

Council for the Conservation of Migratory Birds

2013-2014
Annual Report





Council for the Conservation of Migratory Birds Annual Report

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I. Executive Summary

This report highlights actions taken by federal agencies on the Council for the Conservation of Migratory Birds (Council) to satisfy Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds* (Order). The Council recognizes the important role that the federal government plays in achieving successful bird conservation in our nation. Millions of federally owned acres, combined with millions of actions carried out or permitted by federal agencies annually, translates to a substantial interface between federal agencies and migratory bird resources. Consequently, a federal agency's actions to reduce negative or harmful impacts can have a tremendous positive effect on bird conservation.

The Council surveyed federal agencies in 2011 and 2012 and determined that agency staff would benefit from a heightened awareness of: 1) agency bird conservation responsibilities, 2) how agency actions impact bird populations, and 3) how to avoid or minimize activities that negatively impact birds. In 2013, the Council sought to actively improve the ability of federal agencies to fulfill their responsibilities under the Order by equipping agency staff with conservation knowledge, training, and implementable conservation measures. To assist with agency education

and training needs, the U.S. Fish and Wildlife Service (Service) developed the Migratory Bird Conservation for Federal Partners course. This course is tailored to meet agency-specific compliance needs, increase staff education regarding bird conservation responsibilities, and collaboratively find solutions and paths forward for priority agency migratory bird issues.

The Council also adopted a tri-annual theme to more strategically and productively develop and implement bird conservation solutions. The 2013-2015 Council theme is Facilities Management (defined by the Council as government buildings and associated infrastructure), as recent studies have shown that negative impacts associated with the construction, operation, and maintenance of facilities nationwide (e.g., collisions, habitat impacts, etc.) are a top contributor to bird mortality. Elements of facilities and associated infrastructure that can create bird hazards include artificial lighting, building glass, landscaping practices, land management, communication towers, and power utility infrastructure. Given that all federal agencies lease, own, and/or manage a variety of facilities and infrastructure, the Council decided to emphasize how federal agencies can reduce the occurrence of these hazards to

The Council recognizes the important role that the federal government plays in achieving successful bird conservation in our nation.

In 2013 and 2014, Council agencies determined what facility types will be addressed and identified solutions for reducing those hazards.

birds through implementation of bird-friendly facility management measures. In 2013 and 2014, Council agencies determined what facility types will be addressed and identified solutions for reducing those hazards.

The annual Presidential Migratory Bird Federal Stewardship award celebrates and recognizes those agencies that go above and beyond to evaluate, manage, and reduce hazards to birds. In 2013, the Council presented the Presidential Award to the Department of Defense (DoD) for the “Migratory Linkages of Burrowing Owls (*Athene cunicularia*) on Department of Defense Installations and Adjacent Lands” project. This project used innovative technologies to monitor and track Burrowing Owls to better understand how this declining species uses installations, and how land management actions may benefit Burrowing Owls both on and off DoD lands. In 2014, the Council presented the United State Department of Agriculture’s Animal Plant Health Inspection Service (USDA-APHIS) with the Presidential Migratory Bird Federal Stewardship Award for their “Managing Raptor-Human Conflicts to Promote Safety and Migratory Bird Conservation” project. USDA-APHIS and its partners used the findings from this research to reduce raptor-aircraft collisions

associated with civil airports, military airfields, and military airspace training areas. In addition, the critical information and innovative methodologies provided by this research are now being used in the evaluation and management of other human-raptor conflict situations.

To learn more about the Council and Council activities, please visit: <http://www.Service.gov/migratorybirds/CCMB.htm>

II. Background

Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds* (Order) identifies migratory bird conservation responsibilities of Federal agencies pursuant to the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (the Eagle Act), the Fish and Wildlife Coordination Act, the Endangered Species Act (ESA), the National Environmental Policy Act (NEPA), and other pertinent statutes. Per the Order, “each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations is directed to develop and implement a Memorandum of Understanding (MOU) with the Service that shall promote the conservation of migratory bird populations.” It further states that “each MOU shall establish protocols for implementation of the MOU and for reporting accomplishments.”

The Order established the interagency Council for the Conservation of Migratory Birds (Council) to oversee the implementation of the Order, and identifies four duties for the Council:

1. Share the latest resource information to assist in the conservation and management of migratory birds.
2. Develop an annual report of accomplishments and recommendations related to this Order.

3. Foster partnerships to further the goals of this Order.
4. Select an annual recipient of the Presidential Migratory Bird Federal Stewardship Award for contributions to the protection of migratory birds.

The Council, which consists of 21 federal departments and agencies (Table 1), meets annually and is chaired by the Director of the U.S. Fish and Wildlife Service. A Staff Committee identifies conservation opportunities to meet Council goals, and task-oriented subcommittees research issues and develop products required by the agencies to meet Council objectives.

This report fulfills the requirements set forth in the Order for reporting accomplishments related to the Order and agency MOUs.

Department/Agency	Council Member
Department of Agriculture	--
Animal and Plant Health Inspection Service	William H. Clay
Forest Service	Rob Harper
Natural Resources Conservation Service	Terrell Erickson
Department of Commerce	--
National Oceanic and Atmospheric Administration/NOAA Fisheries	Samuel D. Rauch III
Department of Defense	John Conger
Army Corps of Engineers	Timothy Toplisek
Department of Energy	Andrew C. Lawrence
Department of Homeland Security	Dr. Teresa R. Pohlman
Department of Interior	--
Bureau of Land Management	Neil Kornze
Bureau of Ocean Energy Management	William Brown
Fish and Wildlife Service	Dan Ashe
U.S. Geological Survey	Anne Kinsinger
National Park Service	Jonathan Jarvis
Office of Surface Mining, Reclamation, and Enforcement	Joseph Pizarchik
Department of State	Dan Reifsnnyder
Department of Transportation	--
Federal Aviation Administration	Lynne Pickard
Federal Highways Administration	Gerald Solomon
Environmental Protection Agency	William Jordan
Federal Communications Commission (observer)	Jeffrey Steinberg
Federal Energy Regulatory Commission	Ann Miles

Table 1.
Federal Departments and Agencies Participating on the Council in 2013 and 2014.

III. Goal and Purpose

This report fulfills the requirements set forth in the Order for reporting accomplishments related to the Order and agency MOUs.

This report highlights:

- Agency actions to reduce impacts to migratory birds at federal facilities;
- Agency activities associated with implementation of the Order and associated MOUs for the current year; and
- How agencies use partnerships and outreach to improve bird conservation.



IV. Implementation

Facilities Management

It is estimated that millions of birds die each year due to interactions with manmade structures. Birds collide with buildings, communication towers, and other man-made structures, particularly during fall and spring migration. With continued pressure to meet societal demands for resources, human-caused sources of mortality are expected to increase.

To more strategically and proactively identify bird conservation opportunities, the Council decided to focus on facilities management from 2013-2015. Recognizing that all federal agencies lease, own, and manage a variety of facilities and associated infrastructure and that anthropogenic sources of mortality can contribute to bird population declines, the Council endeavored to identify bird-safe facility management options that reduce impacts to birds. Conservation measures identified focus on manageable sources of bird mortality, such as building glass, communication towers, electric utility infrastructure, and land management actions.

The goals of the 2013-2015 Facilities Management theme are to:

- Identify harmful impacts and hazards to migratory birds associated with any of their facilities and infrastructure;
- Identify clear and achievable solutions to these impacts;

- Educate agency staff of facility management issues and solutions;
- Implement actions to reduce these impacts; and
- Identify policy improvements that could address migratory bird hazards occurring at federal facilities.

In 2013 and 2014, the Council staff committee identified areas where federal facilities and infrastructure were negatively impacting migratory birds, and where agencies could implement effective and cost efficient actions to reduce these impacts. Agencies on the Council expect to implement actions identified to reduce bird impacts at federal facilities where possible within an agency's mandated mission in 2015.

The Council believes that as federal agencies take a leadership role in addressing facility impacts to birds, wider implementation of simple and effective measures to reduce impacts from our nation's infrastructure will become a common practice.

To more strategically and proactively identify bird conservation opportunities, the Council decided to focus on facilities management from 2013-2015.

Building Glass

Mortality Estimate: between 365-988 million birds/year collide with building windows/glass (Source: Loss *et al.* 2014a)

Source of Mortality:

- During the daytime, birds collide with windows because they see reflections of the landscape in the glass (e.g., clouds, sky, vegetation, or the ground); or they see through glass to habitat (including potted plants or vegetation inside buildings) or to sky on the other side.
- At night, birds can be attracted to lighted buildings leading to collisions, entrapment, and exhaustion-related deaths.

Solution:

- Conduct regular monitoring around your building to identify any problem areas.
- Improve visibility of glass to birds through the use of window films, netting, or etching/fritting that have proven results for effectiveness.
- Keep shades or blinds half open during the daytime and closed at night to reduce the mirror effect and light attraction, especially during peak migration periods.
- Move interior landscaping or house plants away from clear glass windows to lessen the illusion by birds of clear air space and safe refuge. If you can see the plants from outside the building at window level, so can the birds.
- Eliminate or reduce unnecessary lighting at night.
- Design new buildings to follow current best practices for bird-friendly design.

Communication Towers

Mortality Estimate: between 6.8 million birds/year collide with communication towers (Source: Loss *et al.* 2012)

Source of Mortality:

- Bird collisions with communication towers increase with tower height, presence of guy wires, and steady burning lights.
- Collisions increase with inclement weather as birds fly at lower altitudes and are attracted to artificial light in low visibility conditions.
- Birds become attracted to the emitted artificial light of communication towers and as they circle the tower they can collide with guy wires or become exhausted.

Solution:

- Attempt to co-locate new antennas on existing towers when possible.
- Build shorter towers.
- Consider building self-supporting towers (i.e., no guy wires).
- Extinguish steady-burning red obstruction lights and use more bird-friendly flashing light alternatives.
- Evaluate tower siting locations to avoid areas with high densities of migrating birds.

Electric Utility Infrastructure

Mortality Estimate: An average of 30 million birds/year are electrocuted at or collide with powerlines (Source: Loss *et al.* 2014b)

Source of Mortality:

- Electrocutions and collisions result from the interaction between bird biology, environmental factors, and structural engineering configurations.
- Birds regularly perch and nest on power poles increasing their vulnerability to electrocution, especially when power poles/structures are prominent features within the landscape.
- Electrocution occurs when birds connect two energized components (i.e., wings touch two adjacent energized components).
- Birds collide with unseen distribution and transmission lines, especially during inclement weather.

Solution:

- Develop an agency Avian Protection Plan to outline an electric infrastructure risk assessment and the steps to implement a proactive "bird-safe" retro-fitting program.
- Follow the Avian Powerline Interaction Committee's best practices for recommendations to reduce collisions and electrocutions at all new and existing electric utility infrastructure.
See <http://www.aplic.org/> to learn about avian safe electric utility infrastructure.

Artificial Light

Artificial light increases the vulnerability of bird fatalities at man-made structures

Source of Mortality:

- Structural lighting can disorient birds during migration, attract birds into hazardous situations, and disrupt light-sensitive cycles, critical to birds.
- Effects of artificial light are increased in inclement weather.
- During low visibility conditions, birds are disoriented by or attracted to lights that may ultimately cause their death from the collision with structures or exhaustion when they circle lights for long periods.

Solution:

- Reduce light pollution at buildings by encouraging all staff to turn off interior building lights at night.
- Eliminate the use of decorative/vanity lighting during bird migration seasons which vary by location (example: mid-March through May and mid-August through October). This includes upward directed spots and floods, and roof-top lighting.
- Arrange to clean Federal buildings during the daytime, saving energy, and reducing light pollution at night.
- Control office lights with timers or motion-sensor devices. This measure may also provide energy savings, and reduce cost to the Federal government.
- Ensure all exterior lighting is "fully shielded". "Fully shielded" is the same as "zero up light" and "dark sky compliant".
- Minimize use of lighting on facility infrastructures (e.g., towers, etc.) - see communication towers.

Land Management

Disturbances to bird habitat can affect birds through direct and indirect impacts

Source of Mortality:

- Federal land management actions may impact migratory birds through the introduction of invasive plants and animals, reducing critical resources required for bird survival and reproduction and through direct killing of birds and nests during vegetation removal.

Solution:

- Work with landscape planners to use the best planting, gardening and horticultural practices for exterior greenery.
- Use native vegetation for landscaping and re-vegetation of disturbed areas.
- Minimize disturbance (e.g., noise) during the breeding season.
- Use disturbed land for appropriate project activities (i.e., siting, lay-down areas, construction).
- Minimize release of chemicals into the environment.

To learn more about impact management, sources of mortality, and recommended conservation measures, please visit: <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>

V. Improving Agency Education Opportunities

To implement the Order and recommended conservation measures at their facilities, agencies require access to more information, tools, and training for staff. To address this increasing need, the Council agencies developed a federal agency-focused training webinar program designed to educate Council agency staff on the science of stressor management (stressor: an addition to or alteration of the landscape resulting in adverse effects). Webinars focused on managing the level of impact to birds from a specific activity; examples exhibited how to avoid and minimize to the maximum extent practicable before advancing to restoration or compensation options. The goal of this training was to reach the appropriate agency staff in an effective and efficient manner to promote a clear understanding of how to address migratory bird impacts, as well as to provide tangible solutions to reduce those impacts.

The second aspect of this training program was to develop the Migratory Bird Conservation for Federal Partners course. This new training opportunity focuses on specific agency needs, including:

- An agency's responsibility for protecting migratory birds and their habitats

- How to use stressor management to identify specific agency-produced impacts
- Use of tools and resources to help implement solutions to avoid or minimize bird impacts
- Specific actions designed to implement an agency's migratory bird protection MOU

MOU Status

The Order provides broad guidelines on conservation responsibilities and requires the development of more detailed guidance in MOUs. However, federal agencies are not required to have a completed MOU with the Service to become a member of the Council. Those who do not have MOUs in place work in partnership on the Council to implement conservation objectives outlined in the Order. For example, staff at the Federal Communications Commission collaborated extensively with the Council to provide conservation solutions for reducing mortality at communication towers.

In 2013, the Department of Energy completed a five-year renewal of their original 2008 MOU. Through the end of 2014, ten MOUs with the Service have been completed in accordance with the Order (Table 2), including the DoD (5-year

“The cooperative goals identified within MOUs often require the exchange of information, tools, and training that will improve agency bird conservation awareness, ability and action...”

renewal) and U.S. Coast Guard. Six additional MOUs are currently being developed, including those with the Environmental Protection Agency; Federal Highway

Administration; Office of Surface Mining, Reclamation, and Enforcement; Federal Aviation Administration; U.S. Customs and Border Protection;

and the U.S. Army Corps of Engineers. As more agencies begin to address their actions by using an MOU as an implementation tool, the Council expects that the responsibilities outlined in the Order will be implemented on a greater scale, improving the protection of migratory birds nationwide.

Presidential Award

The Presidential Migratory Bird Federal Stewardship Award annually recognizes a single project or action conducted by or in partnership with a Federal agency that meets the intent and spirit of the Order by benefitting migratory bird conservation. Actions may involve reducing adverse impacts to migratory birds and their habitats, restoring or enhancing migratory bird habitat, and incorporating conservation of migratory birds and their habitat into agency plans, guidance, or other activities. Winning projects demonstrate innovation, successful partnerships and effective results in migratory bird conservation. They also demonstrate leadership in inspiring and assisting others

to further migratory bird conservation (e.g. developing and implementing best-management practices, a policy action, or research). The action should demonstrate leadership by inspiring others to further migratory bird conservation. This could include, but is not limited to, developing and implementing conservation measures, a policy action, or research.

2013 Presidential Migratory Bird Federal Stewardship Award

In 2013, DoD’s “Migratory Linkages of Burrowing Owls (*Athene cunicularia*) on Department of Defense Installations and Adjacent Lands” project was the recipient of this prestigious Presidential award. Burrowing Owls are commonly found on DoD installations in the Western U.S. Using a combination of stable isotopes, blood samples, and radio telemetry, DoD was able to better understand how Burrowing Owls are using the landscape both on and off DoD lands.

This study provided a landscape-scale view of movements among Burrowing Owl populations, which will allow conservation managers to direct efforts appropriately. The results provide insight into how the rapid land-use changes occurring in arid areas of the Southwestern U.S. and northern Mexico are likely to influence the distribution of owls in the future, as well as how DoD installations may become

Department/Agency	Date MOU Signed
Department of Agriculture	
Animal and Plant Health Inspection Service	August 2012
Forest Service	December 2014 (renewed)
Department of Commerce	
National Oceanic and Atmospheric Administration/NOAA Fisheries	July 2012
Department of Defense	July 2014
Department of Energy	September 2013 (renewed)
Department of the Interior	
Bureau of Land Management	April 2015 (renewed)
Bureau of Ocean Energy Management	June 2015 (renewed)
National Park Service	April 2010
Federal Energy Regulatory Commission	March 2011
U.S. Coast Guard	August 2014

Table 2.
MOUs signed with Fish and Wildlife Service as directed by the Order.

more important refugia for this species. This information is an important component of DoD's natural resource management goals because it will help identify the management role of DoD installations for conserving Burrowing Owls in the U.S, which may help further conservation efforts for a species in decline.

2014 Presidential Migratory Bird Federal Stewardship Award

The United State Department of Agriculture's Animal Plant Health Inspection Service (USDA-APHIS) Managing Raptor-Human Conflicts to Promote Safety and Migratory Bird Conservation project was the 2014 recipient of the Presidential Migratory Bird Federal Stewardship Award. With the help of their partners, USDA-APHIS conducted a national program with the goal of reducing human-wildlife conflicts associated with raptors, including many species of conservation concern. Most raptor-human conflict management issues addressed by the agency involved a high profile human health and safety issue, such as collisions between birds and aircraft. Bird-aircraft collisions are both costly and deadly; therefore, this agency has undertaken significant efforts, within the United States and at military bases in foreign

nations, to reduce the frequency and severity of bird-aircraft collisions involving raptors. These birds were removed from dangerous environments (i.e., airports and military airfields) when they are at risk for collisions with aircraft and relocated to areas without this risk of mortality. During 2004–2013, over 13,700 individual raptors (representing at least 32 different species) were successfully live-trapped and relocated away from the environment where the conflict was occurring and the birds and other resources were at risk. Notably, approximately 5% (more than 650 individual birds) that were managed during these situations were species of concern, such as short-eared owls (*Asio flammeus*), golden eagles (*Aquila chrysaetos*), and Mississippi kites (*Ictinia mississippiensis*). Although the findings from this research have been used predominantly by agencies and entities involved in reducing raptor-aircraft collisions associated with civil airports, military airfields, and military airspace training areas, the critical information and innovative methodologies provided by this research are being used in the evaluation and management of other human-raptor conflict situations (e.g., wind energy facility development).

V. Council Survey

“I placed marker stakes around a killdeer nest at our new office to avoid it from being run over. As a result all 4 chicks fledged”

In seeking opportunities that increase the ability of federal agencies to meet the intent of the Executive Order, the Council facilitates progress and implementation of federal agency responsibilities, as defined by the Order. The order broadly defines federal agency responsibilities as five distinct elements:

1. Policy and Planning
2. Conservation Actions
3. Partnerships
4. Bird Conservation Training
5. International Conservation

The Council issued a self-assessment questionnaire in 2011, 2012, and 2014 that addressed these five elements. This survey

was distributed nationwide to determine how each agency’s staff perceived their ability to implement the Order, and for the first time, included questions pertaining to the Council’s 2013-2015 theme, Facilities Management. In 2014, the survey evolved to include additional questions designed to obtain information on how federal agencies on the Council address

the production of federal facility-related negative impacts to birds.

Results of the survey are used to assist the Council in defining perceived gaps in bird conservation knowledge, skills, and abilities across Council agencies. These gaps can then be addressed by: 1) creating or improving resources to serve as job aids, tools, and training; 2) improving communication routes through agency in reach and outreach; and, 3) increasing staff access to existing resources. Responses collected through the survey on how federal agencies are currently addressing impacts on the tri-annual theme are shared in a number of Council products (including this report) in an effort to reward good work; as well as foster ideas and incentivize others within, across, and even outside of Council agencies to implement similar initiatives and practices.

Results

The survey consists of a cross-sectional study, which collects data from a representative subset of a population at one specific point in time. Base assumptions associated with this survey are that the same individuals are not sampled from year to year, and therefore, results cannot be used to observe a pattern or trend over time. Rather, this survey obtains snapshots of agency perception to advise where the Council should best direct concerted effort.

A total of 943 individuals from 16 different agencies responded to the survey. Overall, scores within the five distinct elements of agency responsibilities fell within the level

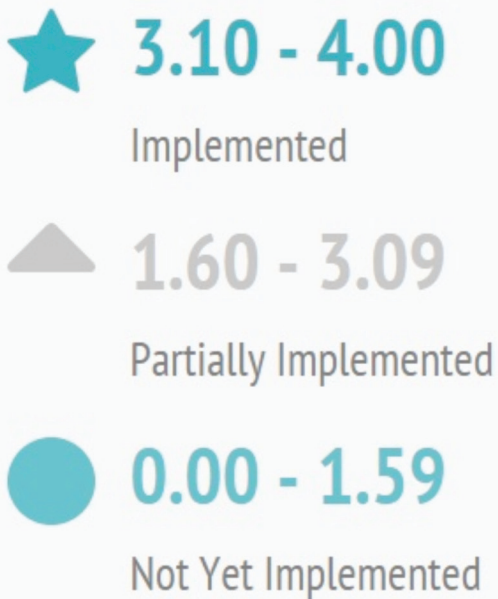


Figure 1- Levels of Implementation (based on mean scores in aggregated results of survey questions)

of perceived implementation, according to levels agreed upon by the Council (see Figure 1).

In 2014, agency staff perceived they were the strongest in Policy and Planning, and weakest in the areas of International Conservation and Bird Conservation Training.

The results also indicated that approximately 70% of people who participated in the survey were aware of their MOU status with FWS. Agency staff awareness of MOU status and content is critical to successful agency implementation of bird conservation actions, as federal employees can access tools, conservation measures, and solutions within their MOU. MOUs can also provide clarity regarding an agency's communication protocols with FWS. Alternatively, federal employees who are aware their agency has not yet developed an MOU with FWS may be able to identify the need for one when necessary. The Council views this awareness as an important part of its outreach efforts, and makes an effort to promote the content and intent of MOUs with agency staff.

The majority of respondents revealed they give equal consideration to both birds and bird habitat in their planning processes. Targeting conservation of both birds and the habitats upon which they depend is crucial to effectively addressing anthropogenic impacts and maximizing conservation opportunities.

FEDERAL FACILITIES MANAGEMENT SURVEY RESULTS

With the advent of the Council 2013-2015 theme, the 2014 survey included new questions aimed at obtaining information on how each federal agency addresses the production of federal facility-related impacts to birds. Questions focused on two broad categories of information: (1) the types of guidance federal employees receive from their agencies and FWS on minimizing the production of facility-related impacts to birds; and (2) the types of guidance federal employees implement that minimize facility-related impacts to birds. Participants were given the option to choose from existing guidance provided by FWS or to write in their own guidance as responses. The goal of these questions was to assess the overall use of existing guidance, and discover new sources to add to the existing knowledge base.

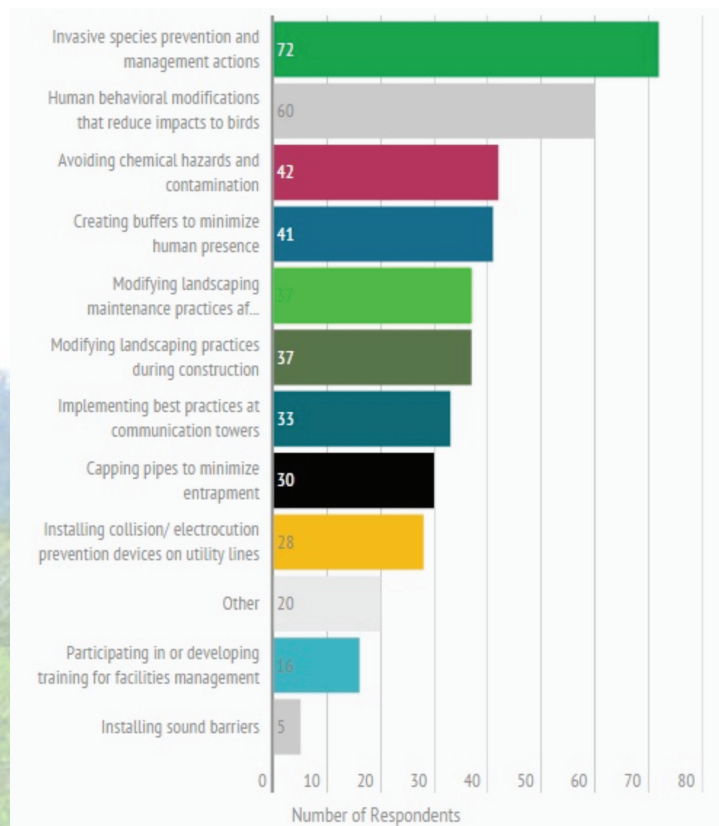


Figure 2-Number of Survey Respondents Implementing Various Bird Impact-Reduction Strategies at Federal Facilities

About 22% of the survey respondents had received guidance from their agency on reducing Federal facility-related impacts to birds. Information was

distributed through webinars, guidance documents, and informal communication. About 20% of the survey participants indicated that they implement measures to reduce the production of facility-related impacts, regardless of whether they received guidance or not. Impact-reducing actions were characterized in the following categories, with their usage ranked above.

In the 'other' category, participants were given the option to submit an implementation method not listed in the available categories. Other strategies submitted included nest marking to avoid destruction during building construction, creating a nest hotline to report nests found during building construction, taking steps to ensure that fireworks and spectators do not disturb bird nesting and foraging activities, and installing reflection-reducing film onto windows to reduce bird collisions with buildings.

DISCUSSION AND CONCLUSIONS

The categories of Policy and Planning, Conservation Actions, and Partnerships received the higher scores amongst the five categories in 2014. While cross-sectional studies do not reliably yield pattern data, higher values were also obtained in all five categories than in previous years. These higher values in overall scores may reflect a greater level of perceived importance of federal staff awareness of responsibilities, an awareness of natural resource information available to help meet migratory bird conservation responsibilities, or even an overall higher perception of the integration of migratory bird conservation into planning, implementing, and collaborating within existing federal processes. While the higher scores this year might reflect an improvement from past years, analysis was focused on within year patterns of variability.

The scores for the categories of Bird Conservation Training and International Conservation revealed that the Council still needs to improve in these areas. In response to this opportunity for improvement, the FWS has offered the Migratory Bird Conservation course to federal partners throughout the nation 7 times in 2013 and 2014. This very popular course is customized to agency scenarios to ensure that participants understand their legal responsibilities for bird conservation. Participants receive current information and job aids to assist them in implementing effective bird conservation strategies. They also have the opportunity to provide feedback to further improve the course's efficacy.

The survey also revealed that agencies that have low to moderate mandates for bird conservation, and even those with no mandates, scored highly in the areas of Policy and Planning, Conservation Actions, and Partnerships. The agency mission rankings were originally developed as a way to provide more consistency and objectivity in the scoring of the categories used for the Presidential Migratory Bird Federal Stewardship Award, and were established with input and agreement from the full Council Staff. The rankings represent the degree to which each agency's mission directly involves the protection and conservation of migratory birds and migratory bird resources. This is an important distinction for these agencies, as even those agencies with no or a low to moderate mission involving migratory bird conservation appear to go above and beyond that of what is expected, which adds tremendous benefits to bird conservation overall (see Figure 4 below).

While the higher scores this year might reflect an improvement from past years, analysis was focused on within year patterns of variability.

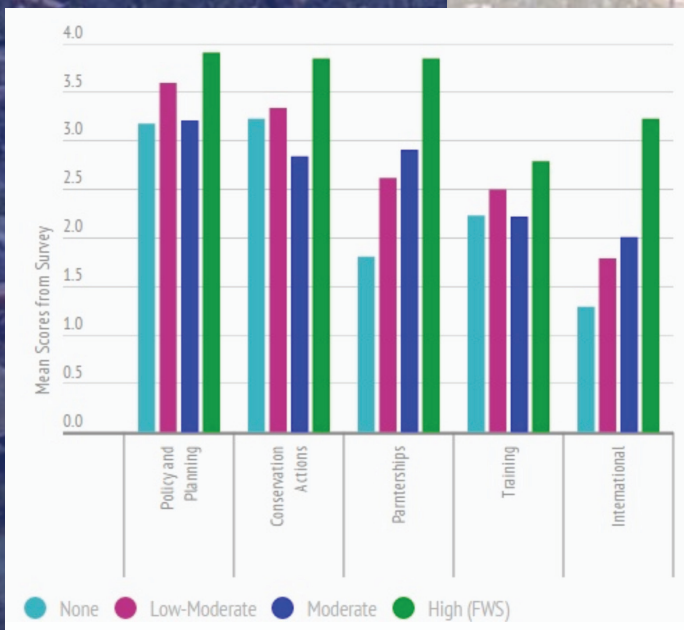


Figure 3-Mean Scores from Survey by Agency Mission Rankings

★ 72%

How often Council staff distributed facilities management information to conserve birds.

👤 21%

How often federal employees stated they implemented actions that reduce the production of Federal facility-related impacts to birds.

▲ 42%

How often implemented conservation actions were based on guidance received.

Figure 4- Federal Facilities Management Information Distribution and Implementation among Agencies

FEDERAL FACILITIES MANAGEMENT DISCUSSION

In 2013, the Council began to focus on specific areas where agencies can take actions to improve bird conservation within their mission and at their federal facilities. The survey revealed that a wide variety of actions that reduce federal facility-related impacts to birds are currently being implemented, the most prevalent of these being invasive species management (see Figure 2). The survey results also revealed that the Council is distributing information that describes measures to reduce facility-related impacts to birds, but that it can improve in how frequently this information is implemented (see Figure 4 above).

Therefore, developing and improving existing guidance for optimal use by staff became a goal of the Council. In 2014, the Council's Conservation Measures Subcommittee developed guidance on various types of Federal Facilities Management measures for distribution to the Council. The Council will continue to assess the need for new measures, and improve upon guidance where needed. As this effort progresses, the Council expects the level of implementation of actions that reduce the production of federal facility-related impacts to birds to rise.

This survey will continue to be used as a way of obtaining snapshots in the future of agency perception of how the federal family is implementing the Order. The intention of the survey is to obtain the most accurate information on: (1) awareness of federal agency staff of their migratory bird responsibilities; (2) awareness of information available to them to help meet these responsibilities; and (3) the extent to which they are using the resources made available to them to influence positive changes in behavior and actions for migratory bird conservation.

Some comments received in response to the survey reflected the need to modify some of the existing questions so that they become more interactive for the survey participant, and improve in ease of comprehension. Therefore, the Council will use this helpful feedback, and assess each question before issuing a survey for 2015.

VI. SubCommittee Updates

The Avian Resources Subcommittee continues to address the Council's data management and decision-support needs.

Subcommittees are established by the Council to complete work required by the Council Charter and to help meet conservation needs expressed by federal agencies. Subcommittees are staffed almost exclusively by Committee staff, although members can recruit additional agency personnel to provide specific agency expertise.

Avian Resources

The Avian Resources Subcommittee continues to address the Council's data management and decision-support needs. Many agencies on the Council require access to reliable bird population and habitat data to inform land management decisions, best practices for federal actions, and NEPA analyses. In addition, several agencies on the Council have bird monitoring programs in place, and can share

based options that could help agencies protect current investments through proper data management, storage, and archiving. In 2013, the Subcommittee began working with partners to scope the development of an online inter-agency data network that would enable agencies to protect data investments with secure storage and archiving and access more avian data and tools to inform impact analyses and land management decisions. In 2014, the Subcommittee began actively engaging Council agencies in conversations about the further development of an existing avian data sharing network called the Avian Knowledge Network (AKN) and integration of that system with an evolving U.S. Fish & Wildlife Service decision support tool called the Information for Planning and Conservation (IPaC) system. The proposal included the following objectives: (1) establish a nationwide node of the AKN to enable Council agencies to more easily collect, access and share the best available avian data on several scales across the country; (2) offer a number of customized analysis and viewing options for that data through the AKN; and (3) enable integration of AKN data into the IPaC system to improve the strength and utility of the information delivered through that tool.



American Robin.
Photo Credit: Eric Kershner

these data to strengthen the Council's avian knowledge base. In 2012, the Avian Resources Subcommittee explored internet-

Conservation Measures

The Conservation Measures subcommittee facilitates bird conservation excellence by seeking and distributing sustainable solutions for bird conservation to Council Agencies. While several Council agencies have the ability to directly benefit bird populations and habitats through land management practices, the primary benefit most federal agencies can provide is through the reduction of avian impacts associated with federal decisions. Conservation measures are the primary method to reduce impacts and can be integrated into and implemented through agency plans and guidance. In 2012, the subcommittee amassed a repository of easily implementable and effective bird conservation practices. In 2013, the subcommittee continued to build this repository by identifying existing and adding new conservation measures, as well as others under development. A growing compendium of avian conservation measures is now linked with other avian conservation resources, such as guidance documents and decision support tools to

the Council for the Conservation of Migratory Birds webpage for direct and easy access by Council agencies. The subcommittee also continues to work toward sharing these conservation measures through a Service tool known as the Information for Planning and Conservation (IPaC) system, that automates conservation measures delivery based on information about project location, activity and species presence. The Conservation Measures subcommittee continues to work closely with the Avian Resources subcommittee to facilitate delivery of best available avian conservation resources like conservation measures, bird survey/occurrence data, and decision support tools to federal agencies and others in a variety of easy and convenient ways.



APHIS is a multi-faceted agency with a broad mission area that includes protecting and promoting U.S. agricultural health, regulating certain genetically engineered organisms that may pose a risk to plant health, administering the Animal Welfare Act and carrying out wildlife damage management activities.

Department of Agriculture **Animal and Plant Health Inspection Service**

<http://www.aphis.usda.gov/wps/portal/aphis/home/>

APHIS's policy is to identify, conserve, and protect fish and wildlife populations and habitat on property owned or operated by the Agency and consult with the FWS and state fish and game agencies in developing, implementing, managing, and evaluating plans for fish and wildlife management, as appropriate.

Facilities Management Highlights

APHIS has considered facilities management at several office buildings, including the previously leased and now GSA-owned headquarters building in Riverdale, Maryland. An agency-wide email was distributed entitled "Things that Go Bump" that provided employees with 7 easy steps that they could incorporate into their daily activities at home or the office. In addition, APHIS is developing a study to quantify the number and species of birds hitting the Riverdale building throughout the year. Upon completion, APHIS will make recommendations to the APHIS Administrator and Facility and Conference Services staff regarding the most effective conservation measures that we can implement to prevent bird strikes at this location.

Conservation Actions and Partnerships

APHIS' strong partnerships with State and Federal agencies, non-governmental organizations, and private entities enable it to carry out conservation actions benefitting migratory birds during and outside of the breeding season. Conservation action focal points include research, relocation, and predator management. APHIS actions have contributed to the promotion of species reintroductions such as the Peregrine Falcon (*Falco peregrinus*) in areas of Missouri through the use of GIS technology to aid APHIS wildlife experts in analyzing data and making sound management decision. In Maine and New Jersey, APHIS assisted with the relocation of Osprey (*Pandion haliaetus*) nests to ensure nest success. Through predator management activities, each fiscal year APHIS contributes to the conservation efforts of approximately 162 federally-listed threatened and endangered species, 25 of which are bird species.

In support of the One Health concept, and in accordance with Homeland Security Presidential Directives 8 and 9, APHIS created the National Wildlife Disease Program (NWDP). NWDP, administered through the



Dave Sinnett (left) and Terry Smith (right), APHIS Wildlife Services, conducting AI sampling of snow geese in Greenland. Dave Sinnett is holding the first confirmed Ross's goose in Greenland. *Photo Credit: USDA APHIS Wildlife Services.*

National Wildlife Research Center, is the only comprehensive, nationally coordinated system in the United States capable of conducting disease surveillance and emergency response for diseases of concern in wildlife. The strategy of the NWDP is based on a strategic premise that safeguarding the health of humans, animals, and ecosystems makes it possible for safe agricultural trade, and reduces losses to agricultural and natural resources. NWDP also provides early warning for the emergence and introduction of zoonotic disease that have the potential to cause epidemics or pandemics in humans as well as domestic and wild animals. NWDP has conducted surveillance for more than 100 pathogens, toxins, and syndromes across the country and world. The success of NWDP is attributed to its strong partnerships with USDA Foreign Agricultural Service, U.S. Department of Interior (DOI), Health and Human Services, Homeland Security, and State Agriculture, Wildlife, and Human

Health Agencies. Additionally, NWDP has built relationships with more than 30 foreign government agencies including Canadian, Mexican, Chinese, and Russian Agriculture, Health and Natural Resource Agencies, and with international organizations such as FAO, OIE, Wildlife Conservation Society, Wildlife Trust, Wetlands International, and Chinese Academy of Sciences. Building collaborations with these domestic and foreign government agencies and nongovernmental organizations has been critical in the development of NWDP's internationally recognized programs such as the Interagency Highly Pathogenic Avian Influenza (HPAI) Early Detection System for Wild Birds, Canada-U.S.-Mexico Trilateral HPAI Surveillance System, U.S.-China Joint Wildlife Disease Surveillance and Research Program, Plague and Tularemia Surveillance and Early Warning System, and Feral Swine Comprehensive Disease Surveillance Program.



Avian Influenza sampling of Common Eiders. *Photo Credit: Lucas Savoy, Biodiversity Research Institute*

Highly Pathogenic Avian Influenza

As a direct result of the collaborations established by the HPAI early detection system, FWS and APHIS worked together to investigate a seasonally recurring die-off of common eider sea ducks (*Somateria mollissima*) on Cape Cod, MA beginning in 2008. Occurring in close proximity to a major sea duck over-wintering and migratory staging area in Nantucket Sound, the die-off caused concern about population-level impacts to migratory waterfowl. Additionally, there was concern whether this newly discovered virus could become a threat to poultry and the nation's food supply.

APHIS has coordinated field efforts during the past two years to capture and fit year-round resident common eiders from MA with global positioning system (GPS) transmitters in an effort to understand where these birds might

be exposed to the virus. This information was mapped and used to identify areas important to the year-round resident MA common eiders. Besides providing clues about where the birds acquire the virus, it also indicates where habitat management might become important for common eider population management. Further studies mapping common eider movements will take place in 2015, and collaboratively, USFWS and APHIS will lead the effort for more transmitter fittings in MA common eiders. APHIS will also assist in serology surveys of the MA resident common eiders to determine if the virus is persisting or changing over time in this population.



Mission: The mission of the USDA Forest Service is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.

Department of Agriculture

U.S. Forest Service

<http://www.fs.fed.us/biology/wildlife/index.html>

The Forest Service (USFS) manages approximately 193 million acres of national forests and grasslands. The lands—important habitat for hundreds of species and millions of birds—are the largest amount of breeding bird habitat managed by a single agency or landowner within the U.S. In addition to managing habitats, the USFS is providing a science-based foundation for conservation actions through its Research and Development Branch. The USFS State and Private and International Programs Branches contribute to our “all-lands” approach to migratory species management, recognizing the shared responsibility for many of these species.

Facilities Management

The USFS is working on a multitude of facility projects to mitigate their impact on bird species. USFS leadership has acknowledged that pipe mortality is a serious issue and has committed to implementing a phased response that includes assessment of the scope of uncapped pipe hazards, review of existing policies and procedures, monitoring of metrics to gauge progress, and collaboration with Federal and State agencies to reduce this

impact. Additionally, the USFS is assessing their contract with vault toilet manufacturers so that all new structures can be adequately capped.

In order to aid facilities management practices in the field, the USFS National Technology & Development Program publishes “Tech Tips” which provide thorough guidance on responsible usage and maintenance on various facilities and equipment. One of the recent Tech Tips instructs forest managers on how to install exclusion vents (pipe caps) on existing vault toilets to exclude birds.

Plastic netting used in Erosion Control Matting products have been found to entangle wildlife, including reptiles, amphibians, birds, and small mammals contributing to their mortality as well. The USFS has acknowledged the issue and is currently researching methods to resolve this problem. Additional knowledge is needed on species risk, entanglement/entrapment, and mortality on National Forest System and other public lands to inform decision makers on the scope and severity of the issue and to develop sound alternatives.



Harlequin ducks taking flight. Chugach National Forest, Cordova, Alaska. *Photo Credit: USFS*

Policy and Planning

Similar to other land management agencies, the USFS has policies on migratory bird conservation in accordance with the MBTA, Executive Order 13186, and MOU with the FWS. USFS forest plans contain direction which includes guidance for conservation of migratory birds. This may be in regard to snag retention in managed habitats, limited operating periods for projects that could occur during the breeding season, buffer areas for active nests, and other species-specific guidance for listed and sensitive bird species. USFS also has accomplishments for providing exit ramps on developed waters so birds can escape. Some units are providing nest boxes for songbirds and small raptors to promote recruitment. Federal law, regulation and policy provides the structure for regional based training which provides local guidance for implementing bird conservation actions and associated documentation.

Conservation Actions

The USFS takes an integrated and collaborative approach to bird conservation. Throughout the USFS, and in alliance with our many partners, we develop or employ many new technologies for bird conservation efforts. The USFS is working with partners to develop and implement the Western Hummingbird Partnership (WHP), which addresses hummingbird conservation

issues in western North America. WHP is a sustainable hummingbird conservation program that focuses on science-based monitoring, research, habitat restoration/enhancement, and education/outreach efforts. WHP goals are to support projects, develop programs, and build partnerships that investigate what hummingbirds need to survive, successfully reproduce, and maintain thriving populations. This can be used to inform land managers, policy makers, and the public so habitats can be managed in ways that help hummingbirds and their communities thrive.

Partnerships

The USFS has actively pursued means of internal and external outreach relating to the responsibilities of the agency to conserve birds and ways the agency can implement bird conservation strategies. USFS personnel participate and provide leadership in collaborative efforts through numerous bird conservation initiatives and partnerships such as the Council for the Conservation of Migratory Birds, North American Bird Conservation Initiative, Joint Ventures, Wings Across the Americas, Waterbird Conservation for the Americas, and International Migratory Bird Day. USFS employees are active partners in local and regional conservation efforts and outreach activities across the country and internationally.

Collectively, these efforts assist the USFS in protecting, conserving, and restoring migratory bird habitats and populations on millions of acres of the nation's forests and grasslands and by extension providing economic benefits and quality environments in rural communities across the Americas

International Conservation

The USFS works with many partners here in the U.S. and overseas to conserve habitats and populations of birds as part of a program called "Wings Across the Americas". Over 350 bird species found on National Forests migrate to Latin America and the Caribbean each year. Wings across the Americas invests in international conservation and uses USFS expertise to improve bird conservation at home and abroad. Federal dollars are leveraged through partnerships with other agencies, conservation Non-government Organizations (NGOs), local communities and private/ corporate sources—in the U.S. and abroad—to ensure long-term sustainable projects that benefit birds throughout their range.

The Cooper River International Migratory Bird Initiative is a program established by the USFS International Programs, along with the Pacific Northwest Research Station, the Chugach National Forest and Ducks Unlimited, and Ducks Unlimited of Canada. This initiative links efforts of the Copper River Delta with conservation work along the Pacific Flyway critical for various bird species. Cooperating with counterparts at key domestic and international sites, the initiative works to improve wildlife resources along the entire flyway.

On March 12, 2015, U.S. Forest Service employees and their partners were recognized for their outstanding work in the conservation of birds, bats, butterflies, and dragonflies. Cindi West, the Associate Deputy Chief for Research and Development, U.S. Forest Service, presided over the 2015 Wings Across the Americas Conservation Awards ceremony. The festive event was held as part of the 80th North American Wildlife and Natural Resources Conference in Omaha, Nebraska.

The 2015 recipients for bird conservation included:

The **Habitat Management and Partnership Award** went to Central and Southern Great Plains Migratory Bird Habitat Conservation. For more than two decades, the Rainwater Basin and Playa Lakes Joint Ventures have worked with partners to manage 200 million acres of native grassland, wetland, river and stream habitats for many important bird species across Nebraska, Kansas, Colorado, New Mexico, Oklahoma and Texas. Through public-private engagement, the nearly 70 conservation organizations and government agencies involved in the Joint ventures have leveraged funding, addressed regional planning and landscape design, developed outreach and promotional materials, and collaborated with landowners to conserve the region's bird species.

The **Bird Conservation Award** went to the Puerto Rican Parrot Recovery Milestone, to celebrate the wild breeding of Puerto Rican Parrots in a new area of the island. Partners include El Yunque National Forest, the U.S. Fish and Wildlife Service's Puerto Rican Parrot recovery program, Puerto Rico Department of Natural and Environmental Resources and private partners. Their work has laid the foundation for future parrot population growth and for managing human use conflicts.

The **Latin American Reserve Manager Training Program (RESERVA)** was awarded in the **International Cooperation** category. Started in 1989, the program was the first internationally focused, hands-on, protected area training program in Latin America. RESERVA graduates manage habitats throughout Latin America that are vital for migratory species that breed on U.S. national forests and grasslands and winter south of our borders. To date, RESERVA has graduated 458 professionals, representing 23 Latin American countries & several from 5 countries outside the region.



Department of Homeland Security

U.S. Coast Guard

<http://www.uscg.mil>

Mission:

The United States Coast Guard has eleven statutory missions which are: Ports, Waterways, and Coastal Security (PWCS), Drug Interdiction, Aids to Navigation (ATON), Search and Rescue (SAR), Living Marine Resources (LMR), Marine Safety, Defense Readiness, Migrant Interdiction, Marine Environmental Protection (MEP), Ice Operations, and Law Enforcement (LE).

Many USCG missions provide direct or indirect benefits to migratory birds. The PWCS, Defense and ATON missions provide waterways security and protection to our marine and inland river waterways and terrestrial shorelines and wetlands, which provides and protects key habitat for migratory birds. The PWCS and Defense missions include the prevention and disruption of terrorist attacks and promote national security. ATON systems assist the navigators by reducing the potential for ship groundings that could result in cargo release and adverse environmental impacts to birds and their habitat. The MEP mission not only helps prevent but also responds to oil spills and releases of hazardous substances which helps protect migratory birds and their habitats. The LMR and LE missions enforce important environmental laws/fisheries laws applicable at sea and protect our marine natural resources including protecting fisheries from depletion thereby securing a food source for migratory seabirds and promotes the enforcement of seabird bycatch avoidance gear regulations on commercial fisheries.

USCG is working in collaboration with the FWS to develop and implement an MOU Regarding Implementation of Executive Order 13186, "Responsibilities

of Federal Agencies to Protect Migratory Birds". The USCG is already implementing and starting many of the USCG action items committed to in the draft MOU including: preparing a detailed spreadsheet characterizing the USCG's major aids to navigation most likely to pose affects (with regard to their light characteristics) to migratory birds for FWS analysis, a comprehensive review/biological evaluation of all ATON maintenance actions and their affects to ESA listed species (including listed birds) and the updating and revision of many of our policies implementing the requirements of laws that assist in the protection of migratory birds.

Facilities Management

USCG TRACEN CAPE MAY

The USCG Training Center in Cape May, New Jersey established the first USCG Integrated Natural Resources Managements Plan (INRMP). The USCG is not required by the Sikes Act to develop INRMPs for its facilities; however, the USCG decided to develop an INRMP for one of its facilities, Training Center Cape May, to ensure conservation of its Piping Plover and Least Tern (*Sternula antillarum*) populations and their habitats. Least Terns are listed as endangered and Piping Plovers are listed as threatened;



FWS Kodiak. Photo Credit: Eric Kershner

both species are considered migratory birds. TRACEN Cape May is located at the southern tip of Cape May County, New Jersey. The Installation comprises approximately 300 acres of land managed by the USCG. Its location at the southern tip of the Cape May Peninsula is ideally situated as a “jumping-off” point for migratory birds during spring and fall migrations. This geographical advantage combined with a large network of wetlands, mudflats, and beaches provide exceptional habitat for migratory birds.

USCG Tracem Cape May coordinates closely with the Endangered and Non-Game Species Program for the State of New Jersey on all its activities that could potentially impact birds. The TRACEN actively participates in the protection of migratory birds during the nesting season for the endangered Piping Plover to include: nest location and monitoring, the construction of predator exclusion devices, predator control during off season, and annual reporting of nesting success or failure. TRACEN CAPEMAY provides similar protections (minus the predator exclusion devices) for the American Oystercatcher (*Haematopus palliatus*), not listed as endangered, but a species of concern. Also,

TRACEN CAPEMAY shuts its beach down to all activities, except for monitoring and security patrols, during the nesting season. TRACEN Cape May announces the shutdown of the beach within its property to all activities through publication in the local newspaper and by posting notices to the public by the public entrance to the access path leading to their beach.

The USCG Air Station Cape Cod (ASCC) Natural Resources Management Plan – The USCG is developing a Natural Resources Management Plan (NRMP) for the ASCC. Due to the presence of an active airfield on ASCC, the management of wildlife hazards is critical. One of the goals of the NRMP is to identify activities that may cause impacts to migratory birds and develop recommendations for minimizing these impacts. A key goal of the NRMP will be to conduct site-specific surveys of local populations, risks, and interactions over the next five years. The USCG will utilize that baseline data to study the effects of different management regimes on bird populations. If new research or site specific-data provides support for modified operations such as alternative mowing regimes or prescribed burning that benefit both wildlife and flight

safety, the USCG will take these findings into consideration and implement modifications.

Policy and Planning

The Natural Resources Management, COMDTINST M5090.3 (series). M5090.3 (series) is the USCG's policy and procedures for Natural Resources Management. This policy is currently being rewritten to provide updated policy on compliance with Natural Resource laws including ESA, MBTA, and the Eagle Act. The USCG just recently updated and reissued its Commandant Instruction 16004.2 (series), Coastal Zone Management, Federal Consistency Procedures. Coastal Zone Management Act compliance is important in the protection of important coastal habitat that benefit Federal trust species, including migratory birds. The USCG NEPA Manual, COMDTINST M16475.1 (series), Implementing Procedures and Policy for Considering Environmental Impacts is currently undergoing revisions that will add more specific guidance on MBTA and NEPA. The USCG

just issued its revised Commanding Officer's Environmental Guide (December 2013) which includes updated information on the requirements of MBTA.

Bird Conservation Training

The Natural Resources Management, USCG sponsored Nationwide MBTA and Eagle Act training in 2013. The USCG partnered with FWS to develop an MBTA compliance training course to offer to USCG nationwide. The USCG-specific FWS-taught MBTA course was piloted at USCG Headquarters on March 26-28, 2013. The USCG also held the training in Miami, FL on July 30-August 1 and in Seattle, WA on August 12-14, 2013 for USCG operators and environmental staff. Training operators and environmental staff in MBTA will help ensure compliance with the laws that protect migratory birds. USCG plans to offer this course nationwide every 2-3 years.



*Department Mission:
To provide the forces needed to deter war and to protect the security of our nation and its people.*

*Natural Resources Mission:
To enable the Defense mission by sustaining the natural resources required for readiness activities.*

Department of Defense

<http://www.denix.osd.mil/nr>

www.dodnaturalresources.net www.dodpif.org

The DoD Natural Resources (NR) Program works to ensure that DoD's soldiers, sailors, and air personnel have continued access to the land, air, and water resources needed for realistic military testing, training, and operational activities. DoD accomplishes this goal by preparing installation Integrated Natural Resources Management Plans (INRMPs), planning documents that outline how each military installation with significant natural resources will manage those resources. INRMPs are fully coordinated with military operations and all on-installation management plans, as well as with FWS and state wildlife agencies. All bird conservation activities described in a given installation's INRMP fully support and often exceed the stewardship goals and obligations as expressed in the Migratory Bird MOU and Executive Order 13186.

Facilities Management

DoD regularly implements a wide variety of facilities management programs and tools to benefit bird conservation, including deterring birds from airfields and hangars to prevent bird strikes, and retrofitting power lines to prevent bird electrocutions. For example, the Navy identified power pole configurations that were resulting in high levels of

electrocution of raptors, corvids, and other low-flying species at several facilities. Consequently, personnel retrofitted these poles to avoid continuing impacts to birds, and are now working to reduce electrocutions of Red-tailed Hawks (*Buteo jamaicensis*) and Peregrine Falcons at the immediate base of poles that had not previously been identified as a hazard. Based on the results of surveys funded in FY12 and coordination with FWS, the Navy will be retrofitting high priority power poles specifically to protect at-risk bird species, including for eagles and Ospreys.

Policy and Planning

The DoD NR Program Instruction and accompanying Manual describe requirements for managing natural resources on lands managed or controlled by DoD, describe procedures for developing and implementing effective natural resources management, and establish metrics to evaluate those programs across seven focus areas. The Sikes Act authorizes DoD to conserve and rehabilitate natural resources on military installations. DoD also must comply with federal statutory and regulatory requirements, Executive Orders, and Presidential memoranda.

The *Strategic Plan for Bird Conservation and Management on DoD Lands* identifies actions that support the military mission while working to secure bird populations across DoD's 28 million acres.

Conservation Actions

DoD has invested significant resources in bird conservation activities, including \$462.5 million on listed bird species alone (FY1993-FY2014), not including the significant bird monitoring and conservation activities that have been funded through DoD's Strategic Environmental Research and Development Program, Environmental Security Technology Certification Program and the Legacy Resource Management Program.

To help coordinate the myriad bird and bird habitat activities that occur on the over 340 installations with significant natural resources, DoD has established an ad hoc network of subject matter experts who provide technical information in support of migratory bird management on DoD lands. Through this network, DoD has identified mission-sensitive priority bird species both on and off the FWS Candidate Species list for special monitoring and management consideration. The species on this list are deemed to have the highest likelihood of mission impact should they be federally listed.

DoD's avian monitoring activities are guided by *Coordinated Bird Monitoring: Technical Recommendations for Military Lands*, which provides a thorough set of guidelines for the design of bird monitoring surveys on DoD lands (when, where, and how to monitor), as well as sample monitoring programs designed for specific military installations or purposes. These guidelines help DoD meet its conservation and regulatory responsibilities for monitoring birds, consistent with recommendations in *Opportunities for Improving Avian Monitoring* by the North American Bird Conservation Initiative.

Partnerships

Partnerships are vital to the success of DoD's conservation programs. DoD's natural resources managers rely on partner organizations for the most current information to guide their conservation and monitoring priorities. For example, DoD has partnered with the U.S. Army Engineer Research and Development Center, University of Tennessee, and Cornell Lab of Ornithology to develop an autonomous aerial acoustic recording system to estimate population sizes of sensitive bird species in inaccessible areas across all DoD installations requiring an INRMP. By identifying which installations have bird species most in need of conservation action on military lands, DoD can better tailor and target its management efforts.

Other organizations also work with DoD to help more effectively manage for mission-sensitive priority species, including the Institute for Bird Populations, Smithsonian Conservation Biology Institute, Ball State University, Kalamazoo Nature Center, Point Blue Conservation Science, and Vermont Center for Ecostudies – all of which have provided expertise on source-sink population dynamics, migratory connectivity, climate change, and breeding habitat requirements. This information allows DoD's leadership to maximize resource expenditures in a time of shrinking budgets, thus helping installation personnel to reduce or reverse population declines on DoD lands. This, in turn, sustains DoD's military mission activities.

Bird Conservation Training

DoD worked with the FWS to customize the *Migratory Birds: A Trust Responsibility* training course for a DoD audience. The course has been offered eight times; over 400 DoD personnel participated. DoD and FWS are currently working to schedule additional offering for 2016. Additionally, the DoD Bird Conservation and Management National Technical Representative leads a training session at the National Military Fish and Wildlife Association Annual Training Workshop to ensure DoD's natural resources

personnel are familiar with and kept abreast of changes to current laws, regulations, and bird conservation tools and resources.

International Conservation

DoD works with many international conservation partners. The information garnered from our Central and South American partners combined with data collected over many years of Monitoring Avian Productivity and Survivorship and other projects, allows DoD to manage its resources in ways that complement partner conservation efforts. From tracking the Swainson's Hawk (*Buteo swainsoni*) to Argentina in the 1990s to current efforts to identify breeding and wintering locations for the Wood Thrush (*Hylocichla mustelina*), DoD has been and will continue to be an active and engaged partner, providing quality nesting and stopover sites for the myriad bird species that travel throughout the Western Hemisphere.



A Wood Thrush being banded and fitted with a radio transmitter at the Belize Foundation for Research and Environmental Education field site. This SERDP-funded effort is investigating full life-cycle conservation of Wood Thrush, including source-sink population dynamics in breeding habitats on DoD installations in Indiana and life-history information on the wintering grounds in southern Belize. *Photo Credit: Richard Fischer*

Researchers from the University of Tennessee and U.S. Army Engineer Research and Development Center prepare an Autonomous Aerial Acoustic Recording System affixed to a weather balloon for launch over a training range at Fort Riley, KS. This ESTCP project is collecting avian vocalization data from inaccessible "impact" areas on military lands as a means to provide a more complete picture of federally listed and At-Risk species populations on installations. *Photo Credit: Richard Fischer*





The mission of the Department of Energy (DOE) is to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions.

Department of Energy

www.energy.gov

DOE sites identify and address the effects of operations and activities on migratory birds and their habitat through environmental management systems (EMS). DOE uses the NEPA process to evaluate potential environmental effects of proposed Federal actions, including potential effects to migratory birds, and to consider reasonable alternatives to those actions. In addition, DOE sites implement site-specific programs that are crucial in managing the balance between site management and conservation of migratory birds and bird habitats.

2013 Facilities Management

The **Western Area Power Administration** obtained a Migratory Bird Purposeful Eagle Take Permit from the FWS in December 2013 to remove four Golden Eagle (*Aquila chrysaetos*) nests on towers of a 230 kilovolt transmission line. Line crews are erecting artificial nesting platforms as an alternate nest site for the Golden Eagles to retain Golden Eagle nest territory productivity.

The **Los Alamos National Laboratory** retrofitted four power poles located within 300 meters of an active Mexican spotted owl (*Strix occidentalis*

lucida) nesting site to ensure the safety of birds that might perch on the equipment.

The **Pantex Plant** buried all utility lines associated with its five newly installed wind turbines and equipped new down-line utility poles with raptor protection.

The **Brookhaven National Laboratory** worked with a local communications company to delay cell tower work to avoid impacts to nesting Osprey.

Golden Field Office/National Renewable Energy Laboratory environmental staff retrofitted reflective glass surfaces for the offices with decals that reflect in the ultraviolet spectrum to make the glass more visible to birds; a permanent retrofit solution is planned for 2014. Also, the National Renewable Energy Laboratory bus shelter was modified with a window film to reduce bird collisions.

Lawrence Livermore National Laboratory-Site 300 has integrated the policy to install polyvinyl chloride triangles on power poles to discourage perching birds of prey.



Banding a Burrowing Owl at the Hanford Site. *Photo credit: Jane Abel, U.S. Fish and Wildlife Service.*

Policy and Planning

DOE sites continue to use EMSs and the NEPA process to identify and address migratory bird conservation issues associated with agency activities.

The Hanford Site Biological Resources Management Plan of the **Richland Operations Office** calls for monitoring key avian species, implementing protection measures, evaluating the migratory bird impacts on projects, providing migratory bird protection training to site personnel, and migratory bird habitat conservation.

Los Alamos National Laboratory's *Biological Resources Management Plan and Migratory Bird Management Practices Source Document* describe the use of controls, such as restrictions on tree/shrub removals during the nesting season to minimize migratory bird impacts.

Conservation Actions

The **Pantex Plant** continued its deployment of geolocator data loggers on 24 Purple Martins

(*Progne subis*) to include birds on the western edge of the range in a hemispheric scale project. The project includes taking blood and feather samples; the latter may help identify timing and location of moults. An additional 239 Purple Martins were banded, adding to the more than 10,000 previously banded.

The **Richland Operations Office** used cameras to monitor important Bald Eagle (*Haliaeetus leucocephalus*) night roost locations. This allowed biologists to document eagle arrival times, confirming that the field survey protocol was appropriate for proper roost documentation. A bird reporting hotline, 509-376-BIRD, was established so contractors working on the Hanford Site could easily and quickly contact biologists on bird-related issues.

The Bryan Mound and Bayou Choctaw sites of the **Strategic Petroleum Reserve (SPR)** maintained nest boxes and nest platforms along site ponds to attract ducks, herons and Ospreys. All SPR sites continue the “no mow” practice in the spring and fall to allow grasses to grow



Nestling Purple Martin being banded by a Pantex Plant staff member. *Photo credit: James Ray - Pantex, DOE*



Osprey on artificial nesting platform. *Photo credit: James Elmore and Neil Griffin Oak Ridge National Laboratory, DOE*

and provide food and cover for nesting resident and migratory birds. To avoid raptor ingestion of “high risk” rodent bait, sites only use first generation rodenticides and vitamin D analogs. with frosted lines oriented horizontally, was selected to break up glass reflectivity and transmissivity, thereby making the glass more visible to birds.

Partnerships

The **Richland Operations Office** continued to partner with FWS, Washington Department of Fish and Wildlife, Bonneville Power Administration, U.S. Geological Survey (USGS), local Audubon chapters, and the Hanford Natural Resource Trustee Council to benefit land management on the Hanford Site and neighboring areas.

A member of the Interior Least Tern Committee for the Arkansas and Red Rivers, the **Southwestern Power Administration** participates with the FWS, the U.S. Army Corps of Engineers Tulsa and Little Rock Districts, and others to preserve and build habitat in support of interior Least Tern reproduction throughout the nesting season.

The **Pantex Plant** continued to partner with a consortium of entities including York University, local volunteers, West Texas A&M University, Wildcat Bluff Native Habitat of Amarillo, TX, University of Manitoba and the Purple Martin Conservation Association in deploying geolocator data loggers on 24 Purple Martins. This work benefits birds through greater identification of habitats and threats and will lay the foundation to lead to better bird protection education programs in the Yucatan and Brazil.

Additionally, it partnered with West Texas A&M University and the USGS Cooperative Fish and Wildlife Research Unit at Texas Tech University in tracking Swainson’s Hawks, including their time in migration and in their wintering grounds in Argentina.

Bird Conservation Training

The **Golden Field Office/National Renewable Energy Laboratory** provided training to staff responsible for grassland mowing, landscaping, and other outdoor maintenance activities emphasizing migratory bird regulatory requirements and field training in surveying for nesting birds. Trainees were evaluated during the nesting bird surveys to ensure their understanding of the process.

The **Richland Operations Office** raised awareness of migratory bird protection responsibilities through specialized and mandatory training for all Hanford Site staff as part of the site access training.

Lawrence Livermore National Laboratory educated staff on native species and sensitive habitats and provided site-specific and project-specific natural resource trainings.

International Conservation

The **SPR Big Hill** site participated in the North American Bird Banding Program administered by the Canadian Wildlife Service Bird Banding Office and USGS Bird Banding Laboratory to understand migratory bird population dynamics in North, Central and South America and the Caribbean.

2014 Facilities Management

A **Pantex Plant** employee serves on the Purple Martin Conservation Association Board of Directors, an international 501c3 non-profit organization for the conservation of the Neotropical migratory songbird.

Monitoring data gathered by the **Richland Operations Office** are used by FWS, Canadian Wildlife Service, and Partners in Flight for trending and bird conservation priorities throughout western North America.

The **National Renewable Energy Laboratory** installed avian collision deterrent film on the windows of the new Energy Systems Integration Facility. The film features either 2-inch white dots in a grid or 2-inch horizontal bars and

adheres to the exterior of the windows. No bird collisions have been reported to date.

Lawrence Berkeley National Laboratory's Chief Environmental Planner and grounds keeping specialists conducted tree surveys to determine that no nests were present in trees proposed to be pruned, removed, or otherwise disturbed by nearby activities during the breeding season.

Oak Ridge Operations personnel advised facility managers on nest-exclusion devices, materials, and designs aimed at preventing negative human/bird interactions.

To protect raptors, the **Strategic Petroleum Reserve** requires perch guards in specifications for wood pole buildings. It developed written procedures regarding interaction with injured birds, marking of active nest locations, and marking equipment "out of service" until chicks have fledged.

The **Pantex Plant** assessed the effects of its new windfarm on migratory birds through monitoring bird plots; in particular, Swainson's Hawk (*Buteo swainsoni*) home ranges (via satellite tracking); and tracking the productivity of Swainson's Hawks at various distances from the windfarm to possibly develop risk models on wind energy development and Swainson's Hawk habitat.

Policy and Planning

Oak Ridge Operations requires inspection of buildings prior to demolition and trees prior to removal to detect nesting activity or use by migratory birds and maintaining natural stream buffers of 60-100 feet to protect riparian zones.

Idaho National Laboratory implements policies requiring biological resource reviews to determine if projects will affect sensitive ecological or biological resources.

Lawrence Berkeley National Laboratory protocols include surveying for nesting birds before work begins and establishing buffer zones and noise restriction requirements if nesting birds are found.



The NREL bus shelter has been modified with a window film to reduce bird collisions. NREL shares its research campus with more than 80 bird species. *Photo credit: Raymond David - Golden Field Office/ National Renewable Energy Laboratory, DOE*

Hanford Site policies guide its re-vegetation and restoration actions to enhance bird habitats.

Conservation Actions

Western Area Power Administration installed avian flight diverters along spans of transmission lines that have a high potential for bird collisions and ultra-violet reflective bird flight diverters on spans adjacent to or over wetlands. It used mono poles, rather than lattice towers, to provide less nesting potential and limit potential impacts to nests during maintenance activities.

Thirty-eight power poles were modified for bird protection at **Lawrence Livermore National Laboratory**. Modifications included creating elevated center pole perches, running under cross arm conductor jumpers, adding elevated center phase conductors with kingpins, upgrading cross arm geometry to “straight line” conductors on line and buck (multi-directional) poles, cleaning-up wiring or adding bushing covers to switch poles.

The **Legacy Management Weldon Spring Site** (Missouri) maintained a prairie and native plant garden attractive to pollinators and birds.

Los Alamos National Laboratory improved Mexican spotted owl (*Strix occidentalis lucida*) habitat by producing a more diverse, healthy riparian plant community to increase the owl’s prey base. Several small water impoundments were constructed from natural material to slow stream flow and reduce channelization. Over 100 native trees and shrubs were planted, including cottonwoods, willows, and New Mexico olive, which will benefit other avian species as well.

Partnerships

Brookhaven National Laboratory works with owners of a cellular telephone tower to ensure that an Osprey (*Pandion haliaetus*) nest would not be disturbed during the nesting season. Consultation ensures the birds migrate before the nest is removed for maintenance and upgrades. The site has been successfully used for approximately eight years.

Nest boxes for grassland bird species and owls were constructed by local Boy Scouts and installed at various locations on the **Oak Ridge Reservation**.

Oak Ridge Operations conducted routine collaborations with the Tennessee Wildlife Resources Agency, Tennessee Division of Forestry, and the University of Tennessee on managing early-succession habitat for birds.

Avian monitoring at **Los Alamos National Laboratory** was supported through collaborations with Bandelier National Monument, the Valles Caldera National Preserve, and local citizen scientists in ornithology. Bandelier's biology program maintains summer and fall bird banding operations; fieldwork was coordinated between the Laboratory and Bandelier to help ensure effective and efficient operation.

The **Hanford Site** shared monitoring data on burrowing owls, shrub steppe birds and raptor populations with the U.S. Fish and Wildlife Service and contributed monitoring and geographic information system data to the Washington Department of Fish and Wildlife's efforts to map species distribution and habitats across the Columbia Basin.

Bird Conservation Training

The **Legacy Management** Rocky Flats Site (Colorado) conducted annual training on migratory bird protection-related field activities. At its Fernald Preserve (Ohio), pre-job training for construction projects includes bird habitat identification and avoidance instruction.

The **Pantex Plant** educated its employees, subcontractors and visitors on migratory bird issues via new employee orientation, NEPA training, e-newsletters, newsletters, and blogs and presentations by its wildlife biologist.

Western Area Power Administration regional staff members conducted annual environmental refresher training for maintenance personnel in their respective regions. Training consists of reviewing migratory bird protection guidelines, discussing avian conservation requirements, and providing contact information in the event maintenance personnel need additional information.

International Conservation

The extensive partnership in Pantex Plant's Purple Martin project includes the Purple Martin Conservation Association (PMCA), York University, University of Manitoba, and the Disney World Wide Conservation Fund (via a grant to PMCA). Researchers studied key stopover locations in the Yucatan and wintering areas in the Amazon Basin and educated and collaborated with area populations.

The Strategic Petroleum Reserve's Big Hill and Bayou Choctaw sites participated in the North American Bird Banding Program, an important monitoring tool for researchers and managers to understand population ecology and migration patterns of game and non-game species that travel through North and South America.

An American Kestrel box built by Boy Scouts is installed by utilities personnel on the Oak Ridge Reservation.



Photo credit: W. Kelly Roy, Oak Ridge Operations, DOE.



*Mission:
Working
with others
to conserve,
protect, and
enhance fish,
wildlife, and
plants and their
habitats for
the continuing
benefit of the
American
people.*

Department of Interior

U.S. Fish and Wildlife Service

www.fws.gov

The U.S. Fish and Wildlife Service (Service) is the lead federal agency charged with the protection and conservation of migratory birds. Under its mission, the Service works to protect, manage, and restore bird populations and habitats for long-term sustainability and socioeconomic benefits. Many Service programs contribute to habitat conservation, population monitoring and assessments, and reducing impacts by managing stressors through policy, planning, action, and partnerships.

Facilities Management

To more strategically and proactively address bird conservation opportunities that directly tie into the Council's theme of Facilities Management, the Service implemented management actions at 80 Service facilities across the nation that reduce negative impacts to birds from building glass and outdoor lighting. Bird collisions with windows are most often caused when birds see reflections of the landscape (e.g. trees, clouds, sky) in the glass or see habitat behind the glass (e.g. indoor plants) and attempt to fly through what appears to be clear airspace. Taking measures that remove the appearance of landscape

features on or behind glass, such as placing film where reflections often occur, can be very effective at eliminating bird collisions.

The Service's National Conservation Training Center in West Virginia placed CollidEscape window film at approximately five different locations on campus, including windows in the Commons building, several corner windows in Instructional East building, and on windows in a second floor wing of the Instructional West building. The window film increases the visibility of the windows without obstructing outdoor views. The product was chosen because (1) it can be tinted or imprinted with images or messages on the external facade; (2) is Leadership in Energy and Environmental Design (LEED) tested; and (3) is effective in preventing bird strikes while increasing energy efficiency. The film is placed on the inside of windows located predominantly in corners or where trees reflect on the outside of the windows.

At Patuxent Research Refuge in Maryland, the Service's National Wildlife Visitor Center and the U.S. Geological Survey's Gabrielson Laboratory applied both white and black versions of the CollidEscape window film

on select facility windows. After implementing monitoring efforts, observations of bird collisions decreased on the treated windows as compared to windows with no film, and there have been no reported strikes for two years on windows treated with black CollidEscape film.

At J. N. “Ding” Darling National Wildlife Refuge (NWR) in Florida, both the Administrative Office and the Education Center now have bird-safe window treatments. The film has been extremely successful at preventing migratory bird collisions. In addition, the John Heinz NWR at Tinicum in Pennsylvania uses netting successfully to prevent bird strikes against the windows at their Cusano Environmental Education Center.

At least 80 Service facilities now take steps to minimize non-essential exterior lighting on site with light fixtures designed to direct light downward. Directing light downward ensures humans and wildlife visual access to the night sky and prevents disruption of nocturnal animal habitat. It also provides several specific benefits to birds. At night, during spring and fall bird migrations when inclement weather events coincide, birds may be drawn down to bright lights and become disoriented, resulting in collisions, entrapment, energy expenditure, and exhaustion. Downward shielded lights minimize the light glare that can lead to these events. Light shielding also minimizes light trespass into any adjacent bird breeding habitat, reducing any potential impacts on bird behavior and breeding from introduction of an artificial light source. Many of these downward directed lights are solar photovoltaic-powered. As an example, Merritt Island NWR in Florida additionally uses remote solar-powered lights at boat ramps, and the National Wildlife Visitor Center at the Patuxent Research Refuge in Maryland uses similar technology in parking lots.

Other excellent examples of outside lighting that achieve energy efficiency, a secure environment, and preserve the night sky may now be seen at the Service’s high performance sustainable buildings such as the LEED Gold-equivalent Visitor Center at Assabet River NWR, Massachusetts, the LEED Gold Visitor Center/ Headquarters at Audubon NWR, North

Dakota, the LEED Gold Visitor Center at Neosho National Fish Hatchery, Missouri, and the LEED Platinum Headquarters and Visitor Center at San Luis NWR Complex, California.



White Standard CollidEscape window film on East Façade and South Façade Windows of the USGS Gabrielson Laboratory at Patuxent Research Refuge, Maryland. *Photo credit: US Fish and Wildlife Service*

Partnerships and Conservation Actions

The Urban Conservation Treaty for Migratory Birds (Urban Bird Treaty) program was created to help municipal governments conserve birds that live in or migrate through their cities. The program is a collaborative effort between the Service and participating U.S. cities, bringing together private citizens, Federal, State, and municipal agencies, and non-governmental organizations. Cities and their surrounding suburbs can become effective sanctuaries for birds and other wildlife, with an environmentally aware citizenry dedicated to conserving migratory birds through education, hazard reductions, citizen science, conservation actions, and habitat improvement strategies. Twenty Urban Bird Treaty cities participate in actions that help make their cities safer and healthier for birds.

Several notable activities were conducted under the Urban Bird Treaty in 2013, including

the construction of schoolyard habitats, the enhancement of other urban habitats, educational bird walks, providing citizen science opportunities, and participating in International Migratory Bird Day celebrations. For example, students and teachers worked with Audubon Minnesota in the city of Minneapolis to install Chimney Swift towers on more than 16 sites where parks and schools share land or abut property. This group also developed a Science, Technology, Engineering, and Math (STEM) curriculum that focused on birds and migration.

In San Francisco, Eco Education interns, and volunteers engaged over 15,000 East Bay community members in learning about the richness and uniqueness of their watershed from local creeks and wetlands to the bay and Pacific Ocean. The program expanded the Eco Education program to Paul Revere Elementary School in San Francisco, a public Spanish-language immersion school. Golden Gate Audubon's Eco-Oakland Program connected diverse East Oakland residents with their local environment, inspiring environmental stewardship, paving the way toward future careers, and fostering new conservation constituencies. The year-round Eco-Oakland program provides in-depth learning for children and their families.

In 2013, the city of Washington, D.C. and their partners participated in a "New Year's Count for Birds" (modeled after the National Audubon Society Christmas Bird Count). Students counted birds and entered the results into eBird, a citizen science database managed by Cornell Lab of Ornithology. The city of Washington, D.C. also partnered with People Animals Love (PAL) during the winter and spring of 2013 for the after school Bird Club through a raptor education program. Over 900 students and members of the community engaged in the program. Two adult male ospreys were successfully captured and fitted with telemetry harnesses, and were tracked during the breeding season to monitor foraging habits. The birds were then followed online during migration through the Anacostia Raptor Watch Blog (<http://www.ospreytrax.com/2013%20>

[Winter.html](#)) to determine their wintering grounds. In addition, a webcam was set up by the Earth Conservation Corps and launched by Secretary of the Interior Sally Jewell to monitor an osprey nest on the Frederick Douglas Bridge. This webcam allowed the public to monitor the activities of this nest throughout the season.



Bird Collision Netting at the Cusano Environmental Education Center, John Heinz NWR at Tinicum, Pennsylvania. *Photo credit: US Fish and Wildlife Service*

The Service continually strives to improve the resources and information that are available to assist their own employees and partners in conserving birds, and to engage future employees and partners in efforts that will help conserve and improve bird populations for generations. This includes active partnerships and initiatives like those established through the Council for the Conservation of Migratory Birds and the Urban Bird Treaty Program.

Through these partnerships and coordination the Service is able to continually provide its employees, partners and the public with more and better information and resources to reduce negative impacts to birds. For more information on Service partnerships and tools and information for the conservation of migratory birds, visit the Service webpage on Project Assessment Tools and Guidance and Bird Conservation Partnership Initiatives.



The mission of the National Park Service is “to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

(16 U.S.C. 1)(16 U.S.C. 1)

Department of Interior National Park Service

www.nature.nps.gov

The National Park Service (NPS) is entrusted with conserving many of our nation’s most magnificent landscapes. Within these landscapes, park units provide important seasonal habitats for migratory birds. The NPS conserves, restores and implements innovative management plans to identify, plan for, and mitigate actions adversely affecting these habitats and migratory birds within park boundaries. The NPS also engages in collaborative conservation efforts occurring outside of park boundaries, domestically and internationally, to meet the full life cycle needs of migratory birds. Information on migratory bird species and their habitats is integrated into education and interpretive activities within NPS units and in outreach to local communities to increase awareness of migratory bird issues.

Facilities Management

The 401 units of the NPS receive seasonally intense visitation and vehicular traffic. The NPS reduces speed limits inside parks in order to reduce overall and seasonal disturbance and vehicle strikes to migratory birds. For example, Gulf Islands National Seashore reduced the year-round speed limit along barrier-island roads from 55 to 35 mph to reduce road-kill, and seasonally



Banded snowy plover. *Photo credit National Park Service, Gulf Islands National Seashore.*

restricts speed to 20 mph in two important shorebird nesting areas each season. Speed limits were reduced to decrease vehicle strikes of adult shorebirds in these areas as well as protect chicks that attempt to cross these roads. The park uses large solar powered message boards to advise motorists of the 20 mph zone ahead and shorebird presence on and near roads. The park also installs seasonal speed bumps to further encourage slower speeds. The park integrates such facility management with education and outreach (e.g., visitor information and wayside exhibits throughout the park depict shorebird nesting and the importance of sharing the seashore with these nesting shorebirds). Information is also handed out at the entrance stations to inform the public of previous



Sooty tern. *Photo credit National Park Service*

year's road-kill levels, help visitors recognize adults with chicks, and depicting Least Terns killed by vehicle strike.

Policy and Planning

Cape Hatteras National Seashore has developed an Off-Road Vehicle Management Plan that provides for both specific off-road vehicle routes and Vehicle Free Areas to protect breeding and migratory bird beach habitat. During spring, the park establishes pre-nesting beach closures for shorebirds which include historical nesting areas, providing potential breeders with an opportunity to establish territories, engage in courtship behaviors, and begin nesting in areas undisturbed from other activities occurring on the seashore. Currently, this plan designates 26 of 67 miles of park shoreline as Vehicle Free Areas with an additional 13 miles of shoreline seasonally restricted to pedestrians only.

Conservation Actions

Great Smoky Mountains National Park is utilizing collaborative field research to develop innovative approaches to estimate status and detect trends in migratory bird populations. This information is used to inform and guide large landscape fire management within the park and in adjacent lands, particularly in pine and oak dominated communities. For

example, Red-cockaded Woodpeckers (*Picoides borealis*) occurred in the Park until around 1990 when habitat was lost, due primarily to fire suppression. New research is exploring how birds respond to variation in fire severity, frequency, and timing, in order to identify patterns of species persistence within the region. Migratory bird field observations are being integrated with remote sensing tools to identify large landscape-scale patterns related to fire severity and vegetation structure. These landscape patterns are then cross-linked with bird distributions in order to identify areas important to migratory species, identify patterns of species occurrence across larger landscapes, and inform innovative collaborative fire management planning and decisions across the park and adjacent lands. Collaborating research partners include USGS Cooperative Fish and Wildlife Research Unit, USGS National Gap Analysis Program, USGS Core Science Analytics, Synthesis and Libraries, North Carolina State University, The Tallassee Fund and the Great Smoky Mountains Conservation Association.

Partnerships

The NPS Alaska National Parks Arctic Inventory and Monitoring Network collaborate with the SERVICE to conduct biennial contaminants sampling and aerial surveys of Yellow-billed

Loons (*Gavia adamsii*) in western Alaska. With USGS, parks are analyzing the population genetics of Yellow-billed Loons and using remote sensing and environmental DNA to analyze habitat parameters and fish species distributions across the range of Yellow-billed Loons in Alaska. In combination, these studies will be used in Yellow-billed Loon habitat-selection models and to assess the status of this candidate species in Alaska and Canada. In addition, NPS collaborates with the Wildlife Conservation Society, Alaska Teen Media Institute, and Alaska Geographic to work with rural Alaska communities to mitigate Yellow-billed Loon by-catch in fishing nets. With help from the University of Alaska, key baseline information about important habitat areas along the Bering and Chukchi Seas coasts for migrating shorebirds is provided, when needed, to fill information gaps to respond to industrial oil spills.

Bird Conservation Training

Yellowstone National Park prepares annual reports on status and trends of migratory birds and shares this information extensively with NPS staff, concessions guides and private outfitters. This information transfer helps the park communicate and collaborate to protect against unintentional take of migratory birds via hazard tree management programs, wildland fire management, law enforcement, concession management, and facilities management.

Yellow-billed loon. *Photo credit Ken Wright, Bureau of Land Management*



International Conservation

Dry Tortugas National Park has ongoing satellite telemetry studies of the Sooty Tern (*Onychoprion fuscatus*) and Magnificent Frigatebird (*Fregata magnificens*) which provide important information on the movement patterns of both species during the non-breeding season. Geolocators placed on adult Sooty Terns showed a non-breeding season movement south then east from the Dry Tortugas to the Atlantic Ocean half way between South America and Africa, a distance of nearly 7,000 kilometers. Frigatebird movements have been documented as far south as Cuba and the Yucatan Peninsula, as well as north along the coast of Florida. This information is being shared with other biologists at international professional meetings such as World Seabird Conference.

Least tern adult with chick and egg. *Photo credit National Park Service, Gulf Islands National Seashore*





*Mission:
To carry out the
requirements
of the Surface
Mining
Control and
Reclamation Act
in cooperation
with the States
and Tribes.*



Director Pizarchick planting a chestnut tree *Photo Credit: Brian Smith*

Department of Interior Office of Surface Mining, Reclamation, and Enforcement

www.osmre.gov

The Office of Surface Mining, Reclamation, and Enforcement (OSMRE) is responsible for establishing a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations, under which OSMRE is charged with balancing the nation's need for continued domestic coal production with protection of the environment. OSMRE and its partners are also responsible for reclaiming and restoring lands and water degraded by mining operations. OSMRE works with colleges and universities and other State and Federal agencies to further the science of reclaiming mined lands and protecting the environment, including initiatives to promote planting more trees and establishing much-needed wildlife habitat.

Partnerships and Outreach

Major Appalachian Regional Reforestation Initiative (ARRI) partners include notable bird conservation organizations such as the American Bird Conservancy, the Appalachian Mountains Joint Venture, the Cerulean Warbler Technical Group, the Golden-Winged Warbler Working Group, the

National Fish and Wildlife Foundation, The Trust for Wildlife, and many other conservation /environmental groups and international associations.

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International Conservation

ARRI signed an MOU in 2008 with the United Nations Environmental Program (UNEP) establishing a goal to plant 38 million trees on reclaimed coal mines in three years. This was part of a larger UNEP goal to plant 300 million trees in North America and seven billion trees



Appalachian Regional Restoration Initiative, Fishtrap lake in WVA. *Photo Credit: Brian Smith*

worldwide. The commitment by OSMRE through ARRI was the largest North American pledge for the UNEP Campaign. The OSMRE is responsible for establishing a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations, under which OSMRE is charged with balancing the nation's need for continued domestic coal production with protection of the environment. OSMRE and its partners are also responsible for reclaiming and restoring lands and water degraded by mining operations. OSMRE works with colleges and universities and other State and Federal agencies to further the science of reclaiming mined lands and protecting the environment, including initiatives to promote planting more trees and establishing much-needed wildlife habitat.

Policy and Planning

To promote proper mine land reforestation on active mine sites, ARRI (created in 2004) advocates using a set of best management practices called the Forestry Reclamation

Approach - a five step process on all ARRI planting sites. A variety of native, high-value hardwood seedlings are planted, which often include disease-resistant American chestnut trees.

Conservation Actions

The focus of ARRI is restoring forests where deforestation by surface coal mining has occurred, which coincides largely within the Appalachian breeding range of neotropical migratory song birds, notably the Cerulean Warbler (*Dendroica cerulea*). Virtually all of the land being surface mined for coal in Appalachia was woodland or forest at the time it was mined. The resultant forest fragmentation has environmental impacts, reduces carbon sequestration, limits the land's economic value, and reduces habitat for neotropical migratory songbirds that depend on intact interior forests. The positive results of ARRI's actions in reducing existing and potential adverse impacts to migratory birds and their habitats have been nationally and internationally recognized.



Department of State/ USAID

www.state.gov and www.usaid.gov

The Department's mission is to shape and sustain a peaceful, prosperous, just, and democratic world and foster conditions for stability and progress for the benefit of the American people and people everywhere. This mission is shared with the USAID, ensuring we have a common path forward in partnership as we invest in the shared security and prosperity that will ultimately better prepare us for the challenges of tomorrow.

--From the FY 2014 Agency Financial Report, released November 2014

The Department of State (DoS) has 276 overseas and 10 domestic offices and other functional facilities. While we do not manage large tracts of land, we know that by practicing “eco-diplomacy” we can demonstrate to our host countries and local communities that we are good stewards of their natural resources and a model for improved environmental practices. Although none of our operational standards are instituted specifically for birds, they can contribute to their conservation.

Partnerships

State Department and USAID staff have collaborated with local communities, government officials, NGOs or other organizations, including schools, in projects such as wetland restoration, tree planting and beach and stream cleanups. Overseas the Ambassador often takes part in these events resulting in local press coverage which conveys a positive conservation message. The State Department led the U.S. delegation to the eleventh Convention on the Conservation of Migratory Species of Wild Animals Conference of the Parties (COP) in Quito, Ecuador, 4-9 November



Dedication of green roof of new building of Embassy Canberra. *Photo Credit: DOS*

2014. Thanks in part to active outreach by the U.S. delegation, including the U.S. Fish and Wildlife Service, the COP approved the Americas Flyways Framework for migratory bird conservation, which grew out of the U.S.-sponsored Western Hemisphere Migratory Species Initiative. The Americas Flyways Framework is designed to assist governments, non-profit organizations, research institutions, corporations, and citizens in the conservation of migratory birds and their habitats in the Western Hemisphere. The framework seeks to harmonize the conservation efforts of governments and all relevant partners and stakeholders by advancing a suite of actions organized by five broad conservation goals for the hemisphere.



School kids at Bird Life event for World Migratory Bird Day sponsored by US Embassy Gaborone.

Photo Credit: DOS

Policy and Planning

The DOS has policies for integrated pest management, recycling, and energy efficiency in transportation and electricity use. The Department's Bureau of Overseas Buildings Operations offers a *Guide to Green Embassies: Eco-Diplomacy in Operation*, which recommends native or adaptive plants in the landscape, and environmentally friendly cleaning and deicing products; promotes tree planting and constructed wetlands on our overseas facilities; and requires shielded parking lot lighting.

Most overseas missions have engaged host country governments, NGOs and local communities on issues related to reforestation, illegal logging, wildlife trafficking, and other goals which impact conservation of habitat for migratory birds.

Conservation Actions

SUSAID funds many projects which, although usually not specifically designed with birds



Grenada's Minister for Economic Development, the Honorable Oliver Joseph, and Senator Sheldon Scott join other alumni of U.S. State Department exchange programs, U.S. Charge Lou Crishock, and other volunteers at a beach clean-up at La Sagesse, St. David November 30, 2013 to mark International Volunteer Day. Almost 1000 pounds of trash and debris were collected by the forty volunteers present over the course of four hours. *Photo Credit: DOS*

in mind, benefit them. Some examples of these large projects are: conservation efforts in the Okavango basin and Lake Chad; protected areas restoration and management in Thailand, Timor-Leste, Ecuador and Georgia; management of Ramsar sites in



Bogota mudflats and mangroves in area of Colombia part of a USAID protected areas management project. *Photo Credit: USAID*

Gambia and Senegal; watershed conservation in El Salvador, Belize, Guatemala, Honduras, Namibia, South Africa, Armenia, and Nepal; coastal zone management and conservation in Ghana; forest management in Colombia, Jamaica and Peru; development of birding trails and training of birding guides in Jordan and Uganda; bird inventories and field guides developed in Nicaragua.

Overseas embassies and consulates have posted bird conservation messages through social media, most specifically in 2013 to draw attention to the East Asia-Australasian Flyway Partnership and the Society for the Conservation and Study of Caribbean Birds meetings. Migratory birds are featured in Facebook and blog entries and posters prepared for use during Earth Day and International Migratory Bird Day celebrations in overseas posts.

The DoS may not have vast acreage in which to conserve migratory birds, but it nonetheless has the opportunity to influence a wide audience which should have a multiplier effect worldwide, and exercises that influence regularly.



Common Sandpiper in Uganda at area of USAID ecotourism project. *Photo Credit Peter Kaestner*



Section One of the Communications Act of 1934, as amended, states that the mission of the Federal Communications Commission (FCC) is to “regulat[e] interstate and foreign commerce in communications by wire and radio so as to make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nation-wide and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, for the purpose of promoting safety of life and property...”

Federal Communications Commission

<http://www.fcc.gov/>

The FCC regulates thousands of existing communications towers and receives applications for hundreds of new towers every year. Communications towers are involved in the collision fatalities of millions of birds each year. The FCC follows the National Environmental Policy Act (NEPA) and the FCC’s Final Programmatic Environmental Assessment for the Antenna Structure Registration Program (PEA) when regulating and approving new communications towers. Using NEPA and the PEA the FCC coordinates with the United States Fish and Wildlife Service (SERVICE) to prevent, minimize and/or mitigate the likelihood of impacts to endangered species and migratory birds.

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Assessment for the Antenna Structure Registration Program (PEA) when regulating communications facilities and approving new construction. Using NEPA and the PEA the FCC coordinates with the United States Fish and Wildlife Service (USFWS) to prevent, minimize and/or mitigate the likelihood of impacts to endangered species and migratory birds.

Facilities Management Highlights

The Federal Aviation Administration (FAA) permits lighting for towers over 350 feet in height Above Ground Level (AGL) that reduces construction, maintenance, and energy costs to tower owners while simultaneously reducing migratory bird collisions by as much as 70%. Implementing this tower lighting can be achieved through a simple application process with the FAA and the FCC. In 2014 the FCC contacted hundreds of existing tower owners in an effort to educate them about this cost-saving and bird-saving option. Since December 2012 every application seeking approval of a new tower more than 450 feet AGL was approved with the condition that it use bird safe

tower lighting, while applicants for towers 350-450 feet AGL were contacted via email or phone and requested to use bird-safe tower lighting. In 2014 the FCC continued to reach out to other federal agencies that approve and manage communications towers on federal lands to insure that the towers on their lands minimize bird collisions as much as possible. Currently, 415 towers are registered with the FCC as having the new deviation for bird-friendly lighting and 265 of those were registered in 2014.

Policy and Planning

By following NEPA and the FCC's PEA, the FCC ensures that effects on migratory birds and endangered species are considered in the agency's work.

Conservation Actions

The FCC conducts ASR database searches biannually in order to monitor and track the numbers of towers equipped with the bird-safe red lighting deviation. The number of towers with this preferred lighting system is believed to correlate directly to the number of bird collisions that are prevented each year and these benefits will continue for as many bird generations as the tower lighting systems remain lit with bird-safe lights.

Partnerships

The FCC works with the USFWS to ensure that the regulation of communications towers considers the Endangered Species Act (ESA), the Bald and Golden Eagle Protection Act (BGEPA), and the Migratory Bird Treaty Act (MBTA). The FCC also works with other federal agencies by serving as an observer on the CCMB. In addition, the FCC supports the FAA's ongoing initiative to revise FAA guidance documents to include bird-safe lighting systems. These revisions will further speed the changing of tower lighting systems to the more preferred, energy-efficient, bird fatality-reducing option. In individual cases the FCC works one-on-one with industry

members to educate them about tower lighting options and bird conservation opportunities, and in appropriate circumstances it works with environmental organizations on mitigation measures including support for scientific research. In addition to these one-on-one contacts with private entities, the FCC distributes informational materials on bird collision-reducing lighting systems at communications industry trade shows.

Bird Conservation Training

The FCC provides training to hundreds of participants, mostly consultants that perform environmental review of proposed communications towers, during an annual NEPA Training Day. The FCC also provides comprehensive information regarding bird conservation via its website, including videos of Training Day presentations. The FCC is currently improving its website to include additional information about migratory birds, habitat fragmentation, the introduction of invasive species, and other migratory bird impacts relevant to communications towers. In addition, the FCC's biologist offers bird walks during the migration seasons.

International Conservation

The FCC provides bird collision reduction information to Partners in Flight, an organization within the USFWS that focuses on migratory bird conservation across international borders. In addition, the FCC's online bird conservation resources are available to viewers around the world.



*Mission:
The Federal
Aviation
Administration's
mission is
to provide
the safest,
most efficient
aerospace
system in the
world.*

Department of Transportation

Federal Aviation Administration

www.faa.gov

The FAA addresses potential conflicts between aviation safety and migratory birds at airports, navigational facilities and other tall structures, and strives to protect and conserve birds and their habitats whenever it is possible to do so without causing or exacerbating avian threats to aviation safety. The FAA evaluates impacts on migratory birds of its own actions as well as actions it funds, licenses or approves such as proposed airport construction, commercial space launch licensing and grants for land acquisition, and conducts research and training on migratory bird habitats, attractants, the ecology of species encountered at airports and mitigation techniques.

Facilities Management Highlights

In addition to circulating information on reducing impacts to migratory birds to facilities managers and offices with oversight of facility design and operation, the FAA included a message in the Daily Broadcast e-mail issued to all employees listing simple, low- or no-cost measures that can be adopted at existing facilities, emphasizing measures that also have energy-saving benefits and can help to achieve sustainability goals. The

FAA is updating its Advisory Circular for obstruction lighting, used at night to warn pilots of a tower or other hazard, with revised specifications that will reduce their attraction to migratory birds without compromising safety.

Policy and Planning

The FAA issued *Wildlife Strikes to Civil Aircraft in the United States, 1990–2013* which presents analysis of the National Wildlife Strike Database and an overview of mitigation for wildlife strikes. The data show a correlation between airports that have prepared Wildlife Hazard Assessments and Wildlife Hazard Management Plans and improvements in tracking bird strikes, monitoring avian behavior and attractants and holistic mitigation strategies. The FAA provided leadership related to migratory birds through training, research and guidance such as Certalert No. 14-01, *Seasonal Mitigation of Hazardous Species at Airports: Attention to Snowy Owls* which reduces strikes and subsequently avian mortality.

Conservation Actions

The FAA continued making progress in increasing reporting rates for wildlife strikes through a new Advisory Circular and simplified and paperless reporting via a new web site or by mobile phone. The FAA's Interagency Agreement with USDA allows collaborative improvement of mitigation techniques and a better understanding of avian and mammal ecology to reduce conflict with the aviation industry. Research funded in whole or part by the FAA included:

- Evaluation of the risk of Bald Eagle-aircraft collisions using satellite telemetry.
- Evaluation of translocation as a management tool for American Kestrels at airports in the Eastern U.S.
- Evaluation of movement patterns of Red-Tailed Hawks following translocation from an airport.
- Assessment of long range acoustical devices for reducing wildlife hazards at airports.
- Assessment of aircraft pulse lighting to enhance detection and avoidance of aircraft by birds.
- Evaluation of the efficacy of avian and FOD radars for detecting avian movement at airports and other detection / monitoring systems incorporating infrared and state-of-the-art camera equipment.

The FAA funded and helped develop reports by the Transportation Research Board's Airport Cooperative Research Program, including *Airport Wildlife Population Management, Habitat Management to Deter Wildlife at Airports, Balancing Airport Stormwater and Bird Hazard Management and Innovative Airport Responses to Threatened / Endangered Species.*

Partnerships

The FAA collaborates with the aviation industry, Federal agencies and universities to investigate effective technologies and BMP's for appropriate

wildlife hazard mitigation. The FAA is an active participant in Bird Strike Committee USA, which facilitates exchange of information and promotes collection and analysis of accurate wildlife strike data, development of new technologies for reducing wildlife hazards, and professionalism in wildlife management programs. In September 2013, the FAA signed a joint MOU with the National Association of State Aviation Officials and USDA with the goal of increasing strike reporting and awareness at state-regulated airports. The FAA continued partnering with the Smithsonian's Feather Identification Lab to identify bird species involved in aircraft strikes – information which helps airports design habitat management programs and aircraft manufacturers design engines and aircraft to withstand the impact of bird collisions. The FAA works closely with and supports the USDA's National Wildlife Research Center's research to improve wildlife management techniques and practices on and near airports, including alternative habitat management strategies to reduce the attractiveness of airport habitats to hazardous wildlife species, exclusion techniques for restricting access of hazardous wildlife species to attractants like storm water ponds and perches, and techniques for harassing and deterring hazardous species.

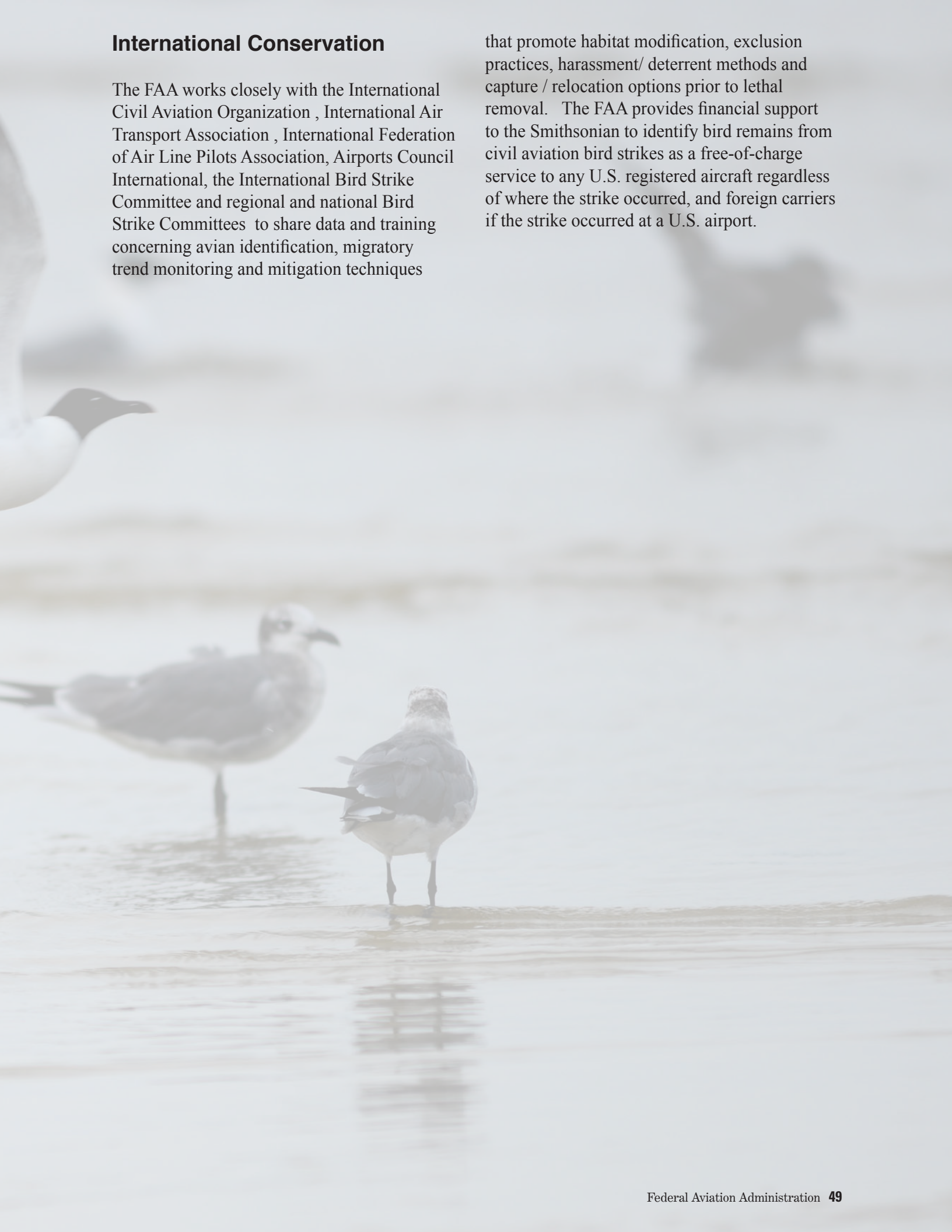
Bird Conservation Training

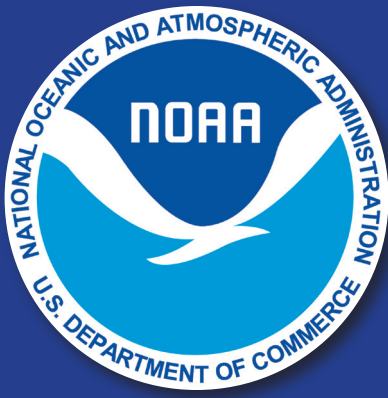
The FAA's Environmental Protection Specialists are provided basic training on migratory birds, including the requirements of the MBTA, Endangered Species Act (ESA), Sikes Act, Fish and Wildlife Conservation Act, and the Animal Damage and Control Act. The FAA has outlined training requirements for contractors and airport personnel actively involved with migratory bird management (see Advisory Circular 150/5200-36, *Qualifications for Wildlife Biologists Conducting Wildlife Hazard Assessments and Training Curriculum for Airport Personnel Involved in Controlling Wildlife Hazards on Airports*), and approves advanced courses offered by third-party providers to fulfill these training requirements.

International Conservation

The FAA works closely with the International Civil Aviation Organization , International Air Transport Association , International Federation of Air Line Pilots Association, Airports Council International, the International Bird Strike Committee and regional and national Bird Strike Committees to share data and training concerning avian identification, migratory trend monitoring and mitigation techniques

that promote habitat modification, exclusion practices, harassment/ deterrent methods and capture / relocation options prior to lethal removal. The FAA provides financial support to the Smithsonian to identify bird remains from civil aviation bird strikes as a free-of-charge service to any U.S. registered aircraft regardless of where the strike occurred, and foreign carriers if the strike occurred at a U.S. airport.





Mission: Science, Service, and Stewardship. To understand and predict changes in climate, weather, oceans, and coasts; to share that knowledge and information with others, and to conserve and manage coastal and marine ecosystems and resources.

Department of Commerce

National Oceanic and Atmospheric Administration

<http://alaskafisheries.noaa.gov/protectedresources/seabirds/national.htm>

Bird Conservation

Through its various statutory authorities and agency policies, NOAA Fisheries has responsibility for studying, monitoring, and minimizing the impacts of agency actions on seabird populations, including seabird bycatch. In addition, the agency studies and monitors the effects of seabird populations on ESA-listed fish species and manages the coastal and marine habitats that seabirds and other aquatic species depend on.

AA Fisheries' Highlights and Accomplishments in 2014

In 2014, NOAA Fisheries issued a report on implementation of the National Plan of Action for Seabirds (http://www.nmfs.noaa.gov/ia/resources/publications/ccrf/longline_fisheries.pdf). The report describes the seabird conservation programs and regulations that have substantially decreased the incidental catch of seabirds in certain fisheries. This report also describes the research, outreach and education on incidental seabird catch, as well as the domestic management of incidental seabird catch.

Although incidental seabird catch has been greatly reduced in longline fisheries, the report highlights the need for further steps and initiatives to reduce seabird bycatch in gillnet and trawl fisheries.

NOAA Fisheries has also supported the adoption of seabird management measures in various international forums. In support of the Agreement on the Conservation of Albatrosses and Petrels, NMFS and the U.S. Fish and Wildlife Service (FWS), along with the State Department, continue to contribute to the work of the Agreement, most recently at the 8th meeting of the Advisory Committee in Uruguay. The United States contributed to revising the best practices for mitigating seabird bycatch in pelagic longline fisheries, the guidelines on translocation of Procellariiforms, and the Agreement's information on breeding colonies of albatrosses and the numbers of albatrosses incidentally caught in U.S. fisheries.

The Pacific Island Region of NOAA Fisheries continues efforts to study and reduce interactions with albatross in the Hawaii pelagic longline fishery. With expert advice from the FWS, the Pacific Island Region

incorporated information on albatross-handling techniques into its protected species workshops for American Samoa and Hawaii longline vessel owners and captains.

The West Coast Region of NOAA Fisheries is working with the Pacific Coast groundfish industry, Washington Sea Grant, FWS, the Pacific Fishery Management Council and others to develop seabird bycatch reduction methods that are both effective and practical for fishermen. At the same time, the West Coast Region is making streamer lines available to fishermen free of charge and working in concert with the Council to track bycatch and institute appropriate regulatory measures. Regulations for streamer lines in this fishery are expected in 2015.

Dr. Stephani Zador of NOAA Fisheries' Alaska Fisheries Science Center delivered the opening plenary presentation for the 41st annual Pacific Seabird Group meeting. The presentation was titled "Ecosystem-Based Management in Alaska: The Role of Seabirds as Indicators of Ecosystem Change".

As part of the annual Alaska groundfish stock assessment and fishery evaluation report, the NOAA Fisheries Alaska Fishery Science Center's 2014 Ecosystem Considerations Report provided the North Pacific Fisheries Management Council with updated seabird and ecosystem indicators:

1. A multivariate seabird breeding index for the eastern Bering Sea
2. Seabird bycatch estimates for Alaskan groundfish fisheries, 1993-2013).

This seabird information helps to set an ecosystem context for the Alaska groundfish fisheries quota-setting process.

There is a growing awareness within NOAA Fisheries that NOAA research vessel surveys are an ideal platform for the collection of ecosystem data. The extensive seabird dataset at the NOAA Fisheries Southwest Fisheries Science Center was collected aboard multiple cruises that date to 1988 and span the entire

eastern and central Pacific from central Peru to the U.S.-Canada border and seaward to the latitude of the Hawaiian Archipelago. Seabird data for the California Current (U.S.-Mexico to U.S.-Canada border and seaward to 300 nautical miles) date to 1996, with subsequent surveys conducted in 2001, 2005, 2008, and 2014. The primary objective of the California Current surveys is to conduct a marine mammal assessment for purposes of monitoring trends and abundance. However, during the 114 days of the 2014 California Current survey, seabird observers recorded 15,547 birds of 85 species and 30 unidentified species groups including seabirds and a mixture of lost terrestrial migrants, waterfowl, shorebirds, and assorted other species. The top three in terms of overall abundance were Sooty Shearwaters (2,300), Leach's Storm-Petrels (2,253), and Red Phalaropes (1,513), all seabirds commonly associated with the California Current.

Seabird data collected aboard these surveys have been used for various purposes to:

- compile species lists for oceanic regions under US jurisdiction and on the high seas;
- document species ranges and their variation over time;
- quantify species-specific habitat preferences in the open ocean;
- identify density and diversity hotspots for conservation applications;
- understand the overlap between seabird and fisheries distribution with implications for mitigating their interactions; and
- develop indicators of ecosystem status and of ecosystem components.

Collaborative efforts among the Stellwagen Bank National Marine Sanctuary, FWS, and the NOAA Fisheries Northeast Fisheries Science Center identified areas of probable seabird-fishery interaction by integrating data from satellite-tagged Great Shearwaters and self-reported fishing locations from the

New England sink gillnet fishery. An area constituting 1% of the Gulf of Maine was identified as having the highest seabird bycatch risk, information that was further corroborated by contemporaneous fisheries observer data collected by the NOAA Fisheries Northeast Fisheries Science Center as part of core operations. NOAA ships *Gordon Gunter* and *Henry B. Bigelow* collected seabird data as part of shipboard line-transect surveys in support of the Atlantic Marine Assessment Program for Protected Species conducted by the NOAA Fisheries Northeast Fisheries Science Center. From February to April 2014, the *Gordon Gunter* covered about 4,000 km of track lines that spanned waters from Massachusetts to Virginia, with 6,940 sightings of seabirds of which Herring Gull, Northern Gannet, and Dovekie were the most frequent. From July

25 to 30, 2014, the *Henry B. Bigelow* covered about 800 km of track lines along the southern edge of Georges Bank, with 802 sightings of seabirds of which less than 90% belonged to one of five species or species groups: Wilson's Storm-Petrels, Cory's Shearwaters, Audubon's Shearwaters, unidentified storm-petrels, and Great Shearwaters. These data were archived in the Compendium of Avian Occurrence Information for the Continental Shelf Waters along the Atlantic Coast of the United States, which supports marine spatial planning efforts by various governmental agencies.



Mission: The Natural Resources Conservation Service (NRCS) helps America's farmers, ranchers and forest landowners voluntarily conserve the nation's soil, water, air and other natural resources while ensuring the land's productivity.

Department of Agriculture

Natural Resources Conservation Service

www.nrcs.usda.gov/wildlife

Natural Resources Conservation Service

Through the Working Lands for Wildlife (WLFW) partnership, NRCS provides financial and technical support to landowners to make conservation improvements to their land that benefit seven at-risk species, including the golden-winged warbler.

The golden-winger warbler breeds in young forest habitats in the Great Lakes region and at higher elevations of the Appalachian Mountains. A decline in habitat has greatly impacted the warbler, and its population is at-risk for listing under the Endangered Species Act (ESA).

Conservation Actions

WLFW benefits both the landowners and the warbler. Voluntary, private-lands conservation enables landowners to proactively conserve the species before it gets to the point of an ESA listing. Landowners who maintain these conservation practices are also protected from additional ESA regulations for up to 30 years, even if the golden-winged warbler is listed.

In 2014, NRCS provided more than \$1.3 million in technical and financial assistance to help landowners restore and enhance habitat for the golden-winged warbler. These practices include prescribed burning of forests and fields to stimulate plant growth, timber management and grazing livestock to suppress unwanted plants.

Since 2012, NRCS has helped landowners create and maintain more than 12,000 acres of golden-winged warbler habitat in the Appalachia region.

Measuring Results

During the past three years, NRCS has worked with the Golden-Winged Warbler Working Group to monitor and evaluate the birds' response to NRCS conservation practices. A study identified five successful conservation activities commonly used in WLFW -- timber harvest, prescribed fire in young forests, prescribed fire in old fields (former agricultural fields that are reverting to forest), grazing management and management of old fields. The types of plants that provide the best protection for golden-winged warblers were also identified -- grass cover for nest sites and overhead cover in the

form of blackberry or raspberry brambles to enhance nesting success.

The study examined density, nest success, juvenile survival and movements, adult condition and survival and habitat selected by golden-winged warblers across 95 study locations in four Appalachian states: North Carolina, Pennsylvania, Tennessee and West Virginia. NRCS will continue this assessment partnership to gain better insight on the effect of WLFW practices on golden-winged warbler populations, and assess the response of other wildlife species that also rely on early forest successional habitats.

NRCS' Conservation Effects Assessment Project (CEAP) funded the assessment, which was coordinated by the Indiana University of Pennsylvania Research Institute.

Partnerships

Voluntary, private lands conservation yields significant results for our nation's wildlife. Partnerships, as well as NRCS financial and technical assistance, make it happen. Since the launch of the WLFW partnership between NRCS and the U.S. Fish and Wildlife Service (FWS), NRCS has invested more

than \$5.4 million to help landowners create and maintain the habitat necessary to support breeding populations of golden-winged warblers and others wildlife that share their habitat.

Recently, due in large part to proactive steps by private landowners, FWS delisted the Oregon chub, the first fish species to be delisted due to recovery. Listing the Arctic grayling was not required because of similarly successful voluntary improvements to aquatic habitat. Additionally, through their partnership in the Sage Grouse Initiative, the agencies have seen gains in habitat creation for the greater sage-grouse through which private landowners have restored 4.4 million acres over the past five years – an area twice the size of Yellowstone National Park.

Learn more about Working Lands for Wildlife at www.nrcs.usda.gov/wildlife.

VI. Conclusion

“It is through this consistent application of solutions that systemic threats to bird conservation can best be managed.”

The Council for the Conservation of Migratory Birds believes that successful bird conservation can be achieved in this nation through partnership, sustainable practices, and collaborative endeavors that seek to build flexibility for bird populations across the landscape. As the Council continues to work towards building leadership standards and conservation measures, it will develop online resources that make this information accessible across the federal government as well as to the public. It is through this consistent application of solutions that systemic threats to bird conservation can best be managed.

This report has highlighted the first steps taken by Council agencies to address government leased, owned, and managed facilities. In 2013 and 2014, agency actions included:

- Reducing impacts from entrapment hazards in building and land-marking pipes,
- Addressing electric utility electrocution risks by retro-fitting unsafe power poles,
- Retro-fitting glass hazards at agency buildings, and
- Researching new and innovative ways to reduce facility impacts.

The Council is committed to working collaboratively across the federal government and with partners to continue strengthening our bird conservation culture in the years ahead. In 2015, the Council will continue to embrace

actions that make facilities “avian safe” and focus efforts on identifying opportunities to implement sustainable practices for federal facilities management. Continued commitment to partnerships, innovation, and sustainable solutions will play a key role making the Council an effective voice for advancing bird conservation across Federal Agencies.

Council agencies have taken a leadership role in bird conservation by working with a wide variety of domestic and international partners to adopt new and creative practices that benefit birds. The diversity of partnership approaches taken include testing new technologies, restoring habitat, embracing practices that reduce impacts across the landscape, funding or executing bird monitoring, raising awareness in agency staff and the general public of the economic and recreational value of birds, and promoting bird conservation. These accomplishments represent a significant achievement for conserving migratory birds and their habitats by cultivating our nation’s conservation ethic.

**COUNCIL FOR THE CONSERVATION
OF MIGRATORY BIRDS**



www.fws.gov/migratorybirds/CCMB.htm

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