

Intermountain West Joint Venture

Coordinated Bird Conservation Plan

Version 1.0



September 2005

Executive Summary

The Intermountain West Joint Venture (IWJV or Joint Venture) is comprised of multi-level partnerships between diverse public and private organizations who share common interest in the bird conservation in the Intermountain West. The Joint Venture encompasses much of the Intermountain area, from Canada to Mexico. This extensive geographic region encompasses portions of eleven western states and includes an enormous diversity of avian habitat.

The Joint Venture began in June of 1994 with a focus of conservation of wetland and associated habitats to serve as the implementation arm of the North American Waterfowl Management Plan (NAWMP). In 1999 the Management Board expanded the mission of the Joint Venture to include conservation actions for all bird habitats within the Joint Venture boundary.

The mission of the Intermountain West Joint Venture is to provide for partner assistance with long-term conservation of priority avian habitats. The guiding principles of Joint Venture operation are to apply a voluntary and non-regulatory approach to partnership building. IWJV is non-partisan and centered on building conservation partnerships rather than advocacy.

Well over 360 Joint Venture partners have come together to accomplish bird conservation in the first ten years of the Joint Venture's existence. To date, these partners have collaborated to conserve more than 430,000 acres of avian habitat. Non-federal partners have contributed more than \$75 million to match \$58 million from federal partners on bird conservation in the last decade.

This Plan coordinates the needs of all priority birds in the Joint Venture. Our planning focal points are key geographies where priority birds and priority habitats come together. Conservation projects will be generated within these areas. Partners used existing data to focus conservation efforts on priority habitats. Our challenge is to mix our best information and our best science with conservation opportunity to be most effective and most efficient with conservation expenditures. This Plan is a summary of the eleven State Coordinated Bird Habitat Conservation Plans and includes GIS mapping and analysis products.

We estimate approximately 500 avian species occur in the IWJV. A total of 87 species are considered continentally important in the Joint Venture, while 181 additional bird species have been identified by partners as regionally important. Both continentally and regionally important species were selected because they (1) are at risk or are in serious decline, (2) the most significant population of the species resides in Intermountain West biomes, or (3) have socio-economic importance. Continentally important species are those listed by plans of the major bird initiatives.

More than 495 million acres of habitat occurs within the IWJV. Of that total of 84.3 million acres were identified by state partners as Priority A habitats and 43.1 million acres as Priority B habitats, i.e., as the locations where bird conservation should happen in the next decade. These priority habitats occur in Bird Habitat Conservation Areas (BHCAs) which were designated as key geographies for conservation by state

partners. IWJV habitat objectives and strategies, which include protection, restoration, enhancement or maintenance of seven Priority A and seven Priority B habitats are presented.

The Plan describes administrative goals and objectives, including those for operation of the organization, communications for partnership development and maintenance, and adaptive planning, which includes established monitoring and evaluation principles for Joint Venture programmatic, project tracking, and applied science applications for the next decade.

The Plan also develops habitat goals and objectives for the fourteen Priority A and B habitat types identified in the planning process. These goals and objectives were based on a "roll-up" of the collective goals and objectives developed by each State Steering Committees (SSC). Narratives which describe priority habitats, associated continental priority bird species, threats and opportunities, long-term and short term goals, and identifies directional goals, measurable objectives, and strategies to improve habitat conditions are developed in the Plan.

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The Adaptive Process

Two basic assumptions underlie the development of the IWJV adaptive process. First, planning is never complete . . . it is by its very nature, iterative. While the plan we have today is our best plan, we believe it will improve tomorrow. Secondly, change is our one constant. Environmental conditions change. Values for bird species and habitat change. Priorities change. Property values change. Technologies change.

With these assumptions, and as noted previously by our Management Board, Joint Venture "conservation planning and implementation is *an adaptive process*." We anticipate adaptive planning and implementation in the IWJV will involve three organizational components. First, the State Steering Committees will identify voids in planning information which requires improvement in the quality of information. For example, most partners are already aware GAP Analysis provides inadequate or incomplete information on the distribution and classification of riparian habitats. The SSC will detail the scope and magnitude of the problem within each state.

The SSC will then collaborate with the IWJV Technical Committee to develop efficient solutions to improve the planning information. The Technical Committee will also prioritize the most critical needs as they work to find solutions to gaps in planning data.

The respective BCR Coordinator will then be responsible to assist with building the necessary partnerships to fill these data gaps. Partnerships could be built in various ways and with a variety of partners. This would help the Joint Venture to better understand region-wide priorities for information development and how to get the most effort within administrative budget constraints.

Natural Resource Planning Base

Avian Species

The abundance and diversity of the avian resource of the Intermountain West Joint Venture is staggering. We estimate at least 500 species occur here and utilize habitats ranging from desert scrub to alpine, from grassland and sagebrush to forested types and from wetlands to aspen communities.

A list of continentally important species (Table 5) has been developed from those listed by plans of the major bird initiatives (see literature cited). These are listed because they (1) are at risk or are in serious decline, (2) the most significant population of the species resides in Intermountain West biomes, or (3) have socio-economic importance. All these species are included in the priority bird species list developed by the State Steering Committees as well.

Based on the criteria noted above a total of 88 species are considered continentally important in the Joint Venture. Of this total, 19 species are land birds identified as continentally important in the Southwest Avifaunal Biome according to the PIF North American Land Bird Conservation Plan. However, these species indicated by an asterisk (*) in Table 5, are not considered continentally important in the Intermountain West

Avifaunal Biome (which includes perhaps 90 percent of the Joint Venture area). Fourteen species are year-long residents while the remaining species are migratory.

A total of 276 priority bird species (Appendix 4) have been reported by partners in our 11-state, 495 million-acre area. Partners used the same criteria noted above for continentally important species to list regionally important species. With 88 species designated as continentally important, 188 species are considered regionally important within the Joint Venture.

Table 5 - IWJV Continentally Important Species

Species	Key Seasonal Use	Primary Habitat
Common Loon	M	Wetland
Eared Grebe	B,Y	Wetland
Western Grebe	B,M	Wetland
Clark's Grebe	B,M	Wetland
American White Pelican	B,M	Wetland
American Bittern	B,M	Wetland
Snowy Egret	B,M	Wetland, Riparian
White-faced Ibis	B,M	Wetland
Trumpeter Swan	B,M	Wetland
Mallard	B,M	Wetland
Northern Pintail	B,M	Wetland
Gadwall	B,M	Wetland
American Wigeon	B,M	Wetland
Cinnamon Teal	B,M	Wetland
Northern Shoveler	B,M	Wetland
Lesser Scaup	B,M	Wetland
Canvasback	B,M	Wetland
Redhead	B,M	Wetland
Ruddy Duck	B, M	Wetland
California Condor	Y	Various
Swainson's Hawk	B	Grassland, Agriculture
Gunnison's Sage-grouse	Y	Sagebrush-Steppe
Greater Sage-grouse	Y	Sagebrush-Steppe
Montezuma Quail *	Y	Grassland, Dry Forest
Scaled Quail *	Y	Grassland
Gambel's Quail *	Y	Desert Scrub
Yellow Rail	M	Wetland
Greater Sandhill Crane	B,M	Wetland, Grassland
Lesser Sandhill Crane	B,M	Wetland, Grassland
Snowy Plover	B	Wetland
Mountain Plover	B	Grassland
Black-necked Stilt	B	Wetland
American Avocet	B	Wetland
Spotted Sandpiper	B	Wetland
Whimbrel	M	Wetland

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Species	Key Seasonal Use	Primary Habitat
Long-billed Curlew	B	Wetland, Grassland
Willet	B	Wetland
Western Sandpiper	M	Wetland
Least Sandpiper	M	Wetland
Long-billed Dowitcher	M	Wetland
Wilson's Phalarope	M	Wetland
Red-necked Phalarope	M	Wetland
Franklin's Gull	B,M	Wetland
Black Tern	B,M	Wetland
Band-tailed Pigeon *	B,M	Mixed Conifer, Pine-Oak
Flammulated Owl	B,M	Dry Forest, Pine-Oak
Elf Owl *	B,M,W	Pine-Oak Woodland
Mexican Spotted Owl	B,M,W	Dry Forest, Pine-Oak
White-throated Swift	B,M	Riparian, Various
Black Swift	B,M	Riparian, Various
Calliope Hummingbird	B,M	Riparian
Rufous Hummingbird	B,M	Riparian, Pine-Oak
Lewis's Woodpecker	B,M,W	Dry Forest, Riparian
White-headed Woodpecker	B,M,W	Dry Forest, Mixed Conifer
Williamson's Sapsucker	B,M,W	Spruce-fir
Red-naped Sapsucker	B,M,W	Aspen, Mixed Conifer
Olive-sided Flycatcher	B,M	Spruce-fir, Mixed Conifer
Willow Flycatcher	B,M	Riparian
Dusky Flycatcher	B,M	Dry Forest, Pine-Oak
Gray Flycatcher *	B,M	Pinyon-Juniper, Sagebrush
Bell's Vireo *	B	Riparian
Gray Vireo	B,M	Pinyon-Juniper, Pine-Oak
Pinyon Jay	Y	Pinyon-Juniper
Clark's Nutcracker	Y	Whitebark Pine
Verdin *	B,M,W	Mountain Brush
Cactus Wren *	B,M,W	Desert Scrub
Black-tailed Gnatcatcher *	Y	Desert Scrub
Mountain Bluebird	B,M,W	Aspen, Agricultural
Bendire's Thrasher	B,M,W	Grassland, Mtn. Brush
Curve-billed Thrasher *	Y	Desert Scrub
Crissal Thrasher *	Y	Desert Scrub
Sage Thrasher	B,M,W	Sagebrush-Steppe
Virginia's Warbler	B,M	Mtn Brush, Dry Forest
Lucy's Warbler *	B	Riparian
Grace's Warbler	B,M	Mixed Conifer
Red-faced Warbler *	B,M	Mixed Conifer, Riparian
Pyrrhuloxia *	Y	Mountain Brush
Canyon Towhee *	Y	Desert Scrub
Green-tailed Towhee	B,M	Sagebrush, Mtn. Brush
Black-throated Sparrow *	B,M	Desert Scrub
Sage Sparrow	B,M,W	Sagebrush-Steppe

Species	Key Seasonal Use	Primary Habitat
Brewer's Sparrow	B,M	Sagebrush-Steppe
McCown's Longspur	B,M	Grassland
Scott's Oriole *	B,M	Pine-Oak Woodland
Yellow-headed Blackbird *	B,M,W	Wetland
Black-capped Rosy Finch	Y	Alpine
Brown-capped Rosy Finch	Y	Alpine
Cassin's Finch	B,M,W	Dry Forest

*Only considered continentally important in the PIF Southwest Avifaunal Biome; B=breeding, M=migration, W=winter, Y=year-long

Avian Habitat

Avian habitats in the IWJV offer the most diverse habitat niches in North America. The wide array of habitat types provides nesting, migration, and wintering habitat for 500 bird species. See Table 6 for the total acreage of habitat types by state.

More than 495 million acres occur within the present bounds of the Joint Venture. The entire states of Nevada, Idaho, and Utah, which encompasses more than 180 million acres, are included. The smallest acreage of any IWJV state occurs in eastern Washington, still with more than 27 million acres.

Of the 495 million acres which occur within the bounds of the IWJV, 103 million acres or nearly 21 percent is classified as sagebrush steppe. This community is a critical habitat type in the JV because it is so extensive and perhaps as much as 80 percent of the North American sagebrush biome occurs within the IWJV boundary. It also hosts eight continentally important species (see Table 7), the highest number of any upland type in the JV. The sagebrush-steppe community has suffered significant degradation over the last half-century.

Aquatic and wetland habitats occupy more than 13.2 million acres and host an amazing 37 species of continental significance in the JV (42 percent of the species so classified). Clearly this is a critical habitat type in the JV. Also, an estimated 60 percent of wetlands have been drained or severely degraded in the JV.

Riparian habitats (5.6 million acres) are a critical type in the IWV in that they host 10 continentally important species, occupy only about one percent of the Joint Venture area, and are scattered across multiple ownerships and throughout diverse adjacent habitats.

Another 53 million acres is classified as grassland. Much of this type occurs as bunchgrass types in the Great Basin, but an estimated 45 percent occurs in the shortgrass and desert grassland communities of New Mexico and northeastern Colorado. Seven continentally important species occur here and this too is a critical habitat for Joint Venture partners.

The dry forest type dominated by ponderosa pine communities is a critical habitat for JV partners because so much of its old-growth component has been removed. More than 26 million acres are distributed relatively evenly across the JV and the type hosts six continentally important species.

Table 6 – Total Acreage of IWJV Habitat Types by State
 (bold indicates Priority A habitat, *italics* indicates Priority B habitat in millions of acres)

Habitat Type	AZ	CA	CO	ID	MT	NV	NM	OR	UT	WA	WY	Total
Aspen Woodland	.10	.03	3.31	.86	.39	.34	.41	.04	1.87	.01	.68	8.03
Grassland	3.01	.43	4.68	4.52	6.32	.78	19.52	3.72	.64	4.56	5.00	53.17
Dry Forest	3.50	1.62	2.58	2.25	1.77	.05	5.15	5.23	.50	3.04	.45	26.14
Sagebrush Steppe	1.39	3.57	5.44	15.23	2.14	28.88	1.12	14.43	9.78	2.13	18.99	103.09
Riparian	.06	.07	1.15	.97	.63	.33	.47	.15	.48	.19	1.09	5.57
Aquatic-Wetland	.06	.77	.60	.68	.59	2.16	.34	.88	4.69	.46	1.96	13.17
Agricultural	.03	1.01	6.25	7.42	1.20	.55	.57	2.37	2.27	8.42	3.33	33.42
Mixed Conifer	.36	7.26	1.67	6.90	5.99	.10	1.10	3.93	.78	4.68	.93	33.69
Pinyon Juniper	9.33	2.68	5.22	.63	.17	9.00	13.34	2.86	10.57	.56	1.37	55.74
Desert Scrub	5.80	2.37	2.07	.62	0	17.03	5.22	.82	8.44	.02	2.56	44.96
Spruce-Fir	.08	1.09	4.53	3.15	3.40	.09	.39	.32	1.11	.01	1.16	14.66
Mountain Brush	.13	.50	3.00	3.43	1.06	.67	.64	.18	1.99	1.21	.45	13.27
Pine-Oak Woods	.17	.65	0	0	0	0	.92	.04	0	.32	0	2.09
Cedar Hemlock	0	0	0	1.09	.36	0	0	0	0	0	0	1.45
Other Forest	0	2.17	1.80	6.54	4.82	.20	.10	2.12	.69	.36	4.49	23.40
Other Shrub	4.20	3.36	.53	0	0	7.40	9.16	.03	2.86	0	2.30	29.84
Other	2.42	1.01	3.70	2.10	1.61	3.23	2.64	5.78	7.64	1.21	2.70	34.04
Total	30.64	27.91	46.53	56.39	30.14	70.81	61.09	42.91	54.31	27.18	47.46	495.37

**Table 7 - Relative Habitat Value
for Continentally Important Species in the IWJV**

Habitat Type	Continentally Important Species relying Prominently on Habitat Type
Aquatic-Wetland	37
Riparian	10
Sagebrush-Steppe	8
Grassland	7
Desert Scrub	7
Ponderosa Pine Forest	6
Pine-Oak	6
Mountain Brush	5
Mixed Conifer Forest	5
Pinyon Juniper	3
Aspen	2
Spruce Fir Forest	2
Agricultural	2
Alpine*	2
Various	1

* Not a priority habitat in IWJV

Land Ownership

Table 8 displays the total acreage of broad habitat types by state. More than any other Joint Venture, federal land ownership is of major significance in the IWJV. For example, the state of Nevada has more than 87 percent federal ownership, while Utah and Idaho have more than 65 percent each. This ownership occurs predominantly at high to mid-elevations while low elevation bottom-lands tend to be privately owned. One very significant implication of this ownership pattern is that much of the water in the Intermountain Region is also privately owned. Obviously water is a critical element of aquatic-wetland, riparian, and other habitat types as well. Thus, privately owned habitats are a vital focus of Joint Venture partnership activities for maintenance of avian populations.

Much of the Intermountain area is under federal ownership and more than half (54 percent) of the BHCAs occur on federal lands (see Table 8). The remaining 46 percent reflects the predominance of non-federal ownership of lower elevation habitats including valley bottoms, river corridors, and shrub-steppe communities. These "bottom" types are the most productive of all Intermountain habitats, so again, private ownership of habitat is critical to avian population.

Who owns the habitat within the BHCAs? The Bureau of Land Management (BLM) controls one-third of the geography identified as those areas with the most important avian conservation opportunities in the next decade. The BLM owns the highest acreage of sagebrush, pinyon-juniper and desert scrub habitat designated in BHCAs. They also control the highest federal component of grassland types.

A-5. RIPARIAN

Riparian habitats are those plant communities which generally support woody vegetation found along rivers, creeks, streams and other water bodies. This habitat can range from a dense thicket of shrubs to a closed canopy of large mature trees covered by vines. Riparian habitat occurs from the highest to lowest elevations, thus it provides riverbank protection, erosion control and improved water quality. Riparian systems are one of our most important and most impacted habitats.

The total acreage of riparian habitat, which is poorly represented by GAP Analysis, but improved by SW ReGAP, was estimated at 5.6 million acres. Within the BHCAs, about 2.1 million acres is mapped.

Continental Priority Bird Species: White-throated Swift, Black Swift, Calliope Hummingbird, Rufous Hummingbird, Lewis's Woodpecker, Willow Flycatcher, Bell's Vireo, Lucy's Warbler.

Threats and Opportunities: Riparian habitat conservation opportunity often involves areas where woodland, shrubland and herbaceous/wetland components are present in various combinations. Losses of riparian habitats of all types have been estimated at approximately 75 percent and are particularly pronounced at lower elevations where these habitats have been more heavily impacted by agricultural and urban development. The extent of mature stands of cottonwoods has decreased over time as natural flows have been altered along rivers throughout the Joint Venture, which has reduced regeneration and replacement. In some areas, cottonwoods have been harvested for pulp or cleared for pasture and residential development. Remaining riparian habitats have been invaded by non-native plants in many areas and degradation related to livestock grazing is common.

Long-term Vision for Habitat Condition: Protect and enhance existing stands, with a goal of no net loss of riparian forest, woodland, or shrub type. Maintain and, where possible, expand existing large blocks of riparian woodland. Re-establish riparian woodlands on appropriate floodplain sites.

Short-term Directional Goals: Maintain or restore the dynamic nature of floodplains to accommodate all successional stages of riparian types. Manage existing complexes to protect mature trees and snags, and to recruit replacements for both. Manage grazing intensity to allow a diverse habitat structure to develop, including a shrub understory. Stream banks should support dense growth of shrubs, forbs and grasses.

Measurable Objectives: Protect, restore and/or enhance 1 million acres of riparian habitat in the Joint Venture.

Strategies:

- Employ non-continuous grazing programs to increase structural diversity for birds.
- Employ extended timber management rotations to insure all age-class representation in riparian corridors.

- Replicate flood regimes in habitats that have been altered through man's activities.

A-6. AQUATIC-WETLANDS

In the IWJV we reference aquatic habitats to include ponds, lakes, springs, and various types of wetlands. Some of these habitats are shallow and others deep, some are cold-water and others warm-water, some are freshwater and others saline, and all have varying degrees of water level stability.

Wetlands generally are shallow, low-lying areas (near the water table) with fluctuating water levels. The soils are wet at some point in time most years and they support an abundance of aquatic plants. Wetlands are valuable habitats that support a rich biodiversity of waterfowl, shorebirds, waterbirds, songbirds, and other wildlife. They act as natural sponges, absorbing rain water and preventing floods. They can vary in size from a small wet meadow to thousands of acres.

More than 13.1 million acres of aquatic and wetland habitat occur in the Joint Venture. More than 5.9 million acres have been included in the BHCA inventory. The greatest amount of aquatic-wetland habitat in the Joint Venture occurs in our driest states: Utah with 35 percent, and Nevada with 16 percent of the total acreage.

Wetlands continue to be a primary conservation emphasis for IWJV partners. All the primary wetland complexes considered to be of conservation priority were included in the BHCAs. But, because the National Wetlands Inventory is not completed for each state, we had to rely on the Montana Gap layers for acreage calculations. While open water habitats are well represented (and probably overstate wetland acreages), other wetland types are not. Therefore the acreage represented by these merged types is thought to be somewhat accurate. Project proponents will rely on local data to better define wetland acreage during the development of conservation projects.

Continental Priority Bird Species: Common Loon, Eared Grebe, Western Grebe, Clark's Grebe, Snowy Egret, American White Pelican, American Bittern, Trumpeter Swan, Mallard, Northern Pintail, Gadwall, American Wigeon, Cinnamon Teal, Northern Shoveler, Lesser Scaup, Canvasback, Redhead, Ruddy Duck, Yellow Rail, Greater Sandhill Crane, Lesser Sandhill Crane, Snowy Plover, Mountain Plover, Black-necked Stilt, American Avocet, Spotted Sandpiper, Whimbrel, Long-billed Curlew, Willet, Long-billed Dowitcher, Western Sandpiper, Least Sandpiper, Wilson's Phalarope, Red-necked Phalarope, Franklin's Gull, Black Tern, Yellow-headed Blackbird.

Threats and Opportunities: Drainage, conversion through tilling and filling has resulted in a continual loss of small wetland acres across the Joint Venture. These threats are compounded periodically by drought conditions. Lakeshores throughout the Joint Venture are severely threatened by development. Invasive aquatic and semi-aquatic plants (e.g. Purple loosestrife) are a growing concern in many marsh areas. Water level management is a primary concern on reservoirs and managed wetland systems. Adequate quantity and timing of water delivery is a key issue.

Long-term Vision for Habitat Condition: Increase high quality wetland habitat in the long-term. Maintain, restore and enhance wetland basins to increase the

capacity to provide resilience to drought cycles and provide a diversity of wetland types. Emphasize projects that include associated priority upland habitat types (grassland, shrub steppe, and riparian).

Short-term Directional Goals: Wetlands should be managed to preserve or mimic natural water level fluctuations, and to encourage diverse natural plant communities, including submerged, emergent and riparian vegetation. Wetland complexes should be protected and managed with adjoining uplands to provide nesting cover for waterfowl, shorebirds and waterbirds. Where known nesting colonies of priority birds exist, wetlands should be managed to provide both security and appropriate feeding habitats for the species in question.

Measurable Objectives: Protect, restore and/or enhance 1.8 million acres of wetlands in the Joint Venture.

Strategies:

- ~~Protect wetlands through acquisition or easement from willing partners.~~
- Restore and enhance wetlands to mimic natural wetland systems.
- Secure adequate water supplies.
- Aggressively control invasive species to maintain productivity of marsh habitats.

A-7. AGRICULTURAL

Potatoes, hay and grains, dairy and poultry, livestock, fruits, and nuts, are major crops produced by Intermountain West farmers. We estimate more than 115,000 farmers make their living here. Some 33.4 million acres are held by private landowners and farmed each year. Of those acres, about 12.3 million acres are included in the BHCA's.

Monotypic agricultural crops are generally of little value to birds. However, irrigated pasture and rangelands do have significant values for avian species. Many agricultural environments can often serve as a buffer for important grassland, sagebrush steppe, wetland, and riparian habitats, where profuse development is threatening the ecological integrity of landscapes. The protection and restoration of agricultural lands may be our best approach to meeting the needs of wetland and grassland birds.

Continental Priority Bird Species: Swainson's Hawk, Greater Sandhill Crane, Lesser Sandhill Crane, Long-billed Curlew.

Threats and Opportunities: Many agricultural practices such as conversion of native grassland to cropland, pesticide and herbicide applications, harvest during the nesting season, and the maintenance of extensive monocultures can have negative impacts on bird habitat. But agricultural lands often offer opportunities for habitat restoration; innovative farming practices, planting of cover and food crops, and important feeding and staging areas for a variety of avian species. These values are also threatened in much of the West by population growth and explosive residential and industrial development.

Long-term Vision for Habitat Condition: Work with the agricultural community to develop best management practices to restore bird nesting and foraging values. In any case, work with the agricultural community to maintain agriculture on the landscape to preserve future opportunities. Use appropriate grazing regimes in pasturelands that provide residual cover for ground-nesting birds.

Appendix 3.1 - Technical Committee Members

Committee Chair: Tice Supplee, IWJV Board Liaison

Members: Carol Beardmore (Sonoran JV)
Joe LaTourrette (IWJV State All Bird Plan Coordinator)
Red Hunt (NAWMP)
Gary Ivey (IW Waterbird Plan)
Tom Aldrich (Pacific Flyway)
Don Paul (Great Basin BCR Coordinator)
Dan Casey (Northern Rockies BCR Coordinator)
Lew Oring (IW Shorebird Plan)
Christopher Rustay (Shortgrass Prairie BCR)
~~Jon Bart (USGS Bird Monitoring)~~

Appendix 3.2 - Details of IWJV Monitoring and Evaluation Plan Elements:

1. Programmatic Evaluation: Identify IWJV Implementation Plan Goals and Objectives

Acreage: type, location

Partners: new, numbers

Funding: targets achieved

Expansion: geography, positions

Science: adaptive management, biological assessment

2. Project Tracking: This form was adapted from the Colorado Division of Wildlife Wetland Program Evaluation developed by Mr. Alex Chappell. This form when constructed will be a web based interactive document based on user response.

A. General Information (example)

Project Name and IWJV #	Sipe Wetland protection and restoration project IWJV #22309
BCR	Southern Rockies
STATE	Arizona
Watershed(s); GPS Coordinates or UTM Coordinates	Mount Baldy 26.8N; 29.8 E
Bird Habitat Conservation Area	White Mountains BHCA
Assessor Date project completed Date of evaluation Project contact	James Q. Cole, 07/2001; 04/2004 Dave Cagle
Project Objectives: original project objectives: (provide a brief statement of what was to be accomplished)	Acquire 3,500 acres of wetlands and 2,000 acres of associated uplands. Restore 900 acres of seasonal wetlands through improved water delivery system.
Have the objectives been met? List habitat types and acreages	Yes? No? if no, why?
Is there a management plan for the site?	Yes/ No if yes, where is it?
Has there been any public use generated by the project?	Yes/ no if yes what kind, user days, revenue. etc.?
Do photo points exists; before and after?	Yes, No if yes, where are they housed?
Has the project resulted in surrounding landowners changing management?	Yes, No. If yes, how? What acreage is involved?
Structural Integrity, project future needs.	Fee title acquisition protected in perpetuity and included as a SWMA, Moist soil/ water delivery structures need repair year 2015.

B. Continental Bird Plan Priorities (example)

Species - Plan Linkage	NAWMP	U.S. Shorebird	PIF	Waterbird
Northern Pintail	X		X	
G. Scaup	X			
Sandhill Crane			X	X
Bandtail Pigeon			X	
Marbled Godwit		X		
SW Willow Flycatcher			X	
Mountain Plover		X		
Marsh Wren			X	

C. Regional (State or JV Plans) Species or Habitat Objectives

Species/Habitat	Objectives	Measures	Results
Northern Pintail	Increase winter use by 1000 bird days	Bi-monthly winter ground counts	02-03 winter use, average winter use increased by 2000 bird days
Cinnamon Teal	Increase nesting pairs 10%	Conduct June nesting islands surveys	02-03 nest density increased 15% over previous year
Ruddy Duck	Increase nesting density 10%	Conduct June emergent vegetation surveys	02-03 nest density declined 5%
Sage Grouse	Increase current population by 100%	Seasonal lek counts	10 % increase at leks
Palustrine emergent marsh	Increase habitat type by 500,000 acres	Acreage completed	500 acres maintained in perpetuity. 1% of objective achieved
Grassland	Increase habitat quality on 100,000 acres	Acreage of habitat quality improved	500 acres protected. .5% of objective achieved
Sagebrush	Increase wet meadow complexes by 50,000 acres	Acreage of wet meadow habitat restored	250 acres restored. .5% of objective achieved

Appendix 4 – Continental and Regional Priority Bird Species

Species List		Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
1	Common Loon		X		X	X			X	X	X	X
2	Horned Grebe				X	X			X	X		
3	Eared Grebe		X	X	X	X	X	X	X	X		X
4	Red-necked Grebe				X				X			
5	Western Grebe	X	X	X	X	X	X	X	X	X	X	X
6	Clark's Grebe	X	X	X	X	X	X	X	X	X	X	X
7	American White Pelican	X	X	X	X	X	X	X	X	X	X	X
8	Double-crested Cormorant		X					X				
9	Neotropic Cormorant							X				
10	American Bittern	X	X	X		X		X			X	X
11	Least Bittern	X	X				X	X	X	X	X	
12	Great Blue Heron		X			X					X	X
13	Great Egret	X	X					X				
14	Snowy Egret	X	X	X	X	X	X	X	X	X	X	X
15	Cattle Egret				X					X		
16	Green Heron							X				
17	Black-crowned Night-Heron	X	X	X	X	X	X	X	X	X	X	X
18	White-faced Ibis	X	X	X	X	X	X	X	X	X	X	X
19	Tundra Swan		X		X	X	X			X	X	
20	Trumpeter Swan		X		X	X	X			X	X	
21	Greater White-fronted Goose		X			X	X		X			
22	Ross's Goose					X	X	X				
23	Lesser Snow Goose				X	X	X	X		X		
24	Canada Goose	X			X	X	X	X		X	X	
25	Wood Duck	X	X	X	X	X	X	X	X	X	X	
26	Mallard	X	X	X	X	X	X	X	X	X	X	
27	Northern Pintail	X	X	X	X	X	X	X	X	X	X	X
28	Gadwall	X			X	X	X			X		X

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Species List		Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
29	American Wigeon	X	X	X	X	X	X	X	X	X	X	
30	Northern Shoveler	X			X	X	X			X		
31	Blue-winged Teal	X		X	X	X	X	X		X		
32	Cinnamon Teal	X		X	X	X	X	X		X		
33	Green-winged Teal	X		X	X	X	X	X		X		
34	Lesser Scaup	X	X	X	X	X	X	X	X	X		X
35	Ring-necked Duck	X	X	X	X	X	X	X	X	X		
36	Greater Scaup	X	X	X	X	X	X	X	X	X		
37	Canvasback	X	X	X	X	X	X	X	X	X		
38	Redhead	X	X	X	X	X	X	X	X	X	X	X
39	Harlequin Duck	X	X	X	X	X	X	X	X	X	X	X
40	Common Goldeneye		X	X	X	X	X	X	X	X	X	X
41	Barrow's Goldeneye		X	X	X	X	X	X	X	X	X	X
42	Bufflehead	X	X	X	X	X	X	X	X	X	X	X
43	Common Merganser	X				X		X				
44	Ruddy Duck	X			X	X		X		X	X	
45	Hooded Merganser					X				X	X	
46	California Condor	X	X			X		X		X	X	
47	Northern Harrier	X	X	X		X	X	X	X	X	X	X
48	White-tailed Kite		X				X	X				
49	Cooper's Hawk		X				X			X	X	
50	Sharp-shinned Hawk		X			X						
51	Northern Goshawk	X	X	X	X	X	X	X	X	X	X	X
52	Zone-tailed Hawk	X					X	X				
53	Common Black-Hawk	X						X				
54	Swainson's Hawk	X	X	X	X	X	X	X	X	X	X	X
55	Ferruginous Hawk	X	X	X	X	X	X	X	X	X	X	X
56	Osprey	X	X	X	X	X	X	X	X	X	X	X
57	Golden Eagle	X	X	X	X	X	X	X	X	X	X	X
58	Bald Eagle	X	X	X	X	X	X	X	X	X	X	X
59	Gyrfalcon	X	X	X	X	X	X	X	X	X	X	X
60	Prairie Falcon	X	X	X	X	X	X	X	X	X	X	X

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Species List		Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
61	Merlin		X				X				X	X
62	Peregrine Falcon	X	X	X	X	X	X	X	X	X	X	X
63	Ring-necked Pheasant											
64	Chukar											
65	Ruffed Grouse		X		X	X						
66	Sharp-tailed Grouse			X	X	X	X	X	X	X	X	X
67	Greater Sage-grouse		X	X	X	X	X	X	X	X	X	X
68	Gunnison Sage-Grouse			X								
69	Spruce Grouse				X	X			X			
70	Blue Grouse	X		X	X	X		X	X		X	X
71	White-tailed Ptarmigan	X		X	X	X		X			X	X
72	Mearn's Quail											
73	Mountain Quail				X				X		X	
74	Scaled Quail	X		X				X				
75	Gambel's Quail											
76	Sora									X	X	
77	Virginia Rail					X						X
78	Yellow Rail		X		X	X			X		X	
79	Greater Sandhill Crane	X	X	X	X	X	X	X	X	X	X	X
80	Lesser Sandhill Crane		X									
81	Black-bellied Plover	X	X		X	X	X		X	X	X	X
82	American Golden Plover				X	X			X		X	X
83	Semipalmated Plover		X		X	X			X		X	
84	Snowy Plover	X	X	X	X	X	X	X	X	X	X	X
85	Killdeer	X	X		X	X	X	X	X	X	X	X
86	Mountain Plover	X		X	X	X	X	X	X	X	X	X
87	Black-necked Stilt	X	X	X	X	X	X	X	X	X	X	X
88	American Avocet	X	X	X	X	X	X	X	X	X	X	X
89	Greater Yellowlegs	X	X	X	X	X	X			X	X	X
90	Lesser Yellowlegs		X		X	X						
91	Solitary Sandpiper	X	X	X	X	X	X	X	X	X	X	X
92	Spotted Sandpiper	X	X	X	X	X	X	X	X	X	X	X

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Species List		Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
93	Upland Sandpiper				X	X	X		X	X	X	X
94	Buff-breasted Sandpiper					X						X
95	Whimbrel		X		X	X			X		X	X
96	Long-billed Curlew	X	X		X	X	X	X	X	X	X	X
97	Hudsonian Godwit					X						X
98	Marbled Godwit	X	X		X	X	X	X	X	X	X	X
99	Willet	X	X		X	X	X		X		X	X
100	Sanderling					X						X
101	Red Knot					X						
102	Dunlin		X		X	X					X	
103	Baird's Sandpiper		X		X	X					X	
104	Semipalmated Sandpiper	X	X		X	X	X			X	X	X
105	Western Sandpiper	X	X	X	X	X	X		X	X	X	X
106	Least Sandpiper	X	X		X	X	X		X	X	X	X
107	Pectoral Sandpiper		X		X	X					X	
108	Stilt Sandpiper				X	X					X	
109	Long-billed Dowitcher	X	X		X	X	X	X	X	X	X	X
110	Short-billed Dowitcher					X						
111	Wilson's Snipe	X	X	X	X	X	X	X		X	X	X
112	Wilson's Phalarope	X	X	X	X	X	X	X	X	X	X	X
113	Red-necked Phalarope	X	X		X	X	X		X	X	X	X
114	Franklin's Gull	X	X		X	X	X	X	X	X	X	X
115	California Gull	X	X		X	X	X	X	X	X	X	X
116	Black Tern	X	X	X	X	X	X	X	X	X	X	X
117	Caspian Tern	X	X		X	X	X			X	X	X
118	Common Tern	X				X	X			X	X	X
119	Forster's Tern		X	X	X	X		X	X	X	X	X
120	Band-tailed Pigeon	X	X	X				X		X	X	X
121	Black-billed Cuckoo					X						X
122	Western Yellow-billed Cuckoo		X	X			X	X		X	X	X
123	Yellow-billed Cuckoo	X	X		X	X	X		X	X	X	X
124	Barn Owl											

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Species List		Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
125	Long-eared Owl	X	X	X						X	X	
126	Short-eared Owl	X	X	X	X	X	X	X	X	X	X	
127	Flammulated Owl	X	X	X	X	X	X	X	X	X	X	
128	Eastern Screech-Owl					X		X				X
129	Elf Owl											
130	Great Gray Owl		X		X	X	X	X	X	X	X	X
131	Northern Spotted Owl		X				X		X		X	
132	Mexican Spotted Owl	X		X				X		X	X	
133	Northern Pygmy Owl				X	X		X	X	X		X
134	Burrowing Owl	X	X	X	X	X	X	X	X	X	X	X
135	Boreal Owl				X	X			X	X		X
136	Northern Saw-whet Owl									X	X	
137	Common Poorwill			X		X						X
138	Whip-poor-will	X						X				
139	Belted Kingfisher	X	X					X				
140	White-throated Swift	X		X							X	X
141	Black Swift	X	X	X	X	X		X	X	X	X	
142	Vaux's Swift		X	X	X	X			X		X	
143	Magnificent Hummingbird							X				
144	Black-chinned Hummingbird		X	X					X		X	X
145	Costa's Hummingbird		X					X		X	X	
146	Calliope Hummingbird	X	X		X	X	X		X	X	X	X
147	Broad-tailed Hummingbird			X		X			X	X	X	X
148	Rufous Hummingbird	X	X	X	X	X					X	X
149	Red-headed Woodpecker					X		X				X
150	Lewis's Woodpecker	X	X	X	X	X	X	X	X	X	X	X
151	White-headed Woodpecker		X		X		X		X		X	
152	Three-toed Woodpecker			X	X	X	X		X	X		X
153	Black-backed Woodpecker	X	X	X	X	X		X	X	X	X	X
154	Pileated Woodpecker		X			X			X		X	
155	Williamson's Sapsucker	X	X	X	X	X		X	X	X	X	X
156	Red-breasted Sapsucker		X		X					X		

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Species List		Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
157	Red-naped Sapsucker	X	X	X		X	X	X	X	X	X	X
158	Olive-sided Flycatcher	X	X	X	X	X	X	X	X	X	X	X
159	Western Wood-Pewee		X	X								
160	Willow Flycatcher	X	X	X	X	X	X		X	X	X	X
161	Southwestern Willow Flycatcher	X	X	X		X	X	X		X	X	
162	Least Flycatcher					X						
163	Dusky Flycatcher			X	X	X					X	X
164	Hammond's Flycatcher	X		X	X	X		X	X		X	X
165	Gray Flycatcher	X	X	X			X	X	X	X	X	X
166	Pacific Slope Flycatcher		X									
167	Cordilleran Flycatcher	X		X	X	X				X		X
168	Say's Phoebe			X				X				X
169	Vermillion Flycatcher	X	X							X		
170	Ash-Throated Flycatcher						X		X		X	X
171	Cassin's Kingbird			X		X						X
172	Loggerhead Shrike	X	X	X	X	X	X	X	X	X	X	X
173	Bell's Vireo	X	X				X	X	X	X		
174	Gray Vireo	X	X	X	X		X	X		X		
175	Plumbeous Vireo					X						X
176	Cassin's Vireo				X	X					X	
177	Warbling Vireo		X			X		X				
178	Red-eyed Vireo					X			X			
179	Western Scrub-Jay							X	X			X
180	Pinyon Jay	X	X	X	X		X	X		X		X
181	Clark's Nutcracker			X	X	X			X		X	X
182	Black-billed Magpie	X		X								
183	Horned Lark		X	X							X	
184	Violet-green Swallow			X				X				
185	Northern Rough-winged Swallow					X			X			X
186	Bank Swallow		X				X	X	X			
187	Purple Martin	X	X	X	X			X	X	X		X
188	Bridled Titmouse	X						X				

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Species List	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
189 Juniper Titmouse	X	X	X			X	X		X	X	X
190 Oak Titmouse		X									
191 Mountain Chickadee				X	X						
192 Chestnut-backed Chickadee					X						
193 Verdin	X	X				X	X		X		
194 Red-breasted Nuthatch		X		X	X						
195 Pygmy Nuthatch			X	X	X		X	X	X	X	X
196 Brown Creeper		X			X			X		X	X
197 Marsh Wren		X			X		X	X		X	X
198 Bewick's Wren											X
199 Winter Wren					X						
200 Rock Wren			X								X
201 Cactus Wren	X					X	X	X	X		
202 American Dipper	X	X	X	X	X		X	X		X	X
203 Golden-crowned Kinglet	X	X	X		X						X
204 Blue-gray Gnatcatcher		X			X						
205 Mountain Bluebird			X	X	X		X				
206 Western Bluebird			X			X			X	X	X
207 Townsend's Solitaire				X	X						X
208 Varied Thrush					X			X		X	
209 Veery	X				X		X	X		X	X
210 Hermit Thrush											
211 Gray Catbird	X				X			X		X	
212 Bendire's Thrasher	X	X					X		X	X	
213 Curve-billed Thrasher							X				
214 Crissal Thrasher	X	X					X		X	X	
215 Le Conte's Thrasher		X				X			X	X	
216 Sage Thrasher	X	X	X	X	X	X	X	X	X	X	X
217 Sprague's Pipit	X				X		X				X
218 Phainopepla	X	X				X			X	X	
219 Bohemian Waxwing			X		X						
220 Nashville Warbler		X			X			X		X	

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Species List	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
221 Virginia's Warbler	X	X	X	X		X	X	X	X	X	X
222 Lucy's Warbler	X	X				X	X		X		
223 Yellow Warbler	X	X						X	X	X	
224 Townsend's Warbler				X	X			X		X	X
225 Hermit Warbler		X									
226 Black-throated Gray Warbler	X	X	X			X	X		X	X	X
227 Grace's Warbler	X		X			X	X		X	X	
228 American Redstart	X				X						
229 Ovenbird					X						X
230 MacGillivray's Warbler	X	X	X	X	X	X	X	X	X	X	X
231 Common Yellowthroat		X				X	X		X	X	X
232 Wilson's Warbler		X	X			X	X		X		X
233 Red-faced Warbler	X										
234 Painted Redstart							X				
235 Yellow-breasted Chat	X	X				X	X	X	X	X	
236 Olive Warbler	X						X				
237 Western Tanager		X		X	X						
238 Hepatic Tanager	X										
239 Summer Tanager	X	X							X	X	
240 Lazuli Bunting		X	X	X	X		X	X		X	X
241 Dickcissel					X		X				X
242 Pyrrhuloxia						X	X				
243 Blue Grosbeak	X	X				X			X	X	
244 Abert's Towhee	X						X		X		
245 Canyon Wren	X					X					
246 Green-tailed Towhee		X	X	X	X					X	
247 Black-throated Sparrow		X	X	X	X		X	X	X	X	X
248 Sage Sparrow	X	X	X	X	X	X	X	X	X	X	X
249 Chipping Sparrow		X			X						
250 Clay-colored Sparrow					X						
251 Brewer's Sparrow	X	X	X	X	X	X	X	X	X	X	X
252 Black-chinned Sparrow	X	X				X	X				X

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Species List	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
253 Lark Bunting			X	X	X				X		X
254 Vesper Sparrow						X	X	X		X	X
255 Lark Sparrow		X			X			X			X
256 Baird's Sparrow					X		X				X
257 Grasshopper Sparrow	X	X		X	X		X	X	X	X	X
258 Fox Sparrow		X							X	X	
259 Song Sparrow		X			X						
260 McCown's Longspur				X	X		X				X
261 Chestnut-collared Longspur	X				X		X				X
262 Bullock's Oriole		X					X	X		X	X
263 Scott's Oriole	X	X	X				X	X	X	X	X
264 Bobolink	X			X	X	X	X	X	X	X	X
265 Tri-colored Blackbird		X		X							
266 Yellow-headed Blackbird		X									
267 Gray-crowned Rosy Finch								X		X	
268 Black-capped Rosy Finch			X				X				X
269 Brown-capped Rosy Finch			X					X	X	X	X
270 Black Rosy-Finch			X	X	X	X					
271 Red Crossbill				X	X						
272 White-winged Crossbill				X					X		X
273 Lesser Goldfinch				X					X		
274 Lawrence's Goldfinch		X									
275 Cassin's Finch			X	X	X				X	X	
276 Pine Grosbeak	X		X				X	X			