

INTRODUCTION

1. Conception and Objectives

The *Nevada Comprehensive Bird Conservation Plan* is a concerted attempt by Nevada ornithologists and their colleagues in the greater region to summarize our best current knowledge about the conservation status and habitat needs of Nevada's birds, to assess threats to their long-term viability, and to present our main recommendations for addressing these threats. The plan is intended for an audience of resource managers, land owners, and other stakeholders in wildlife conservation.

The plan originated from a recognition that the availability of new information on conservation priority birds in our state required a review and update of recommended conservation strategies. The Nevada Working Group of Partners-in-Flight took an early lead in this effort in 2007 by planning a revision of the *Nevada Partners-in-Flight Bird Conservation Plan* (Neel 1999). This original plan represented the first formal consensus among all major resource management agencies and other stakeholders regarding priority bird species and habitat-based strategies for their



Immature Northern Goshawk. Photo by Fred Peterson

management and conservation. However, at the time this plan was written, the information that was available about the distributions and status of many of Nevada's bird species was limited because no comprehensive inventory or monitoring programs of birds and their habitats had ever been undertaken in the state. Within the past ten years, however, several new data sets (described below in the Methods chapter) have been created that are far more comprehensive than those previously available. Other planning tools, such as the *Partners in Flight North American Landbird Conservation Plan* (Rich et al 2004) and the *Nevada Wildlife Action Plan* (Nevada Department of Wildlife 2008), along with better GIS maps of habitats and other spatial data, have become available in recent years. Significant changes in Nevada's landscape, such as widespread fires, weed invasion, and habitat encroachment, further highlight the need for an updated comprehensive analysis of all available information on birds and their habitats within the state.

During the process of this revision, it was determined at an early stage to embark upon an inclusive approach that was well-integrated with other bird conservation initiatives would produce the most comprehensive and useful product. Therefore, this plan aims to not only summarize the recent insights from large data sets that are now available for Nevada's landbirds and several other species groups, but also to reflect priorities that have been identified by all of the major bird conservation initiatives active in our region.



American Avocet. Photo by Larry Neel

Nevada is famously the driest state of the union, with an average of only 9 inches of precipitation annually, and its human population has been among the fastest-growing in the nation for the past two decades. These two facts conspire to generate significant pressure on our natural ecosystems, which are in many ways more fragile and slow recover than are more mesic ecosystems. However, 87% of the Nevada's lands are

publically-owned and managed by federal and state agencies, a circumstance that provides an unequalled opportunity for regional conservation of birds and their habitats. It also presents management agencies with the challenge of simultaneous addressing conservation objectives and fulfilling mandates to facilitate economic and recreational uses of public lands. Therefore, the primary goal of this plan is to provide these stakeholders with our current knowledge of the most biologically effective strategies for bird conservation.

For these reasons, we provide the following statement of the objectives of the *Nevada Comprehensive Bird Conservation Plan*:

- a) To summarize all relevant and reliable information about the conservation status and habitat requirements of conservation priority birds in Nevada, with an emphasis on quantitative data
- b) To assess and report important threats affecting these birds, with an emphasis on threats that can be wholly or partly addressed through management practices
- c) To emphasize bird conservation through the mechanism of habitat management, recognizing that most threats to Nevada's birds are linked to habitat
- d) To make this information available to resource managers in a relatively concise, organized, standardized, and user-friendly format

- e) To facilitate periodic updating of the plan as new relevant information becomes available, and to make these updates readily available to users

The time period addressed by this conservation plan is the ten years following its release (2010 – 2020). We recognize that effective short-term conservation strategies are not always identical to effective long-term strategies, which is why we envision this plan as a continually evolving product. For instance, in order to prevent further loss of high-quality sagebrush shrublands in the near future, it is imperative to actively combat the extent of rangeland fires. Whether or not this is an equally-viable long-term strategy, however, is another matter.

Although habitat-based conservation strategies are the most heavily stressed in this plan, we also present strategies involving research, planning, monitoring, and public outreach and education in cases where we see gaps in our knowledge or where a better informed public are deemed necessary for effective conservation. As a general rule, we attempt to present a fairly small number of strategies that we believe will be most effective for conservation of Nevada bird populations, rather than providing a comprehensive list of all activities that could be of possible benefit. Also, in this plan, we generally refrain from providing “best management practices”, and instead focus on the desired condition of a habitat type. For instance, we leave grazing plans, fire management practices, riparian restoration planning, methods of weed control, and so forth, to our conservation partners, who generally have staff members who specialize on these matters. Instead, our recommendations generally include instructions such as “avoid removal of herbaceous understory”, “restore riparian woodlands and floodplain wetlands”, “protect areas of tree recruitment”, etc., which leave the options of how to accomplish the task open to the conservation practitioner and, when necessary, to a case-by-case evaluation of how best to go about it.



Yellow Warbler, an indicator species for healthy lowland riparian habitat. Photo by Martin Meyers.

Finally, in this plan we use birds both as targets of applied conservation, and as tools to inform us about what constitutes a “healthy habitat”, as bird-focused conservation planning is one of the most effective ways to achieve general wildlife conservation goals. In a number of habitat types, the presence or absence of priority bird species is an excellent indicator of the status of the habitat and the likely threats to its integrity and

healthy functioning. In those habitat types, which for one reason or another are used by only few conservation priority species, we identified additional indicator species whose presence or absence provides some knowledge of habitat status. Birds respond sensitively and quickly to many sorts of habitat change, and thus serve as indicators of general ecosystem health and of the status of a wide range of wildlife species. Birds are also relatively easy to monitor, facilitating the collection of informative data. We therefore hope that Nevada's resource managers, along with the resources that they manage, will benefit greatly from the information assembled in this plan.

2. Organization of the Plan

The plan's main chapters present:

- a) A detailed summary of the methods used to obtain, synthesize, and analyze, the information presented in this plan
- b) A brief overview of the regularly-occurring and nesting bird species in Nevada and our existing bird conservation framework
- c) Species accounts for each priority bird species summarizing key information about the bird's biology, habitats, needs, threats, and conservation strategies
- d) Habitat accounts that provide a comprehensive vision for management of each focal habitat type based on our knowledge of bird habitat requirements and threats

The plan intentionally focuses on presenting practical, logistically feasible, and hopefully effective approaches for resource managers, conservation practitioners, and other entities or organizations whose activities may affect priority bird species. Policy-oriented conservation strategies, for example those that involve formal agreements among agencies, or advocacy for particular regulatory practices, are not covered, as these issues are beyond the purview of this plan and are better addressed within the framework of agency planning.

Resource managers will likely find the Habitat Accounts section the most immediately useful, as it represents our conclusions about the bird conservation needs in each habitat type. Use of habitat-based strategies has the advantage of benefitting a large number of priority bird species without requiring the manager to sort through the particular habitat requirements of each bird. However, species do vary in their distributions, population statuses, particular habitat needs, and susceptibility to various threats, so the Species Accounts section allows managers to choose a finer-grained species approach to customize habitat management toward particular species of interest. Throughout the species accounts, we make an effort to indicate the reliability of the information presented, so that users of the plan may intelligently evaluate and apply this information [reliability indices will be finalized shortly].

3. Relationship With Other Planning Efforts

This plan was conceived, in part, as a revision of the earlier *Nevada Partners in Flight Bird Conservation Plan* (Neel 1999). Because much of the background and history of habitat-based management in Nevada is well-covered and easily available to readers in this earlier plan, we refrain from repeating the same information here.

The *Nevada Comprehensive Bird Conservation Plan* also attempts to achieve integration with, rather than duplication of, other current wildlife planning efforts in our region. Our goal with this plan is to synthesize and distill information from many sources into a single, convenient repository, but there will still be many circumstances in which resource managers may refer to other plans that provide additional perspectives, cover additional wildlife taxa, and offer a more complete picture of agency-specific resource management issues, including administrative oversight and interagency coordination.



Peregrine Falcon. Photo by Bob Goodman

The Nevada-specific plans to which we direct the reader's attention include the Nevada Department of Wildlife's *Nevada Wildlife Action Plan* (NDOW 2008), which presents a broad range of information and conservation strategies not only for birds, but also for other priority terrestrial vertebrates. The Nevada Department of Wildlife is also currently preparing the *Nevada Department of Wildlife Upland Game Species Management*

Plan (NDOW *in prep.*), which provides the best source of distributional and management information for the upland gamebirds in our region. The Nevada Sage-Grouse Conservation Team (2004) has conducted exhaustive efforts to generate a *Greater Sage-Grouse Conservation Plan for Nevada and Eastern California* which provides much more detail on the distribution, local management issues, and conservation opportunities associated with this high priority bird than this plan can provide. [Add reference to waterfowl management plans]. The two largest land management agencies in Nevada, the U.S. Forest Service (USFS) and the U.S. Bureau of Land Management (BLM) also have management plans that provide in-depth treatments of conservation issues and strategies on the lands managed by these agencies. The USFS is currently preparing the 20-year revision of the *Humboldt-Toiyabe Forest Health Plan*, and Nevada's BLM has regional *Resource Management Plans*, which summarize habitat management strategies for particular regions of Nevada. All of these above-mentioned plans have been consulted in preparation of this plan, but we encourage our readers to refer to them for additional details.

Nevada resource managers can also benefit from multi-lateral bird conservation initiatives with a regional or even continental focus, including the *Partners in Flight Plan North American Landbird Conservation Plan* (Rich et al. 2004), the *Intermountain West Regional Shorebird Plan* (Oring et al. 2003), the *Intermountain West Waterbird Conservation Plan* (Ivey and Herziger 2006) and the [insert regional / national waterfowl plan(s)]. These plans represent the regional conservation planning efforts of several initiatives, which we consulted in particular for selecting priority species for the Nevada region, but which may include additional information that is only summarized in this plan. Many of the plans mentioned above are discussed in greater detail in Section 2.1.1 of the Methods chapter, which describes the key sources used in the preparation of this plan.



Western Grebe. Photo by Larry Neel.

4. New Products and Future Updates

This plan was conceived as the first multi-lateral, all-bird compendium of bird conservation information for Nevada, a goal made possible because only because of the unparalleled collaboration and cooperation among representatives of all major agencies, initiatives, and other stakeholders in the state. We also sought to include the widest possible array of quantitative information in the plan, much of which was only recently

generated. For this, we conducted new analyses, syntheses, and interpretations of both older data and more recent data generated by the Nevada Bird Count (NBC; see Section 2.1.4, Methods chapter) and from a variety of other recent bird inventory and monitoring efforts. As a result, a number of new products are presented in this plan that were not previously available for planning:

- a) Updated distribution maps for all conservation priority species (Section 6, Methods), based on a combined data set drawing primarily from the NBC, the Nevada Breeding Bird Atlas Project, and the NDOW Diversity database (Sections 2.1.3 – 2.1.5, Methods)
- b) Statistical analyses of the relationships between landbirds and their habitats, based primarily on NBC and remote sensing data (Sections 5.1 – 5.2, Methods)
- c) New Nevada population size estimates for all priority landbirds that are adequately surveyed by NBC (Section 5.4, Methods)
- d) Density estimates by habitat type for all priority landbirds that are adequately surveyed by NBC (Section 5.3, Methods)
- e) A newly synthesized GIS habitat map that draws from the most useful elements (from the ornithological point of view) of the LandFire Existing Vegetation Type map, the Southwest ReGAP vegetation map, and other habitat-specific maps offering better coverage of Mesquite-Acacia and Joshua Tree habitats (Section 4.2, Methods)
- f) A formal threats analysis for each conservation priority species and each bird habitat type (Section 7, Methods).
- g) Confidence rankings on key findings presented in the plan, which help to identify gaps that need to be filled with additional monitoring or research (Section 8, Methods).

Finally, it is our intention to make this plan available primarily as an electronic document that can be updated on a regular basis as new information becomes available in upcoming years. As this draft of the plan becomes finalized in the spring of 2010, it will also be made available with a limited number of hardcopies that will be distributed to land managers and other stakeholders in bird conservation in Nevada. GBBO agrees to provide the platform for online access to the plan and any future updates in the form of the following website: www.gbbo.org/bird_conservation_plan.htm. Additional storage sites will be identified as needed during the finalization of the plan.