation Measure 3:** Avoid contaminating natural aquatic and wetland systems with runoff by limiting all equipment maintenance, staging laydown, and dispensing of fuel, oil, etc., to designated upland areas.

**Conservation Measure 4:** Any use of pesticides or rodenticides shall comply with the applicable [Federal and State laws](#).

1. Choose [non-chemical](#) alternatives when appropriate
2. Pesticides shall be used only in accordance with their registered uses and in accordance with the manufacturer's instructions to limit access to non-target species.

3. For general measures to reducing wildlife exposure to pesticides, see EPA's [Pesticides: Environmental Effects](#) website.

**Stressor: Fire**

**Conservation Goal:** Minimize fire potential from project-related activities.

**Conservation Measure 1:** Reduce fire hazards from vehicles and human activities (e.g., use spark arrestors on power equipment, avoid driving vehicles off road).

**Conservation Measure 2:** Consider fire potential when developing vegetation management plans by planting temporary impact areas with a palette of low-growing, sparse, fire resistant native species that meet with the approval of the County Fire Department and local FWS Office.