



Using IMBCR data to inform project-level planning decisions:

A case study on an aspen regeneration project on the Caribou-Targhee National Forest

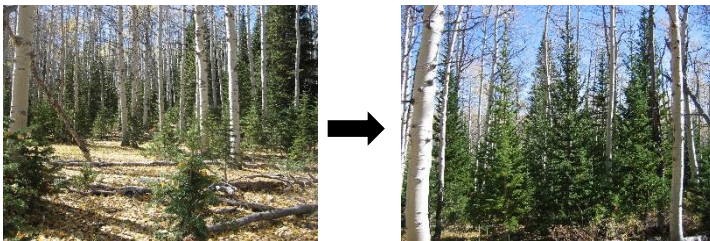


1) Background

The US Forest Service is mandated to promote the conservation of migratory birds (Migratory Bird Treaty Act), assess potential effects of any actions (National Environmental Protection Act), and maintain viable populations of native species (National Forest Management Act). To meet these mandates, USFS wildlife biologists would need to conduct monitoring every year to track bird populations in their forests and grasslands. The Northern, Rocky Mountain, and Intermountain Regions participate in a collaborative breeding landbird monitoring program known as [Integrated Monitoring in Bird Conservation Regions](#) or IMBCR. Through IMBCR, all national forests and grasslands in these Regions are monitored each year, including some units in the Southwestern Region. This monitoring effort results in occurrence detections and population estimates for over 230 different species. Bird Conservancy of the Rockies then makes this information available on the [Rocky Mountain Avian Data Center](#) (RMADC).

2) The Project

Chris Colt, a wildlife biologist with the Caribou-Targhee National Forest, completes project-level impact analyses when assessing the potential impacts of a project on federally listed species, sensitive species, other species of interest such as big game, and migratory birds. He was planning to treat approx. 100 acres for an aspen regeneration project. Many aspen stands in the project area were being replaced by conifers, so the USFS wanted to stimulate aspen growth to enhance wildlife habitat.

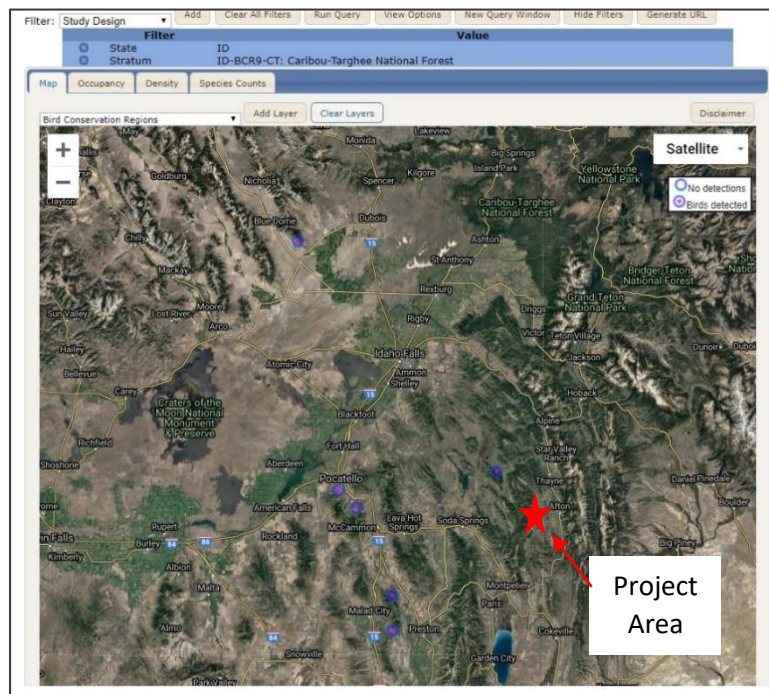


3) The Process

Chris followed several steps to complete his impact analysis. First, he excluded any federally listed or sensitive species that were not likely to occur in the project area. Next, he used existing data and literature to assess project effects on non-avian species of concern. For landbirds of concern, Chris looked to the IMBCR data. He looked at a recent [IMBCR field report](#) which provided survey results for the Caribou-Targhee National Forest and a link to look at density, abundance, and occupancy estimates for 140 species across the forest.



From this baseline information, Chris then focused on Partners in Flight-designated species of concern for the Great Basin Bird Conservation Region (BCR 9) where the project was occurring. He also used the RMADC to pull out density estimates for just the BCR 9-portion of the forest for more accurate project-area data (see short videos on how to pull out and interpret information from the RMADC [here](#)).



4) The Final Report

For the final report, Chris provided information on the landbirds of concern that were likely to occur in the project area—habitats used, unique attributes, and density estimates in the BCR 9-portion of the forest relative to forest-wide estimates. Based on the density estimates, he estimated the number of individuals for each species that could be impacted by the project by multiplying the density estimates by the project area (in km²). He compared this number to the total abundance of each species within the forest to see if it represented a large proportion. He could also compare to abundances across Region 4 for additional context. He then evaluated likely impacts from the project for these species from direct, indirect, and cumulative effects based on the literature and his professional experience. Finally, Chris made recommendations in the report to avoid and minimize negative impacts from the project, such as seasonal restrictions to avoid the nesting season.



5) Take Away

The IMBCR data helped Chris address potential project impacts on migratory birds in the project area. He was able to access information from the RMADC on approximate survey locations, species detected near the project area, and population estimates for the portion of the forest where the project was occurring and also forest-wide for context. Biologists can contact Bird Conservancy if the project will only impact one or few primary habitat types (e.g., lodgepole) and bird densities for just these habitats within the forest would be more informative for assessing potential impacts.

Other Species

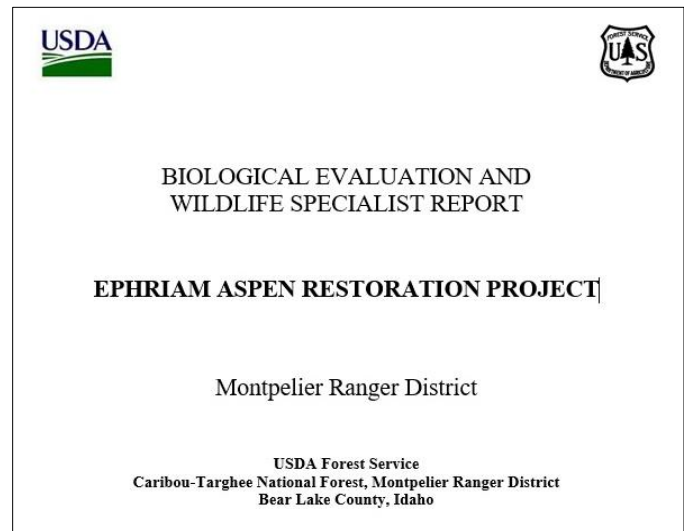


Migratory Birds/Landbirds

The project area contains habitat for numerous species of migratory birds. Land bird surveys conducted using a balanced sampling design across the forest from 2013 through 2018 observed 99 species in aspen habitats across the forest (Appendix 1). These data are based on results of bird surveys conducted in partnership with the Rocky Mountain Bird Observatory (Hanni, et. al. 2018).

With respect to the analysis of impacts to migratory birds/landbirds, the Partners in Flight Landbird Conservation Plan (Rosenberg, et al. 2016, pgs. 50-52), Intermountain West Joint Venture section lists several species of concern (species of continental importance) within the coniferous-pine forest habitat types for bird conservation region 9, these include, Cassin's finch, Lewis' woodpecker, flammulated owl, spotted owl, evening grosbeak, mountain quail, olive-sided flycatcher, and pine siskin. Of these, the flammulated owl is analyzed in the FS R4 Sensitive Species section and the spotted owl and mountain quail do not occur in southeastern Idaho and will not be discussed.

Cassin's finch is a small finch, closely resembling the more common house finch and purple finch (Hahn 1996). It is a fairly common year-round resident in higher elevation coniferous forest in eastern Idaho. This species can occur in aspen habitats, but primarily nests in conifer forested habitats. This species was observed during bird surveys on the Caribou-Targhee National Forest in aspen habitats at an average density of 4.74/km² (Hanni, et. al. 2018).



The USFS has been a funding partner for IMBCR in the Northern, Rocky Mountain, and Intermountain West Regions, and to a lesser extent, the Southwestern Region, for more than 10 years. Biologists have access to the monitoring data and rigorous population estimates to assist with management revisions, project-level planning, and identifying species of concern.



For more information about IMBCR or the data, contact Jen Timmer (jennifer.timmer@birdconservancy.org).

For more information about using IMBCR data to inform project-level planning, contact Chris Colt (chris.colt@usda.gov).