

**Presidential Migratory Bird Federal Stewardship Award
Nomination Application for: Integrated Monitoring in Bird Conservation Regions**

1. Applicant (must be a Federal Agency. If more than one, list the lead agency):

United States Forest Service

2. Co-applicant(s) if any; can be Federal or non-Federal entity. A co-applicant is a major contributor to the outcome of the project (e.g., without their contribution, the action would not have occurred):

The Integrated Monitoring in Bird Conservation Regions program is a partnership of federal, state, tribal, non-governmental organizations and universities.

The major partners (co-applicants) include:

Avian Science Center; Bureau of Land Management (state field offices for MT, CO, WY, ND, SD); Colorado Division of Parks and Wildlife; Idaho Bird Observatory; Intermountain West Joint Venture; Montana Fish, Wildlife & Parks; Montana Natural Heritage Program; Northern Great Plains Joint Venture; Rocky Mountain Bird Observatory; USFWS Great Northern Landscape Conservation Cooperative; Wyoming Game & Fish; and Wyoming Natural Diversity Database

Other partners include:

Confederated Salish-Kootenai Tribe; Idaho Fish & Game; Montana Audubon; National Park Service; Nebraska Department of Fish & Game; Playa Lakes Joint Venture; University of Montana, USFWS Great Plains Landscape Conservation Cooperative; USFWS refuge system; Utah Division of Wildlife Resources; and Wyoming Audubon.

3. Action (In two pages or less, describe how the action contributes to overall migratory bird conservation. Be sure to highlight areas in which the action exceeds daily activities and/or agency mandates, and represents a leadership role in migratory bird conservation):

In 2007 the Forest Service, in collaboration with many partners from across much of the interior western United States, initiated the development of a broad-scale migratory bird monitoring and conservation program known as the “[Integrated Monitoring in Bird Conservation Regions](#)” (IMBCR) program.

Monitoring, if properly designed and implemented, can be a critical foundation for informing conservation and land management decisions. Effective wildlife monitoring programs can identify species that are at-risk due to small or declining populations; provide an understanding of how management actions affect populations; evaluate population responses to landscape alteration and climate change; provide information on species distributions and; allow for the targeted delivery of conservation actions including an evaluation of the effectiveness of those actions.

The IMBCR program grew out of concerns about the effectiveness of existing long-term programs; the desire to improve collaborations among analogous efforts; the need to ensure that the programs

could achieve their objectives; and with the goal of providing a foundation that could inform the proactive delivery of conservation management actions on the ground.

Following a review of the strengths and limitations of several existing programs, considering recommendations from the 2007 NABCI Monitoring Subcommittee report *Opportunities for Improving Avian Monitoring*, we identified the following as important properties for an improved migratory bird monitoring and conservation program:

- 1) The program must be scientifically robust.
- 2) The program must be a partnership to stretch limited funding and leverage resources.
- 3) The program must be able to meet individual partners' specific needs and obligations for monitoring, but should be done in a smart way that can reach beyond obligations and provide a foundation for informing proactive conservation.
- 4) Implementation must be able to account for the realities of anticipated annual fluctuations in funding.
- 5) The design should accommodate an array of monitoring methods, facilitating the evaluation of a variety of population metrics depending on the species of interest and the question being asked.
- 6) The design should facilitate the development of tools that can be used for the targeted delivery of conservation while also providing a method to evaluate those actions.

In 2011, this self-directed partnership leveraged almost one million dollars to complete 937 sampling transects comprised of 10,451 sample points across an area covering 1,117,373 km². The 2011 effort resulted in biologists detecting 122,052 individual birds representing 284 species. This data is used to generate robust population density and occupancy estimates at a variety of spatial scales including those of individual management units to entire bird conservation regions. An example of the outputs from this hierarchical monitoring framework can be found in the [2010 IMBCR Report](#).

The IMBCR partnership had its annual meeting in November 2011 to develop the goals for 2012. Data analysis automation and data dissemination are high priorities for 2012; the analysis automation work is anticipated to allow funding to begin developing decision support tools, such as predicative distribution models.

4. When was the action initiated? (Initiation date must be 2002 or later)

Planning for the IMBCR program began in 2007, with initial field implementation occurring in 2008. The program has continued to develop and expand annually.

5. Does the action take place locally, regionally, nationally or internationally? Please explain.

The IMBCR program was first pilot tested in Colorado in 2008. This all-lands program has since expanded to include all of Wyoming and Montana, the entire Badlands and Prairies Bird Conservation Region (BCR 17), the National Forests and Grasslands within the Shortgrass Prairie Bird Conservation Region (BCR 18), Coconino and Prescott National Forests in the Sierra Madre Occidental Bird Conservation Region (BCR 34), three National Forests in the Idaho portion of the Northern Rockies Bird Conservation Region (BCR 10) and Kaibab National Forest in BCR 34 and the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR 16).

The program is gaining interest for possible expansion across the BCR 10 portion of Idaho and the BCR 16 portion of Utah as well as further expansion across BCR 18 and possibly 19.

6. How does the action meet or exceed agency mandates or daily activities?

The IMBCR program helps the Forest Service and its partners respond directly to the Migratory Bird Treaty Act, Executive Order 13186, the 2001 USDA Forest Service Landbird Strategic Plan, Endangered Species Act requirements for Biological Assessments and status reviews, and issues raised in the US Department of Interior State of the Birds Report. IMBCR data and analyses are also essential to evaluating and demonstrating compliance with area-specific land management plans, state wildlife plans, and joint venture plans, and agreements such as the USFS-USFWS MOU for implementing Executive Order 13186.

In addition to helping managers meet regulatory and legal requirements, the IMBCR program supplies critical, rigorous data to inform management and conservation. The IMBCR program provides population status and trend data for a wide variety of species by stratum—which is often a particular management unit, such as a National Forest—that can be compared to other strata or to broader scales such as states or Bird Conservation Regions. In addition, modeling of habitat relationships across scales has been one outcome of enormous interest and value to the IMBCR partnership. Some of this modeling includes fine-scale variables; ultimately these results identify project design criteria for managers working on projects within a ranger district. For example, recent analyses of Brewer's sparrow occupancy data specified sagebrush cover and patch size thresholds that could be used in wildlife habitat enhancement projects.

7. Explain how the action promotes or results in effective migratory bird conservation.

The data and analyses generated from the IMBCR program have an incredibly diverse suite of bird conservation applications, well beyond tracking the status and trend of species at risk. These data can be used to link population indices and trends to specific sites and the biophysical characteristics of those sites, allowing for the further identification and refinement of species-habitat relationships. IMBCR data can help to untangle the relative influence of management actions and natural disturbance regimes. This information can also be used in a variety of conservation planning exercises, such as identifying areas where conservation will have greatest benefit, and prioritizing lands for acquisition and easements. IMBCR data can help to support and improve the link between using species as Greater Sage-Grouse as an umbrella for a broader assemblage. Site-specific data can also be used to determine the importance of different ownership types for particular species (e.g., public versus private lands), thereby informing the appropriate conservation strategies, and facilitating land management partnerships among relevant entities. In addition, these analyses can identify areas that would benefit from habitat restoration efforts, or help to define appropriate mitigations within treatment areas.

8. Provide details that demonstrate how the action is innovative.

The unique strength of the IMBCR program is based in its wide partnership support and a hierarchical sampling design that provides robust biological inference across a variety of spatial scales while meeting the specific needs of a diverse partnership.

The IMBCR program is a consistent, coordinated monitoring effort implemented across a large area of the Interior West. The expansive geographic scope facilitates understanding of population trends

for priority species, including declining species. The multi-scale analyses produced from the IMBCR data allow partners to evaluate responses to management treatments and other landscape changes. Finally, the partnership approach of the IMBCR program leverages the available resources of the participating organizations.

9. Describe the roles and responsibilities of partners (if any). Partners are associated with the action through monetary or in-kind support.

The annual workload associated with the implementing such a large monitoring program is high, but the IMBCR program does not have a full-time coordinator. Instead, lead staffers from each of the partner organizations must engage and participate in the group coordination that happens at the annual meeting, on conference calls, committee meetings and on the email listserv.

Partners play many roles in the IMBCR program. Partners that provide annual implementation funding also serve on the coordination committee and may also serve of individual subcommittees. Other partners bring implementation capacity to the program with field data collection, data analysis, reporting and logistics.

Because the IMBCR program varies by state, the amount of coordination work varies, but this work includes making collaborative decisions on sampling design and site selection. Partner roles also vary considerably with respect to data collection; currently data collection is handled by different organizations associated with specific geographic areas included in the IMBCR sampling area. Rocky Mountain Bird Observatory handles data storage and basic analytical summaries of species occupancy and density. Diverse partners are involved in supporting additional sophisticated analyses.

10. How might the action be transferrable to other sites managed by this or other federal agencies? Does the action contribute to a tangible need locally, regionally, nationally, or internationally? How is this being encouraged? Please explain.

This program is readily transferred to other areas and ownership types, because the IMBCR model is based on an all-lands approach to bird monitoring. If there are partners interested in collaborating on bird monitoring and conservation, their combined resources are shared to cover the expenses associated with sampling design, data collection, and analyses. Although implementing a monitoring program always entails challenges during the first year, many of the sampling and logistical hurdles have been addressed during the first few seasons of the IMBCR program.

Information is shared throughout the IMBCR program in several ways. The annual IMBCR partnership meeting is held during the fall, and always includes substantial discussion of lessons learned from the past, as well as planned program improvements. In addition, conference calls are held regularly throughout the year, and there is an email listserv.

The IMBCR data and associated analyses contribute to improved bird management and conservation at a variety of spatial scales, from site-specific management projects, to regional, national and international evaluations of population status and trend. These multi-scale IMBCR data are readily available to IMBCR partners and the general public, as described elsewhere in this application. Information gathered under the IMBCR design is disseminated through [annual reports](#), region-specific bird monitoring publications, species accounts and bird conservation information and scientific publications. Additionally, information on bird/habitat associations, species

distributions and raw count data are made accessible to the general public through the [Avian Data Center](#).

11. How does/did the action impact your agency's current migratory bird conservation practices?

IMBCR is essential to meeting the Forest Service's legal and regulatory requirements for analysis and reporting at the project- and plan-scales. These requirements include the National Forest Management Act to support Management Indicator Species and viability analyses; Endangered Species Act requirements for biological assessments and status reviews; manual direction (2670) on sensitive species biological evaluation viability determinations; Migratory Bird Treaty Act and the related Executive Order 13186 and MOU with the USWFS.

In addition to meeting our legal and regulatory requirements, the IMBCR data and analyses as described above positions the Forest Service to move beyond project mitigation to proactively managing habitats for bird conservation.

12. How does the action benefit migratory bird species of concern?

The IMBCR program helps the partners to refine the identification of bird species of concern that occur on their lands, and to target restoration and conservation actions for those species.