

**COORDINATED IMPLEMENTATION PLAN  
FOR BIRD CONSERVATION IN NEVADA**

Prepared by  
Nevada Steering Committee  
Intermountain West Joint Venture

2002

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## **Introduction**

In 1986, the North American Waterfowl Management Plan (NAWMP) was adopted by the United States and Canada to address the conservation and restoration of waterfowl, other migratory waterbirds, and the habitats on which they depend. The Plan, as adopted, aims to restore waterfowl populations to 1970-79 levels and establishes specific population objectives for twenty-five species of ducks, five species of geese, plus trumpeter and tundra swans. It was updated in 1994 to include full participation by Mexico, and again in 1998 to include language strongly encouraging Plan partners to improve coordination with other wildlife initiatives, including those directed at other migratory birds, endangered species, fisheries and bio-diversity. It will be updated again in 2003.

Six public-private partnerships, or joint ventures, were originally established by the Plan to coordinate the implementation of NAWMP and achievement of population and habitat objectives along flyway lines across North America, with four more joint ventures having been formed in recent years. These joint venture partnerships include active participation by the U.S. Fish and Wildlife Service, USDA Forest Service, Bureau of Land Management, Natural Resources Conservation Service (USDA), and other federal agencies. As well as state wildlife management agencies and a number of wildlife conservation groups, including Ducks Unlimited Inc., Pheasants Forever, The Nature Conservancy, and National Audubon Society. The North American Wetlands Conservation Act (NAWCA) was set up in 1989 to implement the objectives of NAWMP. This program, re-authorized by Congress in FY/2001 at \$50 million/year, encourages and rewards partnerships among all wildlife conservation initiatives through two matching grant programs, a standard grant program and a small grant program.

The Intermountain West Joint Venture (IWJV) was established in 1994 as the eleventh habitat joint venture. It encompasses parts of eleven Western states, including all of Nevada. Public agencies and conservation groups work as partners through an IWJV State Steering Committee in Nevada to identify, protect, restore and enhance wetlands and other important habitats for waterfowl and other migratory birds, as well as native resident birds such as Sage Grouse.

The Nevada Steering Committee is one of the most active state steering committees in the IWJV. And, includes representatives from the Nevada Division of Wildlife, U.S. Fish and Wildlife Service, Bureau of Land Management, Bureau of Reclamation, U.S. Forest Service, Natural Resource Conservation Service (USDA), Ducks Unlimited, Nevada Waterfowl Association, Lahontan Audubon Society, Great Basin Bird Observatory and The Nature Conservancy of Nevada. The group has been meeting since 1995, as originally as a wetlands and waterfowl group, to consider projects to protect and restore key wetlands and associated upland habitats statewide. In 2001, the first Standard (large) NAWCA grant was approved for Nevada in the Steptoe Valley of White Pine County.

In 1995 the IWJV Management Board adopted an Implementation Plan intended to provide a framework for implementing the NAWMP in Nevada and other states of the Intermountain West, and for developing more specific wetland focus area plans in each of those states. The Nevada Steering Committee defined four waterfowl and wetland focus areas, which were incorporated into the larger IWJV Implementation Plan, adopted in December 1995. The focus areas delineated by the steering committee are Northeast Nevada, Sheldon/Quinn River, Southern Nevada Wetlands, and Western Nevada Wetlands. Waterfowl and wetland habitat objectives were established for the Intermountain West by the IWJV Management Board and included in the 1996 Implementation Plan.

In 2000, the IWJV Management Board determined that the 1995 IWJV Implementation Plan should be updated, as a Strategic Plan, and that it should be completed from the ground up, state-by-state. The Board also decided that this updated planning process should attempt to coordinate NAWMP objectives with other existing migratory bird initiatives operating within the Intermountain West. In 2001, the Board funded a project to work through state steering committees in developing coordinated “all bird” implementation plans in all the states of the Intermountain West Joint Venture. The Nevada Steering Committee stepped forward to take the lead in developing a state implementation plan.

These coordinated “all bird” implementation plans will not only provide the basis for an updated and expanded overall IWJV Implementation Plan, they will also guide the IWJV Management Board in considering and ranking various habitat protection, restoration and enhancement projects for funding via the North American Wetlands Conservation Act (NAWCA) and other programs.

## **2. Planning Objectives**

1. Create a planning forum, through the Nevada Steering Committee of the IWJV, in which representatives of state and federal conservation agencies and wildlife conservation groups work collaboratively to develop coordinated habitat goals, objectives and projects that address the conservation needs of all bird species in Nevada.

2. Review, merge and synthesize the goals and objectives of existing bird conservation plans into a coordinated planning document that reflects the species and habitat priorities of all bird conservation programs in Nevada. This document is intended to guide the Management Board of the Intermountain West Joint Venture (IWJV) in implementing and updating statewide IWJV goals and objectives for bird conservation in Nevada.

## **3. Direction and Connections**

By taking a lead role in coordinated implementation planning in the Western states, the IWJV Management Board is following the direction of the NAWMP (1998 Update). IWJV is also responding to recommendations and direction from other national sources and programs to attempt coordination of waterfowl and wetland habitat planning with the identified goals of other migratory bird programs. These other national sources and programs include the following:

**North American Bird Conservation Initiative (NABCI):** Formed in 1998 as an international forum for public and private efforts to coordinate international conservation efforts of existing major migratory bird initiatives, NABCI works to increase the effectiveness of, and coordination between, existing and new bird conservation initiatives, including the North American Waterfowl Management Plan. As a recommended framework for coordinated bird management, NABCI has adopted and mapped ecological units called Bird Conservation Regions (BCR), a number of which cover the area of the Intermountain West Joint Venture. The Great Basin BCR covers most of the state of Nevada, with the very southern and southwest part of the state being in the Sonoran and Mojave Deserts BCR. These BCRs are also shown as Figure One.

A Great Basin BCR coordinator was hired in 2002 and a big part of his job is to work with IWJV partners to coordinate planning and project design for bird habitat projects in Nevada and other states within the BCR. The BCRs defined by NABCI will probably prove to be the most relevant ecoregions for migratory bird planning and management.

**International Association of Fish and Wildlife Agencies:** The International Association of Fish and Wildlife Agencies (IAFWA) was founded in 1902 as a quasi-governmental organization of public agencies, including state wildlife agencies, charged with the protection and management of North America's fish and wildlife resources. The IAFWA received a federal grant in FY/2001 to conduct "integrated all bird conservation" planning workshops for state wildlife agencies in FY/2001-2003. The national objectives of this grant closely parallel the IWJV's coordinated migratory bird planning effort, and the IWJV is working with IAFWA staff to ensure that the workshops are complementary. Workshops have been conducted in Colorado and Arizona in 2002 and are planned for other IWJV states, including Idaho, in 2003.

**Figure One – Bird Conservation Regions in Nevada**

**Congress:** The U.S. Congress strongly supports a public-private partnership approach to protecting and restoring wetlands and other important migratory bird habitats across North America, and they have signaled their support by increasing the federal funds available for migratory bird initiatives. In FY/2001, Congress re-authorized the North American Wetlands Conservation Act (NAWCA) and increased its authorized annual funding level from \$30 million to \$50 million. The FY/2001 appropriation for NAWCA was also increased to \$40 million, from \$15 million in FY/2000. In FY/2002 Congress increased the funding level for NAWCA to \$43.5 million and recommended a phased-in approach to fully funding the 15 habitat and species joint ventures that were in place in FY/2001. These actions make it clear in budget language that Congress regards these joint ventures as a primary delivery system for all federally-funded migratory bird programs. In its FY/2002 Interior Appropriations language, the House noted that the joint venture program “continues to be one of the greatest successes of the (Fish and Wildlife) Service, with funding leveraged to a greater extent than all other Service programs combined”.

Congress also passed a new Neotropical Migratory Bird Conservation Act (H.R.2217) in 2002, funding the new Act with an initial \$3 million for a matching grants program, and created a new State Wildlife Grant program within the Interior and CJS budgets, which provides funding to state wildlife agencies for wildlife planning and conservation.

**Executive Order 13186 – Protection of Migratory Birds:** In January, 2001 outgoing President Bill Clinton signed an executive order requiring all federal agencies which might have a measurable negative impact on migratory birds to develop a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service, to promote the recommendations of NAWMP, NABCI and other migratory bird programs, as well as other conservation considerations. The Bureau of Land Management and USDA Forest Service signed an MOU with the Fish and Wildlife Service in 2001, which emphasizes a collaborative approach to migratory bird conservation, in cooperation with other agencies and organizations. Because this executive order addresses the integration of bird conservation principles, habitat restoration for migratory birds, and comprehensive planning among various bird conservation programs, these coordinated implementation plans developed by the IWJV should assist these federal agencies with implementation of the MOU. Other federal agencies will presumably also develop MOUs with the Fish and Wildlife Service to implement Executive Order 13186. This presidential Executive Order was reinforced by the Bush Administration on September 12, 2002 when U.S. Fish and Wildlife Service Director Steve Williams issued **Director’s Order No. 146**, which indicates, among other things, that joint ventures should deliver the full spectrum of bird conservation.

#### **4. Migratory Bird Conservation Initiatives**

There are four migratory bird initiatives for which national, regional and state plans have been or are being developed. The following programs have different but compatible approaches to planning for bird conservation, but the goals, objectives, and priorities of each will be considered in the IWJV Coordinated Implementation Plan for Bird Conservation in Nevada:



**North American Waterfowl Management Plan (NAWMP):** Adopted by the United States and Canada in 1986, and by Mexico in 1994, to address the conservation and restoration of waterfowl, other migratory waterbirds, and the habitats on which they depend. The Plan, as adopted, aims to restore waterfowl populations to 1970-79 levels and establishes specific population objectives for twenty-five species of ducks, five species of geese, plus Trumpeter and Tundra Swans. Priority waterfowl species for Nevada are shown in Table One and Appendix A.

The Intermountain West Joint is one of eleven public-private partnerships established to coordinate the implementation of NAWMP and the achievement of population and habitat objectives along flyway lines across North America. Public agencies and conservation groups work as partners through an IWJV State Steering Committee in Nevada to identify, protect, restore and enhance wetlands and other important habitats for waterfowl and other migratory birds, as well as native non-migratory birds such as Sage Grouse.

**Partners in Flight:** The national Partners in Flight (PIF) program began in 1989 as a coordinated effort to document and reverse apparent declines in the populations of neotropical migratory birds, those birds that breed north of Mexico and then migrate to Mexico, Central and South America and the Caribbean in the winter months. The National Fish and Wildlife Foundation took the lead in bringing together federal, state, and local government agencies, foundations, conservation groups, industry and the academic community to address the problem of population declines. The reasons are complex, and include loss of breeding habitat due to fragmentation, alteration, urban expansion and natural disasters; loss or alteration of habitat in non-breeding areas and along migratory routes; and brood parasitism. The PIF program was later expanded to include all non-game land birds.

Today Partners in Flight is an international program, with eastern and western regional coordinators and PIF working groups in each state. In 2000, the American Bird Conservancy (ABC) published the first comprehensive national plan for the program, entitled *Partners in Flight: Conservation of the Land Birds of the United States*. This plan summarizes the goals and priorities of the various state Bird Conservation Plans, as well as 93 physiographic areas and seven generalized regions of the continental United States. The plan also encourages better coordination with other initiatives such as the NAWMP, U.S. Shorebird Management Plan, and North American Waterbird Conservation Plan. PIF initially divided Nevada into four physiographic areas, but for purposes of coordinated bird conservation, these have now been replaced by the BCRs discussed on page 4. Passage of the Neotropical Migratory Bird Conservation Act in 2001 provided a new federal funding program and commitment to neotropical migrant species addressed by Partners in Flight.

The Nevada Working Group of Partners in Flight was formed in 1993 to focus resources of PIF partners on the improvement of monitoring, research, management and education programs involving native, non-game landbirds and their habitats. The working group includes many of the same agencies, organizations and people as the IWJV steering committee: Nevada Division of Wildlife, U.S. Fish and Wildlife Service, Bureau of Land Management, Bureau of Reclamation, USDA Forest Service, National Park Service, University of Nevada, Red Rock and Lahontan Audubon Societies, Great Basin Bird Observatory and The Nature Conservancy of Nevada.

In 1996, the Nevada Working Group initiated a *Nevada Bird Conservation Plan* (BCP), which assessed the status of 43 priority species of Nevada landbirds, in four established physiographic regions and 15 major habitat types, and articulated 63 population objectives for these 43 species. This plan, completed

in 1999, remains the best summary of species and associated habitat information for neotropical migrant birds and other native non-game landbirds of Nevada, and is one of primary sources of information used in developing a coordinated implementation plan for bird conservation in Nevada.

Priority species listed by Partners in Flight in the Nevada BCP are listed in Table One of this plan, and associations between priority species and habitat types, taken directly from the Nevada BCP (Appendix B), are included this plan, as Appendix A.

**U.S. Shorebird Conservation Plan:** The term shorebird is applied in North America to a large group of birds commonly called sandpipers and plovers but also include oystercatchers, avocets, and stilts. Of 214 species of shorebirds found worldwide, 53 regularly occur in the United States and, although they occur at some time of the year in all 50 states, the biology and ecology of most shorebird species is poorly understood. Technical and regional working groups were convened to address some of the known conservation and research issues for shorebirds and in 2000, the *U.S. Shorebird Conservation Plan* was published by the Manomet Center for Conservation Sciences, funded by a grant from the U.S. Fish and Wildlife Service. This national plan provides baseline information on shorebird populations and habitat, and addresses some of the known challenges to shorebird conservation, including low reproductive potential and habitat loss. It also articulates hemispheric and national goals for restoring and stabilizing shorebird populations, especially those known to be in decline. These goals emphasize research, monitoring and cooperative landscape management strategies at the international, national, and regional levels. As with NABCI and the Partners In Flight plan, the U.S. Shorebird Conservation Plan encourages close coordination with other bird conservation initiatives and implementation of shorebird conservation strategies through the Intermountain West Joint Venture and other habitat joint ventures established by the North American Waterfowl Management Plan. The shorebird plan defines Shorebird Planning Regions across North America, which follow the lines of NABCI Bird Conservation Regions. All of Nevada is within the plan's Intermountain West Shorebird Planning Region.

A draft *Intermountain West Regional Shorebird Plan* was also released as a draft in 2000. The plan notes that perhaps a million shorebirds breed in the Intermountain West and that millions more migrate through the area each year. The plan recognizes that finding ample high quality fresh water will be the greatest challenge faced by shorebirds in the Intermountain West. The regional plan articulates seven goals and associated objectives and strategies related to habitat management, monitoring and assessment, research, outreach and planning. The planning goal includes objectives to coordinate shorebird planning and projects with other migratory bird initiatives and specifically with the Intermountain West Joint Venture. The Intermountain West plan recognizes eleven Key Shorebird Areas, one of which, Lahontan Valley and Humboldt Sink, is in Nevada. Lahontan Valley/Humboldt Sink is recognized as a Hemispheric Site by the Western Hemisphere Shorebird Reserve Network (WHSRN). Another key area, Honey Lake, is in California but just across the border from Nevada.

Some of the breeding shorebird species of particular concern in Nevada and other Intermountain West states are listed in Table One. These include Long-billed Curlew, Snowy Plover, American Avocet, Black-necked Stilt, Wilson's Phalarope, Long-billed Dowitcher, Spotted Sandpiper, and 13 other species with scores of 4 or 5 in the plan's species scoring process. This Intermountain West Regional Shorebird Plan will provide the primary source of information for shorebird species and habitat objectives for the coordinated migratory bird implementation plan for Nevada. . Priority species from this plan are listed in Table One.

**North American Waterbird Conservation Plan:** The *North American Waterbird Conservation Plan* provides a continental framework for conserving and managing colonial nesting waterbirds, including 209 species of seabirds, coastal waterbirds (gulls, terns, pelicans), wading birds (herons, ibises), and marsh birds, such as certain grebes and bitterns. The overall goal of the plan is to ensure that the distribution, diversity and abundance of populations, habitats (breeding, migratory, and non-breeding) and important sites of waterbirds are sustained or restored throughout their ranges in North America. The geographic scope of the plan covers 28 countries, from Canada to Panama, as well as islands and nearshore areas of the Atlantic, Pacific, Gulf of Mexico, and Caribbean Sea. As with NAWMP and Partners in Flight, the waterbird partnership includes federal, state and provincial wildlife agencies, individuals, and nonprofit conservation organizations. Also as with PIF and other migratory bird plans, this plan includes a goal to establish conservation action and exchange information and expertise with other bird conservation initiatives, especially NABCI and the habitat joint ventures such as IWJV established by the North American Waterfowl Management Plan. The plan also calls for establishment of Practical Units for Planning (PUPs) for terrestrial habitats; Nevada falls within the Intermountain West/Southwest Desert PUP.

Volume One of the North American plan covers 165 species of colonial-nesting birds, as well as three grebes that nest semi-colonially. Volume Two will cover 44 species of marsh birds. In October 2001, a second draft of Volume One was released for review. In this draft plan, the conservation status of all North American waterbird species were evaluated, adapting the protocol from Partners in Flight and U.S. Shorebird Conservation Plan. Under this classification system, a number of species found in Nevada as breeders or migrants fall into the **Species of Moderate Concern** or **Species of Low Concern** categories for North America, Northern Hemisphere, Western Hemisphere, and Cosmopolitan (world-wide) including the American White Pelican, California Gull, White-faced Ibis, Western Grebe, Clark's Grebe, and Green Heron. A number of other species, including the Great Blue Heron, Double-breasted Cormorant, Forster's Tern, Ring-billed Gull, and Great Egret, are found in Nevada but classified as **Species Not at Risk** in North America. The status of these species in Nevada may of course be more or less threatened than their global, hemispheric, or continental status. Priority species from this plan are listed in Table One.

In December 2001 the process was initiated for developing a regional waterbird conservation plan for the Intermountain West/Southwest Desert Practical Planning Unit. A first draft was released in August 2002. When this regional plan is completed, it will articulate conservation and management goals and objectives for waterbirds in Nevada and other states of the Intermountain West Joint Venture, as well as identify and describe habitat types and locations of important waterbird habitat in Nevada and other Western states. It will be the primary source of information for waterbird species and habitat objectives for the coordinated migratory bird implementation plan for Nevada.

## 5. Other Bird Conservation Programs

In addition to the four migratory bird initiative described above, there are a number of other important bird conservation programs which will be reviewed, considered and included in a Coordinated Implementation Plan for Bird Conservation in Nevada. These include:

**Important Bird Areas (IBA) Program:** The IBA Program is an international, site-based approach to bird conservation that began in Europe in the mid-1980s, where BirdLife International sponsored a

continent-wide inventory of key sites for birds. The effort spread to the United States; and in the mid-1990s the American Bird Conservancy and National Audubon Society completed a pilot project to identify and describe the Important Bird Areas of Pennsylvania. As of the summer of 2001, 43 states, including Nevada, have IBA programs and three states have published guides to their IBAs.

The IBA program recognizes that there are places on the landscape that provide exceptionally valuable or essential habitat for one or more species of birds, including breeding, wintering or migratory habitat. Identifying, recognizing, monitoring, and stewarding these sites can form the basis of a landscape-level conservation network, not just for birds but for other species of wildlife.

The selection process for IBA's examines sites based on the presence, species assemblage, and abundance of birds and the condition and quality of the habitat. Standardized, science-based criteria are used to identify areas as IBA's. In brief, the Nevada IBA criteria are listed below in Figure 2.

<b>Figure 2: Site Selection Criteria of the Nevada IBA Program</b>	
1.	Sites important to Nevada species of concern (primarily Nevada Partners in Flight Priority list).
2.	Sites harboring species restricted to unique/threatened habitat types.
3.	Sites where significant numbers of birds congregate. Supplementary criteria:
4	Sites supporting long-term avian research.
5.	Sites providing outstanding educational opportunities.

When completed, the Nevada Important Bird Area Program will be an important component of a coordinated migratory landbird, waterfowl, shorebird and waterbird implementation plan for Nevada. After identifying the best and most important habitats for birds in Nevada, the IBA Program will establish long-term monitoring programs for each IBA. The monitoring program is based on the coordinated efforts of volunteer citizen scientists and agency and NGO biologists. Monitoring of each IBA will develop a database to track population trends at each site, and in the long-term, help identify large-scale trends in bird populations. The IBA program will also work with landowners to develop stewardship plans to guide the management of IBA's for the long-term benefit of wildlife. IBA status will also help land management agencies and conservation organizations set conservation priorities and solicit funding and support at the national level for local programs.

When the initial review of potential IBA sites is completed in 2003, the Nevada IBA Program will provide an important component of the IWJV Coordinated Bird Implementation Plan.

**Ecoregional Conservation Planning:** The Nature Conservancy (TNC) has adopted ecoregion-based planning as the most effective way to achieve its national mission of preserving a diversity of plants, animals, and natural communities. The planning process used by TNC follows a methodology outlined in *Geography of Hope* (2000) that defines a vision of conservation success at an ecoregional scale, and is based on documenting and mapping a list or "portfolio" of biologically outstanding sites that represent a full complement of ecosystems, natural communities, and species characteristics of the ecoregion., This

methodology may be used to direct TNC programs and influence other conservation efforts across the United States. The ecoregional plans are based on amended ecoregional units delineated by Bailey et al (1998).

The Nature Conservancy of Nevada was assigned lead responsibility for developing a *Ecoregional Conservation Blueprint for the Great Basin*, which blankets Nevada, the western third of Utah, and part of California, east of the Sierra Nevada mountain range. The rest of Nevada falls within the Columbia Plateau ecoregion to the north, the Mojave Desert ecoregion on the south, or in a small portion of the Sierra Nevada ecoregion in extreme western Nevada. Lead responsibility for these other ecoregional plans was given to Nature Conservancy chapters in Washington and Oregon, Nevada, and California, respectively.

Development of the Conservation Blueprint for the Great Basin began in 1999 and involved extensive literature review, as well as personal interviews with about 170 recognized experts on the flora, fauna and bio-diversity of Nevada and other states of the Great Basin ecoregion. The plan, which was released by The Nature Conservancy in 2001, breaks the ecoregion into 29 “ecological systems” and identifies 358 potential conservation areas, or “portfolio sites”, 249 of which are entirely or partly in Nevada. There are a total of 370 conservation areas in Nevada, all within portions of the four ecoregions in the state.

Although TNC’s ecoregional plans are not specifically bird conservation plans, they do identify and classify those habitat types, areas, and sites which provide important habitat for birds. Only those birds identified as conservation targets for the seven ecoregions are listed for the portfolio sites in those ecoregional plans. Target Bird Species, listed by The Nature Conservancy for each ecological system group, were obtained from the literature and from interviews with acknowledged experts. These target species are listed in Table One, along with priority species from other programs and agencies.

The Nevada Steering Committee of IWJV opted early in this implementation planning exercise to use The Nature Conservancy’s (TNC) ecoregional planning framework as an important source for resource information and the primary source for defining important bird habitats, identifying habitat conservation areas, and linking habitats to priority (target) bird species. The steering committee considered the TNC framework to be important to this effort for a number of reasons: TNC ecoregional data and maps cover the whole state of Nevada; TNC is developing ecoregional plans for other IWJV states; the TNC planning process is current and based on recent interviews with hundreds of wildlife managers and conservation specialists around the state; TNC Portfolio Sites are already depicted on GIS maps, which can be modified to meet our needs; and TNC is working closely with the Nevada steering committee to make its ecoregional planning process relevant to coordinated migratory bird conservation.

**Range-wide Sage Grouse Conservation Project:** The Western Association of Fish and Wildlife Agencies (WAFWA) signed a Memorandum of Understanding in 2000 with the U.S. Fish and Wildlife Service, Forest Service and Bureau of Land Management to develop a strategy for the conservation of Sage Grouse throughout its range. In 2001 the State of Utah and WAFWA received a federal grant to aid sagebrush/Sage Grouse conservation efforts in six or seven Western states and British Columbia. In 2002 a project coordinator was hired with the grant funds and he began coordinating the completion of statewide and province-wide sage grouse databases, including medium-to-fine-scale distribution maps of sage grouse habitat. The project is overseen by a federal-state National Sage Grouse Conservation Framework Team.

**Endangered Species Act:** The Federal Endangered Species Act (ESA) of 1973, as amended, mandates the protection of threatened and endangered species of plants and animals and the development of a recovery plan for each species. In Nevada, there are a number of birds listed as Endangered (E), Threatened (T), Proposed Threatened (PT) or Candidate (C) species under the ESA, including the Yuma Clapper Rail, Southwestern Willow Flycatcher, Mountain Plover and Bald Eagle. Due to their legal status under the ESA, these bird species are automatically included in the list of priority bird species for the IWJV in Nevada, even though independent measures are being taken under the ESA to recover their populations. The U.S Fish and Wildlife Service also maintains a regional Birds of Conservation Concern list and an unofficial, county-by-county “species of concern” list, which includes a number of birds that could become Candidate species for ESA listing in the future; these species are also included in Table One, the combined list of priority bird species for Nevada.

## 6. Priority Bird Species

The bird conservation planning programs described above, including the federal Endangered Species Act and the North American Waterfowl Management Plan/IWJV, have developed or will develop, as part of their overall planning process, a list of priority bird species, species of concern, or target species, either for Nevada or the entire Intermountain West region. The Nevada Steering Committee has reviewed all of these lists, including target bird species in TNC’s *Ecoregional Conservation Blueprint for the Great Basin*, and they have combined and indexed these priority species as Table One. These priority species, by agency and program, are also shown in a matrix labeled as Appendix B.

## 7. Priority Species-Habitat Relationships

Two systems for defining wildlife habitats or habitat types were considered by the Nevada Steering Committee in this planning process. The Partners in Flight *Bird Conservation Plan* defined 15 Habitat Types for Nevada. The TNC *Ecoregional Conservation Blueprint for the Great Basin* defines 29 Ecological Systems for the state. The Nevada Steering Committee decided to use and cross-reference both systems, but to use the Partners in Flight definitions for defining and ranking bird habitat types. Table Two of this planning document cross-references the two sets of definitions.

Appendix A is a matrix, adapted from the 1999 *Nevada Bird Conservation Plan*, which keys the priority species in Table One to the 15 habitat types defined by Nevada Partners in Flight in the *Nevada Bird Conservation Plan*. Habitat definitions used by The Nature Conservancy, as used in their *Great Basin Ecoregional Conservation Blueprint*, as well as their Columbia Plateau and Mojave Desert ecoregional plans, are provided as background information here as Appendix B.

## 8. Priority Habitat Types

In October and December, 2002, the Nevada Steering Committee met in Reno and ranked the major habitat types defined by the 1999 *Nevada Bird Conservation Plan* into three categories of priority, A, B and C, defined below. Three criteria were used to rank these habitat types: 1) Statewide importance to birds; 2) Opportunities (funding, partnerships, and feasibility for habitat protection, restoration, enhancement); and 3) Degree of threat. The three categories were defined as:

Priority A: High threat, high opportunity, and high value to birds statewide

- Priority B: One criterion may be high, but generally the habitat is of moderate concern  
Priority C: Relatively low threat, low opportunity, low value as habitat statewide

The ranked list of habitat types developed by the Nevada Steering Committee is shown as Table 3.

## 9. Habitat Conservation Areas/Functional Landscape Sites

The Nevada Steering Committee decided to use the Nature Conservancy's ecoregional plans for defining and prioritizing habitat conservation areas. TNC takes a "bottom-up" approach to ecoregional planning; "conservation targets", both species and plant communities, are decided upon and then assigned to "ecological systems" (habitat types). TNC then identifies "portfolio sites" in the ecoregion, which are eventually expanded to "functional landscape sites" and/or "aggregations", which are shown on ecoregional maps.

The Planning Site Subcommittee of the Nevada Steering Committee reviewed all of the landscape sites in the TNC ecoregional plan for the Great Basin, eliminated some that they felt had no particular importance for priority bird species, then divided the remaining 68 sites into two groups: **First Priority Sites** are those with a majority of the site having habitats of particular importance to IWJV and included wetlands, lowland riparian, and mesquite/catclaw habitats. **Second Priority Sites** are those with a majority of the site having habitats of less importance to IWJV and included montane riparian, montane shrub/mountain mahogany and salt desert shrub. These sites, prioritized by the Subcommittee into two groupings, are included here as Tables 4 and 5. The Steering Committee met twice again in 2002 and selected 19 of the first priority landscape sites, which the committee felt were the highest priority areas in Nevada for the conservation of all birds. The Steering Committee used the same basic criteria as they did in ranking habitat types: 1) the importance of the area for priority birds and habitats, 2) the presence of significant threats, and 3) available conservation opportunities. These priority Habitat Conservation Areas are listed as Table 6 and briefly described in Appendix C, with narrative taken from The Nature Conservancy's Great Basin Ecoregional Conservation Blueprint.

## 10. Habitat Goals and Objectives

The Nevada Steering Committee met twice in 2002 and established directional goals and six-year (2004-2010) measurable objectives goals for 12 of the Major Habitat Types defined in the *Nevada Bird Conservation Plan*. These habitat types are cross-referenced to the TNC's functional landscape site definitions in Table 2. The Steering Committee met again in December, 2002. Using Nevada GAP data provided by the University of Nevada-Reno, specific habitat goals and objectives drafted by one member of the Steering Committee, and their own collective knowledge about the wildlife resources of Nevada; the Steering Committee proposed measurable statewide habitat objectives for all 12 habitat types in the A and B categories. These goals and objectives are included as Table 7. These habitat goals and objectives will be reviewed by the whole Nevada steering committee and other key people outside the Steering Committee then used as part of the base information for a regional Intermountain West Joint Venture Strategic Plan in 2003. The Nevada Steering Committee will continue to meet and develop more specific habitat and species objectives, which they will use for developing their own priorities and projects within the Intermountain West Joint Venture.

## 11. Landscape Mapping

The Nevada Steering Committee used TNC's Great Basin Ecoregional Blueprint map, as well as site descriptions from other TNC ecoregions, to define and prioritize the 19 Habitat Conservation Areas listed in Table 6. A separate GIS map will be produced to delineate those 19 areas defined by TNC. The coordinated "all bird" implementation plan for Nevada is the first plan completed for the IWJV, and the approaches taken here are being used and adapted in the other IWJV states for both the implementation plan and the mapping of Habitat Conservation Areas.



### TABLE THREE

#### Prioritization of 17 Major Bird Habitats in Nevada

Priority A Habitats: High overall rating: high to medium value to birds, high to medium threat, high to medium opportunity for protection, restoration, and or enhancement of habitat.

**Wetlands:** The strategic location of Nevada's wetlands make them particularly important resting, feeding and breeding habitat for migrating waterfowl, shorebirds and waterbird, as well as a host of resident fish and wildlife. Some wetlands are adequately protected; others are inadequately maintained by water and/or are threatened by land and water development.

**Lowland Riparian:** These habitats are associated with the floodplains of Nevada's major river systems occurring below 5,000 feet in northern Nevada and below 4,000 feet in southern Nevada, including the Humboldt, Truckee, Carson and Walker Rivers in the north and the Colorado River and tributaries in the south. Lowland riparian systems are among the most productive and critical habitat for a wide range of resident and migratory birds and other wildlife. They are also among the most drastically altered by human intervention and development, including irrigation diversion, livestock grazing, and pollution. Statewide, lowland riparian systems are degraded and declining in both quality and quantity of habitat available to birds.

**Mesquite/Catclaw:** Mesquite and catclaw acacia are distributed along washes and riparian areas in the Mojave Desert ecoregion of southern Nevada, generally below 3,000 feet in elevation. A number of priority bird species use these habitats, including loggerhead shrike, Lucy's warbler and phainopepla. Mesquite and catclaw communities have both been decimated by lowered water tables and other human-caused factors such as gravel mining, woodcutting, wildfire and direct development of the landscape. Many stands of mesquite and catclaw have also been replaced by exotics such as red brome, cheatgrass, and salt cedar. Habitat quality and quantity continues to decline with rapid commercial and residential development in southern Nevada.

**Sagebrush:** Native sagebrush habitats are in serious decline throughout the Great Basin, along with sagebrush-obligate bird species such as Sage Grouse. The condition of remaining sagebrush habitat in Nevada is often badly damaged due to over-grazing and introduction of exotic grasses and forbs.

**Aspen:** Aspen stands are found statewide in Nevada at elevations between 6,000 and 8,000 feet, either as riparian stringers or more commonly as disjunct patches in stream bottoms, ridgelines, or talus slopes. Aspen stands are diminished in both number and quality due to a number of factors, including over-grazing, fire suppression, and severe recreational use. This declining trend continues.

**Montane parkland – Great Basin:** This habitat type includes high-elevation mountain meadows that occur in the sagebrush-covered mountains of interior Nevada. At 5,000 to 10,000 feet, montane parklands are primarily found in valley bottoms and associated with streams, springs, and glacial lakes. Meadows are important for a number of priority bird species, including juvenile Sage Grouse, which depend on them for both insect and plant foods. Montane parklands are threatened by improper grazing practices, recreation, and encroachment by pinyon-juniper.

Priority B Habitat: Medium overall rating: one criterion may be high (habitat value, threat, opportunity) but generally of medium importance to birds statewide.

**Montane Riparian:** This habitat type generally occurs along streams and drainages of most mountain ranges in Nevada, generally above the alluvial fans of major valleys. Montane riparian sites include cottonwood, alder, birch, willow, wild rose and red-osier dogwood. Aspen is described above as a separate habitat type. Obligate bird species include Wilson's and MacGillvray's Warblers, but Montane riparian habitat is locally important to other species including Cooper's Hawk, Northern Goshawk, Calliope Hummingbird, Lewis's Woodpecker and Red-naped Sapsucker. Montane riparian systems have been degraded for many years by improper grazing practices, hydraulic mining, road building and off-road vehicular use. Fire suppression has also contributed to the progression of riparian tree stands toward mature, non-regenerative conditions.

**Montane parkland – Sierra Nevada:** This habitat type includes high-elevation mountain meadows that occur on the east slope of the Sierra Nevada range. At 5,000 to 10,000 feet, Montane parklands are primarily found in valley bottoms and associated with streams, springs, and glacial lakes. Meadows are important for a number of priority bird species. Montane parklands in the Sierra Nevada ecoregion are threatened by improper grazing practices, recreation and encroachment by lodgepole pine.

**Montane shrub/Mountain mahogany:** These two habitat types occur throughout the Great Basin, often in a mosaic with other Montane habitat types, at elevations from 5,000 to 10,000 feet. They generally occur where annual precipitation exceeds 12 inches/year and provide important foraging and nesting habitat for a number of raptors and canopy-nesting species, including western bluebirds, and a number of warbler species. Over-grazing and wildfire remain as negative influences.

**Coniferous forest: Sierra Nevada:** Eastern Sierra Nevada forests are the most diverse of Nevada's coniferous forests, transitioning in elevation from Jeffrey and Ponderosa pine to red fir, western white pine, lodgepole pine, and mountain hemlock. Over-harvest of timber in the 1880's and later insect infestations took a toll on the extent and species diversity of eastern Sierra Nevada forests. Coniferous forests in Nevada host a number of priority bird species, including Northern Goshawk, Cooper's Hawk, Lewis's Woodpecker, Flammulated Owl, Three-toed Woodpecker, and Western Bluebird.

**Pinyon-juniper:** Pinyon-juniper woodlands are found in the Great Basin as pure or nearly pure stands of single-leaf pinyon and any of four species of juniper. Pinyon-juniper is largely absent from northwestern Nevada. A number of priority bird species are pinyon-juniper obligates, including gray vireo, black-throated gray warbler and pinyon jay. Although early timber harvest for the mines and recent tree eradication measures for livestock have take their toll on pinyon-juniper forests, the current coverage in Nevada is still almost 18 million acres and expanding. The quality of pinyon-juniper stands is declining in quality (explain...).

**Agricultural land:** Most of Nevada's agricultural lands are found in fertile valley bottoms and river systems, at elevations from 600 to 7,500 feet. Much of Nevada's agriculture lands have been created from native habitat types, ranging from greasewood flats to cattail marshes, and the primary harvested crop is hay, followed by wheat. A number of resident and migratory bird species and other wildlife have adapted to and thrive in agricultural throughout the state, including many wintering raptors, which feed on voles and mice. Currently, the greatest threat to Nevada's declining agricultural land base and associated wildlife is from commercial and residential development, which is not expected to abate in the near future.

**Priority C: Low overall rating: low to medium relative habitat value, threat, and/or opportunity statewide.**

**Salt desert scrub:** The salt desert scrub habitat type is the most extensive in Nevada, covering roughly 22 million acres in the Great Basin ecoregion. The general habitat type encompasses several plant subtypes characterized by salt-tolerant shrubs of the Goosefoot family, often shadscale or greasewood, as well as Indian ricegrass, all of which thrive in areas with generally less than 10 inches/year of precipitation. Birds of the salt desert scrub habitat type are expectedly sparse and lacking in diversity, with the most important species, from a conservation perspective, being the Loggerhead Shrike. This habitat type is not declining significantly statewide. The goal is to maintain salt desert scrub habitat in good condition.

**Mojave shrub:** Two major shrub communities characterize this habitat type in the Mojave Desert ecoregion, creosote-bursage, from 500 to about 4,200 feet elevation, and blackbrush-Joshua tree, from 4,200 to as high as 6,000 feet elevation. This habitat type is experiencing recreational ORV use and intense development pressures in some areas of southern Nevada and, as development expands, there will be some decline in this habitat type. However, many areas are in protected status on public land and not in immediate jeopardy. The goal is to offset habitat losses with long-term protection of Mojave shrub in other areas and landscapes.

**Coniferous forest: Southern Nevada:** The Spring and Sheep Mountains of southern Nevada are islands of ponderosa and white pine in the Mojave Desert ecoregion. Coniferous forests in Nevada host a number of priority bird species, including Northern Goshawk, Cooper's Hawk, Lewis's Woodpecker, Flammulated Owl, Three-toed Woodpecker, and Western Bluebird. Limber pine was over-harvested for the gold and silver mines during the late 1880's and early 1900's and only exists today in isolated stands. The primary threat to the coniferous forests of southern Nevada is catastrophic wildfire. The goal is to provide a continuum of forest diversity for wildlife.

**Coniferous forest: Eastern Nevada:** Eastern Nevada forests reflect a strong Rocky Mountain influence. The Rocky Mountain form of ponderosa pine occurs on dry, rocky slopes and the Rocky Mountain form of Douglas fir forms pure stands on moister slopes or occurs with Englemann spruce and subalpine fir in its upper reaches. Subalpine fir is often associated with aspen both on streams and slopes. Coniferous forests in Nevada host a number of priority bird species, including Northern Goshawk, Cooper's Hawk, Lewis's Woodpecker, Flammulated Owl, Three-toed Woodpecker, and Western Bluebird. The goal is to provide a continuum of forest diversity for wildlife.

**Cliffs and talus:** Cliffs and talus slopes provide important habitat for passerines such as wrens and, as well as raptors such as prairie falcons and ferruginous hawks. Statewide, these areas are relatively stable but susceptible to disturbance and mildly threatened by human activities such as mining, rock climbing and development at the base of rock formations. The goal is to evaluate and review the value of these habitats and maintain the condition of important cliff and talus areas.

Original source of information (modified here): Partners in Flight *Nevada Bird Conservation Plan* (1999)

**TABLE FOUR**

**Priority Landscape Sites – Great Basin Ecoregion**

First Priority Sites	Second Priority Sites
Argenta Marsh	Bald Mountain
Artesia Lake/East Pine Nut Mountains	Battle Mountain
Black Rock Desert/Smoke Creek Desert	Beaver Dam Wash/Bull Valley Mountain
Bodie Hills	Belted Range/Kawich Vy/Gold Flat/Timber Mtn
Butler Basin	Blowsand Mountains/Barnett Hills
Carson Range Front (Long Valley)	Blue Lakes/Badlands
Carson River	Crescent Dunes
Carson Sink	Dry Lake Valley
Cave Valley/Upper White River Valley	Fly Ranch Geyser/Granite Range
Cortez Mtns/Roberts Mtns/Sulphur Spring Range	Goshute Mountains
Currant Mountain	Lone Mountain/Monte Cristo Range
Desatoya Mountains	Long Valley
Duck Creek Range/Steptoe Valley	Meadow Valley
Duckwater Valley	New Pass
East Humboldt Range	Pilot Range
Fourmile Basin	Quinn Canyon Range/Grant Range
Garfield Flat/Rhodes Saltmarsh/Teels Marsh	Rainbow Canyon
Humboldt Range	Sand Mountain
Humboldt River-Golconda	Stoneberger Basin
Humboldt River-Imlay	Sweetwater Mountains
Jackson Mountains Railroad Valley	Virginia Range
Lovelock Valley	Warm Springs Valley
Pequop Mountains/Toana Draw	Wellington Hills
Pilot Mountains	White Pine Range
Pyramid Lake/Lower Truckee River	
Quinn River	
Railroad Valley	
Ruby Mountains	
Schell Creek Range	
Shoshone Range/Carico Lake Valley	
Shoshone/Beowawe	
Silver State Sand Dunes	
Simpson Park Mountains/N Toiyabe Range	
Snake Range	
Soldier Meadows	
South Pine Nut Mountains	
Toiyabe Range/Big Smoky Valley	
Toquima Range/Monitor Valley/Monitor Range	
Upper Humboldt River/Lower Mary's River	
Walker Lake/Walker River	
White Mountains	
White River Valley	
White Rock Mountains	



## TABLE SEVEN

### Statewide Goals and Objectives for Priority Bird Habitats in Nevada

Between 2003 and 2010, Intermountain West Joint Venture partners in Nevada will pursue the following statewide directional goals and measurable objectives for priority bird habitats (Priority A and B):

Priority A Habitats: High overall rating: high to medium value to birds, high to medium threat, high to medium opportunity for protection, restoration, and or enhancement of habitat.

#### WETLANDS:

**Statewide Goal:** Protect and maintain existing wetland habitats in good condition, and restore and improve degraded wetland habitats whenever opportunities arise.

**Statewide Objective:** Permanently protect and/or restore 25,000 acres of high-quality wetlands and associated habitats in Nevada.

#### LOWLAND RIPARIAN:

**Statewide Goal:** Protect, restore and enhance lowland riparian systems wherever possible.

**Statewide Objective:** Permanently protect and/or restore 300 linear miles of lowland riparian habitat in Nevada.

#### MESQUITE/CATCLAW:

**Statewide Goal:** Minimize the loss of mesquite and catclaw habitats wherever possible.

**Statewide Objective:** Permanently protect and/or restore 8,000 acres of mesquite and catclaw habitat in Clark County and other areas of southern Nevada impacted by growth and development.

#### SAGEBRUSH:

**Statewide Goal:** Stem the quantitative and qualitative decline of sagebrush by protecting, restoring, and improving sagebrush habitats, wherever possible.

**Statewide Objective:** Permanently protect and/or restore 240,000 acres of sagebrush habitat in Nevada.

#### ASPEN:

**Statewide goal:** Reverse the loss of aspen habitat and restore and stabilize degraded aspen habitat, wherever possible.

**Statewide Objective:** Permanently protect and/or restore aspen habitat within a 40,000 acre management unit in Nevada.

**MONTANE PARKLAND – Great Basin:**

**Great Basin Goal:** Reverse habitat decline, through sound land use management and application of both restrictions and incentives to reduce negative practices such as over-grazing.

**Great Basin Objective:** Permanently protect and/or restore 350 acres of montane parkland habitat in the Great Basin Ecoregion in Nevada.

**Priority B Habitat:** Medium overall rating: one criterion may be high (habitat value, threat, opportunity) but generally of medium importance to birds statewide.

**MONTANE RIPARIAN:**

**Statewide Goal:** Protect, restore and enhance montane riparian systems wherever possible.

**Statewide Objective:** Permanently protect and/or restore 150 linear miles of montane riparian habitat in Nevada.

**MONTANE PARKLAND – Sierra Nevada:**

**Sierra Nevada Goal:** Reverse the decline of montane parkland habitat in the Sierra Nevada Ecoregion of Nevada, through sound land use management and application of both restrictions and incentives to reduce negative practices such as over-grazing.

**Sierra Nevada Objective:** Permanently protect and/or restore 50 acres of lowland riparian habitat in the Sierra Nevada Ecoregion of Nevada.

**MONTANE SHRUB/MOUNTAIN MAHOGANY:**

**Statewide Goal:** Maintain existing montane shrub communities where possible and reverse the declining trend of mountain mahogany habitat statewide.

**Statewide Objective:** Permanently protect and/or restore 90,000 acres of montane shrub/mountain mahogany habitat in Nevada.

**CONIFEROUS FOREST: Sierra Nevada:**

**Sierra Nevada Goal:** Maintain forest stand diversity in Sierra Nevada coniferous forests, wherever possible.

**Sierra Nevada Objective:** Maintain forest stand diversity on 3,000 acres of Sierra Nevada coniferous forests.



**PINYON-JUNIPER:**

**Statewide Goal:** Manage pinyon-juniper stands for habitat quality and diversity of succession, in order to maintain a diverse population of pinyon-juniper-obligate bird species.

**Statewide Objective:** Implement alternative management on 75,000 acres of pinyon-juniper forest in Nevada to support diversity of successional stages.

**AGRICULTURAL LAND:**

**Statewide Goal:** Assist landowners to maintain or improve the wildlife habitat values on their lands.

**Statewide Objective:** Protect, restore and/or enhance wildlife habitat values on 13,000 acres of privately-owned agricultural lands in Nevada.

**Priority C: Low overall rating: low to medium relative habitat value, threat, and/or opportunity statewide. Goals and objectives not established for Priority C habitats.**

**SALT DESERT SCRUB**

**MOJAVE SHRUB**

**CONIFEROUS FOREST: Southern Nevada**

**CONIFEROUS FOREST: Eastern Nevada**

**CLIFFS AND TALUS**

