U.S. Department of the Interior
Bureau of Land Management
Farmington Field Office

Mancos-Gallup Resource Plan Amendment
and
Environmental Impact Statement

Migratory Bird Report
May 2014

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BLM

New Mexico • Farmington Field Office

Mancos-Gallup RMPA/EIS

Migratory Bird Report

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Acronyms and Abbreviations

BCC	Birds of Conservation Concern
BLM	United States Department of the Interior, Bureau of Land Management
EIS	environmental impact statement
ESA	Endangered Species Act
FFO	Farmington Field Office
MBTA	Migratory Bird Treaty Act
MOU	memorandum of understanding
NMPIF	New Mexico Partners in Flight
RFD	Reasonable Foreseeable Development Scenario
RMP	resource management plan
RMPA	resource management plan amendment
USFWS	United States Fish and Wildlife Service

Chapter 1: Introduction

1.1 BACKGROUND

This Migratory Bird Report is prepared in support of the upcoming United States Department of the Interior, Bureau of Land Management (BLM) Farmington Field Office (FFO) Resource Management Plan (RMP) Amendment/Environmental Impact Statement (RMPA/EIS). Management decisions for this land area are currently covered by the 2003 Farmington RMP/EIS. This RMPA will replace or update certain decisions from the 2003 RMP/EIS for lands within the current planning area.

The BLM analyzed the Mancos/Gallup formations in the 2002 Reasonable Foreseeable Development Scenario (RFD) and current 2003 RMP/EIS. Technology developed since that time is allowing for additional development of what was previously considered a fully developed oil and gas play within the San Juan Basin in northwestern New Mexico. Improvements and innovations in horizontal drilling technology and multi-stage hydraulic fracturing have enhanced the economics of developing this stratigraphic horizon. The types of fluids recovered from the Mancos/Gallup formations are quite variable throughout the basin. Depending on the region of the formation, the fluids pass from the “gas window” into the “oil window,” varying from dry gas with some carbon dioxide to producing oil with some associated gas.

With the rise in oil prices, the oil play to the south has drawn interest, and several wells are being drilled and planned for the near future.

Approximately 4,140 natural gas and oil wells have been drilled in the Mancos/Gallup formations. The current RFD forecasted an additional 300 Mancos oil wells to the existing fractured Mancos play in the southeast portion of the San Juan Basin. The RFD also forecasted multiple Mancos gas completions to add onto existing Mesa Verde and Dakota producing wells.

Full-field development, especially in the shale oil play, will result in additional impacts unforeseen or analyzed in the RFD or the current 2003 RMP/EIS. As a result, this development will require EIS-level analysis and revision in the form of an amendment to the RMP for complete analysis of the Mancos/Gallup formations. Additionally, the RMPA and EIS will need to address updated management related to lands and realty, vegetation, and lands with wilderness characteristics.

The revised and updated RFD will estimate the future number of oil and gas wells to be drilled in the Mancos/Gallup formations and the magnitude of the infrastructure improvements projected at this time to assess the environmental impacts of full-field development in the Mancos/Gallup formations. The impacts associated with the construction of infrastructure and additional well counts will involve more surface disturbance than was originally visualized in the 2003 RMP. The amended RMP will consider impacts on biological resources from expanded oil and gas development in the planning area and will include specific management objectives for raptors and migratory birds. It will also consider updated vegetation management (including habitat) and the 2010 US Department of the Interior, Fish and Wildlife Service (USFWS) memorandum of understanding (MOU) with the BLM to promote bird conservation.

1.2 PURPOSE OF THE MIGRATORY BIRD REPORT

The purpose of the Migratory Bird Report is to strengthen migratory bird conservation in the FFO by identifying and implementing strategies that promote conservation and avoid or minimize adverse impacts on migratory birds as written in the 2010 MOU between the BLM and the USFWS to promote bird conservation.

The 2003 RMP does not contain specific management objectives or direction for migratory birds. Since the RMP, the BLM has developed an Interim Management Policy for management of migratory birds in coordination with the 2010 MOU with USFWS. This report identifies migratory birds in the planning area, analyzes impacts on migratory birds from existing threats in the planning area, and examines current and future conservation measures that could be considered during this RMPA to protect migratory birds from threats in the planning area.

The migratory bird report incorporates input from the public scoping process, research of migratory bird policies from other agency offices with similar issues, outputs from the meetings conducted for this task, and related information provided by the BLM.[1] Information presented in this report is the result of a review of migratory bird policies in the region as well as discussions with federal and state agencies and the New Mexico Partners in Flight (NMPIF, now called New Mexico Avian Conservation Partners).

1.3 PROJECT AREA

The planning area, located in northwestern New Mexico, encompasses approximately 4.2 million acres of federal, state, and private lands, as well as Indian reservations overlying the Mancos/Gallup formations within portions of San Juan, Rio Arriba, McKinley, and Sandoval Counties in New Mexico. The planning area is comprised of large tracts of BLM-managed lands co-managed with US Department of Agriculture, Forest Service, US Department of the Interior, Bureau of Reclamation, tribal, and Indian Allotted lands; there are scattered private and state-owned inholdings as well. The decision area includes only the BLM-managed surface land and subsurface mineral estate within the planning area (2.2 million acres).

1.4 LAWS AND REGULATIONS

Migratory Bird Treaty Act of 1918. The Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 USC 703), made it unlawful to pursue, hunt, kill, capture, possess, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition, Executive Order 13186 set forth the responsibilities of federal agencies to further implement the provisions of the MBTA by integrating bird conservation principles and practices into agency activities and by ensuring that federal actions evaluate the effects of actions and agency plans on migratory birds. As used in the MBTA, "migratory birds" include native resident species that remain in an area throughout the year as well as migrant species that move from northern to southern latitudes and from higher to lower elevations to avoid winter conditions and a seasonal shortage of suitable food.

For most migrant and native resident species, nesting habitat is of special importance because it is critical for supporting reproduction in terms of both nesting sites and food. Also, because birds are generally territorial during the nesting season, their ability to access and utilize sufficient food is limited by the quality of the territory occupied. During nonbreeding seasons, birds are generally nonterritorial and able to feed across a larger area and wider range of habitats.

Among the wide variety of species protected by the MBTA, special concern is usually given to the following groups:

- Species that migrate across long distances
- Birds of prey, which require large areas of suitable habitat for finding sufficient prey
- Species that have narrow habitat tolerances and hence are vulnerable to extirpation from an area as a result of a relatively minor habitat loss
- Species that nest colonially and hence are vulnerable to extirpation from an area as a result of minor habitat loss

BLM Instruction Memorandum 2008-050. This Instruction Memorandum provides guidance toward meeting the agency's responsibilities under the MBTA. This guidance directs field offices to promote the maintenance and improvement of habitat quantity and quality for migratory birds of conservation concern to avoid, reduce, or mitigate adverse impacts on their habitats to the extent feasible and in a manner consistent with regional or statewide bird conservation priorities. Because of the many species of migratory birds potentially present within FFO boundaries, the BLM has focused its protection on species listed by the USFWS as Birds of Conservation Concern (BCC). This listing resulted from the 1988

[1] Some of the studies included data from areas within the FFO, but outside the defined planning amendment area. However, the data is representative of migratory bird species and their habitat requirements, and therefore was included in this report.

amendment to the Fish and Wildlife Conservation Act, which requires USFWS to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973."

Executive Order 13186, Migratory Birds. This Executive Order, signed in 2001, directs executive departments and agencies to take certain actions to further implement the MBTA. The Executive Order directs each federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement, within two years, an MOU with the USFWS that shall promote the conservation of migratory bird populations. Under this Executive Order, the Secretary of the Interior established the interagency Council for the Conservation of Migratory Birds to oversee the implementation of the Executive Order.

BLM Instruction Memorandum NM-F00-2010-001. The Instruction Memorandum NM-F00-2010-001, sent to the FFO on February 22, 2010, provided interim guidance for meeting the BLM's responsibilities under the MBTA, Washington Office Interim Management Guidance (Instruction Memorandum 2008-050) and the Executive Order 13186. Under the MBTA and Executive Order, federal agencies are required to consider impacts on migratory birds from management activities. In keeping with this mandate, the BLM was directed to consult avian conservation plans to identify species at greater conservation risk based on threats to the species or their habitats.

BLM MOU WO-230-2010-04. This MOU between the BLM and USFWS (BLM MOU WO-230-2010-04) provides direction for the management of migratory birds to promote their conservation. At the project level, the MOU directs the BLM to evaluate the effects of the BLM's actions on migratory birds during the National Environmental Policy Act process and to identify potential measurable negative effects on migratory bird populations, focusing first on species of concern, priority habitats, and key risk factors. In such situations, the BLM would implement approaches to lessen such effects. Identifying species of concern, priority habitats, and key risk factors includes identifying species listed on the USFWS BCC list that are most likely to be present in the project area and evaluating and considering management objectives and recommendations for migratory birds resulting from comprehensive planning efforts, such as the NMPIF New Mexico Bird Conservation Plan (NMPIF 2007). This Bird Conservation Plan was initially developed in the 1990s and was updated in 2003 with a new species assessment, a list of priority species, more substantive species accounts, habitat prioritization, and a regional approach to conservation planning. The list of priority species was updated again in 2007.

BLM Interim Management Policy for Migratory Birds. In 2010, the BLM developed an Interim Management Policy for migratory birds pursuant to the MBTA and in coordination with the 2010 USFWS MOU. The policy requires nest surveys for disturbance from construction or operation of equipment during nesting season, with halts to construction mandated until young have fledged at sites where nests are found.

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Chapter 2: Migratory Birds in the Planning Area

2.1 SPECIES AND HABITAT REQUIREMENTS

A variety of migratory song bird species use habitats within the planning area for breeding, nesting, foraging, and migratory habitats. The NMPIF Priority Species List and the USFWS BCC list for Region 16 (Colorado Plateau) were used to identify potential priority species that could utilize habitats within the planning area. **Table 2-1** (NMPIF Species, USFWS BCC, and BLM Special Status Bird Species within the FFO) lists the NMPIF Priority Species and the USFWS BCC species that are a concern within the FFO and are likely to inhabit the planning area.

The New Mexico Bird Conservation Plan identifies a number of bird species within the Colorado Plateau physiographic region as priority species. A number of the highest priority species have been detected in the planning area. This group includes sage sparrow, mountain bluebird, loggerhead shrike, and gray vireo. The NMPIF has identified the pinyon jays and western bluebirds nesting in the FFO as comprising a high percentage (over 10 percent) of each species' US population. NMPIF suggests that New Mexico land managers have a high level of responsibility to maintain or increase the current populations of these species (NMPIF 2007). The FFO will consider NMPIF's recommendations in its future management actions. In this regard, the FFO has been working in concert with the University of New Mexico during the past two years to locate and define colonial nest site characteristics for the purposes of constructing a habitat model that could be used as a planning tool to minimize the future impacts on pinyon jays. A third season of field work will be conducted in 2014. So far, pinyon jay nesting colonies have been found in Crow Mesa and Rattlesnake Canyon Wildlife Areas.

Table 2-1. NMPIF Priority Species, USFWS BCC, and BLM Special Status Bird Species within the FFO

Species	New Mexico Partners in Flight Priority Species	Birds of Conservation Concern (BCR 16)	BLM Special Status Bird Species
American Bittern	X	X	
Baird's Sparrow	X		
Bald Eagle	X	X	X
Band-tailed Pigeon	X		
Bank Swallow	X		
Bell's Vireo	X		
Belted Kingfisher	X		
Bendire's Thrasher	X	X	
Black Rosy-Finch		X	
Black Swift	X		
Black-chinned Hummingbird	X		
Black-throated Gray Warbler	X		
Black-throated Sparrow	X		
Bobolink	X		
Brewer's Sparrow		X	
Broad-tailed Hummingbird	X		
Brown-capped Rosy-Finch	X	X	
Bullock's Oriole	X		
Burrowing Owl		X	X
Cassin's Finch	X	X	
Chestnut-collared Longspur (nb)		X	
Clark's Grebe	X		
Common Black-Hawk	X		
Cordilleran Flycatcher	X		
Dickcissel	X		
Eared Grebe	X		
Ferruginous Hawk	X	X	X
Flammulated Owl	X	X	

Table 2-1. NMPIF Priority Species, USFWS BCC, and BLM Special Status Bird Species within the FFO

Species	New Mexico Partners in Flight Priority Species	Birds of Conservation Concern (BCR 16)	BLM Special Status Bird Species
Golden Eagle	X	X	X
Grace's Warbler	X	X	
Grasshopper Sparrow	X	X	
Gray Vireo	X	X	
Hooded Oriole	X		
Juniper Titmouse	X	X	
Lazuli Bunting	X		
Least Bittern	X		
Least Tern	X		
Lewis's Woodpecker	X	X	
Loggerhead Shrike	X		
Long-billed Curlew	X	X	
Lucifer Hummingbird	X		
Lucy's Warbler	X		
McCown's Longspur	X		
Mississippi Kite	X		
Mountain Bluebird	X		
Mountain Plover	X	X	X
Northern Harrier	X		
Northern Pygmy-Owl	X		
Olive-sided Flycatcher	X		
Painted Bunting	X		
Peregrine Falcon	X	X	X
Pinyon Jay	X	X	X
Plumbeous Vireo	X		
Prairie Falcon	X	X	X
Red-headed Woodpecker	X		
Red-naped Sapsucker	X		
Sage Sparrow	X		
Sage Thrasher	X		
Scaled Quail	X		
Snowy Egret	X		
Snowy Plover	X	X	
Sprague's Pipit	X		
Summer Tanager	X		
Swainson's Hawk	X		
Vesper Sparrow	X		
Virginia's Warbler	X		
Warbling Vireo	X		
Western Bluebird	X		
Western Grebe	X		
Western Scrub-Jay	X		
Whip-poor-will	X		
White-throated Swift	X		
Williamson's Sapsucker	X		
Willow Flycatcher	X	X	
Wilson's Warbler	X		
Yellow-billed Cuckoo	X	X	X

Source: USFWS 2008, NMPIF 2007, BLM 2008

2.2 BIRD SURVEYS IN THE FFO

In 1999, the BLM initiated a monitoring program to assess the status of avian species utilizing the key habitat types common to the planning area. This monitoring effort consisted of conducting point count surveys during the spring breeding period and again during the winter in the following habitat types: pinyon-juniper; ponderosa pine/pinyon pine/Gambel's oak; riparian (cottonwood, willow, saltcedar); Wyoming big sagebrush/grass (untreated); and Wyoming big sagebrush/grass (treated). The results of these surveys are generally consistent with the trends reported in the breeding bird surveys conducted by the USFWS and with the information presented in the New Mexico Bird Conservation Plan. The BLM has continued to track and monitor avian species using point counts. Data collection of this magnitude will also enable the BLM to more effectively meet its obligations under the provisions of the MBTA and the associated MOU.

Table 2-2 (FFO Migratory Bird Survey Route Point Count Data 1999-2013) shows levels of species richness for migratory birds across FFO survey areas between 1999 and 2013. Ten routes were regularly surveyed, representing a variety of habitats. Routes 1 through 4 may under-represent the numbers of birds because compressor noise during the counts masked the sound of bird calls. Routes 5 through 7 had vegetation treatments to reduce sagebrush during some survey years, which may have affected counts by reducing habitat for some species. Detailed data, including species names along each route for these study years, are on file in the FFO (Hansen 2014).

The BLM has also monitored sage-obligate songbird species to determine population trends as a result of reductions in sagebrush habitat in the planning area. **Figure 2-1** (Long-term Trends in Numbers of Sage-obligate Songbirds in the FFO) shows the results of long-term monitoring of sage thrasher (*Oreoscoptes montanus*), sage sparrow (*Amphispiza belli*), and Brewer's sparrow (*Pooecetes gramineus*) populations. Both sage and Brewer's sparrows populations appeared stable, but sage thrashers showed a decline over the study years.

Figure 2-1. Long Term Trends in Numbers of Sage-obligate Songbirds in the FFO

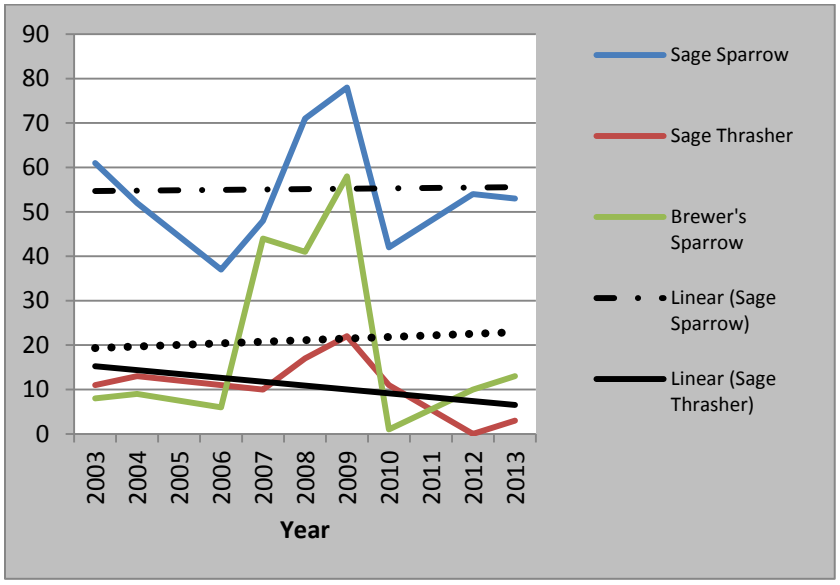

Table 2-2. Farmington Field Office Migratory Bird Survey Route Point Count Data 1999-2013

Survey Route	Habitat Type	Data Point	Year													
			1999	2000	2001	2002	2003	2004	2006	2007	2008	2009	2010	2012	2013	Avg.
Route #1 - Mt Nebo[1]	Pinyon-juniper-pine-oak-fir	# Species	34	34	26	27	28	29	29	29	27	27	23	21	21	27.3
		# Individuals	244	249	221	191	209	128	165	145	129	130	148	72	75	162
Route #2 - Devil's Canyon[1]	Pinyon-juniper-pine-oak-fir	# Species	23	33	30	30	28	30	33	32	34	34	34	28	31	30.8
		# Individuals	343	269	275	250	144	174	173	208	278	235	225	156	207	225.9
Route #3 - Pump Canyon[1]	Riparian	# Species	na*	28	29	31	22	26	25	20	21	20	22	28	32	25.3
		# Individuals	na	147	150	146	103	110	141	109	82	69	110	132	125	118.7
Route #4 - Pump Mesa[1]	Pinyon-juniper-sagebrush-oak	# Species	28	28	29	21	23	31	27	22	25	30	29	28	31	27.1
		# Individuals	237	211	229	158	181	327	129	83	236	385	122	181	216	207.3
Route #5 - Huerfano[2]	Sagebrush-grass understory	# Species	19	14	11	11	13	10	10	12	12	11	10	7	11	11.6
		# Individuals	177	97	113	33	67	63	91	128	105	70	86	54	74	89.1
Route #6 - Angel Peak[2]	Sagebrush-grass understory	# Species	na	na	16	15	15	9	8	12	14	8	8	9	11	11.4
		# Individuals	na	na	48	44	40	39	32	58	44	48	38	63	76	48.2
Route #7 - Blanco T.P. [2]	Sagebrush-grass understory	# Species	na	na	7	12	8	9	9	11	9	7	6	7	8	8.5
		# Individuals	na	na	72	66	63	36	52	45	67	61	34	62	65	53.5
Route #8 - Huerfano N.	Sagebrush - treated	# Species	na	na	11	11	8	15	7	10	10	8	6	8	10	9.4
		# Individuals	na	na	99	99	65	90	101	148	124	96	80	71	110	98.5
Route #9 - Ensenada	Sagebrush - Partly treated	# Species	na	na	na	na	13	16	18	17	18	15	11	12	14	14.9
		# Individuals	na	na	na	na	66	88	105	135	138	76	67	59	56	51.3
Route #10 - Crow Mesa	Pinyon-juniper-sagebrush-oak	# Species	na	na	na	na	na	na	na	17	21	22	17	26	34	22.8
		# Individuals	na	na	na	na	na	na	na	105	95	100	98	128	236	127

Source:
* "na" = not available.
[1] Route counts influenced by compressor noise.
[2] Sagebrush treatments along this route may have affected counts in some years.

From 2004 through 2006, the BLM investigated nesting season migratory birds in sagebrush areas that had been treated with herbicide (tebuthiuron) and control areas in San Juan County to determine whether declines in species diversity were associated with application of herbicide to sagebrush (Schmitt 2009). Results indicated that declines in sagebrush-obligate bird species were associated with herbicide treatment. A total of 25 bird species were detected during the surveys, of which seven (Black-chinned hummingbird [*Archilochus alexandri*], sage sparrow, Brewer's sparrow, mountain bluebird [*Silia currucoides*], pinyon jay [*Corvus corax*], loggerhead shrike [*Lanius ludovicianus*], and sage thrasher [*Oreoscoptes montanus*]) are NMPIF priority species (Schmitt 2009). Throughout the planning area, pinyon-juniper woodlands comprise the dominant habitat type. Studies regarding habitat use by pinyon-juniper obligate bird species have been conducted within the FFO. Most recently, in 2013, a study investigated nest-scale habitat use by pinyon jays and gray vireos at multiple study sites for each species (Johnson et al. 2013). Estimates indicated that pinyon jays nested in trees that were taller and had larger diameters than random trees within the colony. For pinyon jays, the authors recommended no net loss of mature Colorado pinyon or juniper (especially Utah juniper) trees in pinyon-juniper nesting habitat in the FFO. The authors further recommended that size distributions on areas maintained for pinyon jay nesting colonies should leave all mature trees for nesting and for pinyon cone production. For the gray vireo study, estimates indicated that these birds nested in areas with slightly more trees than available habitat but selected nest trees with slightly smaller foliage diameter than randomly selected trees. The study authors recommended no net loss of juniper trees, especially in juniper-dominated woodlands, to support populations of nesting gray vireos. In addition, gray vireos should be considered where tree removal is proposed in pinyon-dominated landscapes in the FFO. Where tree removal activities may occur, the authors recommended maintaining similar tree densities as reported in the study (Johnson et al. 2013).

Another study was conducted in the Rattlesnake Canyon Habitat Management Area within the FFO. This study was designed to investigate the effects of energy extraction activities on avian communities in pinyon–juniper woodlands. The aims were to understand species' habitat use, including nest placement, nest site selection and nesting success in pinyon and juniper trees, and to evaluate the management implications of nesting habitat use (Francis et al 2011). The results indicated that of all the nests in live trees, 86 percent were in junipers. The selection of juniper as a nest tree was significantly higher than expected from the region's pinyon–juniper ratio (1:1.06) for the community as a whole. Nest survival, however, was not higher in juniper than in pinyon trees for the nesting community as a whole. The high use of juniper as a nesting substrate differs from previous studies, which have suggested that a presence of pinyon is among the most important habitat features for many pinyon–juniper species. The authors recommended that, because of their importance to nesting birds, managers should avoid preferential thinning of junipers within pinyon–juniper woodlands (Francis et al. 2011).

Waterfowl habitat within the planning area is limited to stock ponds, sumps, a few acres of wetlands in Carrizo and Pump Canyons, and scattered parcels of BLM-managed land along the San Juan, Animas, and La Plata Rivers. Potholes enclosed by a fence to exclude livestock have been constructed in the Largo Canyon drainage for the purpose of providing waterfowl nesting habitat. Mallards (*Anas platyrhynchos*), American widgeon (*Anas americana*), green wing teal (*Anas crecca*), common merganser (*Mergus merganser*), American coot (*Fulica americana*), common goldeneye (*Bucephala clangula*), and cinnamon teal (*Anas cyanoptera*) are species typically encountered on the water impoundments and rivers. Canada geese (*Branta canadensis*) are abundant on the San Juan and Animas Rivers and the lands adjacent to them.

There are several species of upland game birds found in the planning area. Gambel's quail (*Callipepla gambelii*) are common in many of the drainages that are well vegetated, while scaled quail (*Callipepla squamata*) tend to be more prevalent on drier sage/grass sites in the southern portion of the FFO. Scattered tracts of BLM-managed land adjacent to private agricultural lands support small numbers of ring-necked pheasants (*Phasianus colchicus*). Turkeys are also found on various BLM-administered river tracts along the San Juan and Animas Rivers. These birds are a mix of Rio Grande (*Meleagris gallopavo intermedia*), Merriam's, and domestic turkeys (*Meleagris* spp.). They are hunted over an unlimited entry season in the spring and in the fall. The majority of the planning area supporting wild turkeys (Rattlesnake Canyon Wildlife Specially Designated Area) is closed to hunting (Hansen 2014).

The FFO has inventoried and monitored golden eagles (*Aquila chysaetos*), ferruginous hawks (*Buteo regalis*), prairie falcons (*Falco mexicanus*), and other raptors since 1981 (HawksAloft 1998, 1999, 2006; Animas 2013). Abundance and nesting success has fluctuated, likely due to weather conditions and cyclic prey abundance, including a drop associated with a crash in the desert cottontail population in 2009-2010. Populations of ferruginous hawk and golden eagle have remained relatively stable, but golden eagles continue to show limited nesting success (Animas 2013). Preliminary golden eagle nest survey data from 2014 report at least 13 pairs were observed nesting in the FFO, indicating that the local population has rebounded from the crash in 2010, though nesting success has yet to be determined (Kendall 2014).

Owls recorded during Mexican spotted owl surveys included the long-eared owl (*Asio otus*), northern saw-whet owl (*Aegolius acadicus*), flammulated owl (*Otus flammeolus*), and great-horned owl (*Bubo virginianus*) (BLM 1995).

2.3 SPECIAL MANAGEMENT SPECIES

The BLM's Special Management Species Policy was updated in 2008 to incorporate the September 2002 Biological Assessment for the 2003 FFO RMP, which established management for species and critical habitats listed by the USFWS under the authority of the Endangered Species Act (ESA). However, because not all rare species receive legal protection under ESA, rare species or species with insufficient data are often managed as special status species. Federal land management agencies manage special status species to avoid the need for listing under ESA in the future. The FFO has determined that special management is warranted for the following migratory bird species considered "Special Management Species":

- Bald eagle
- Burrowing owl
- Mountain plover
- Yellow-billed cuckoo
- Raptors

Each of these species is described in more detail in **Sections 2.3.1 through 2.3.5**.

2.3.1 Bald Eagle

Although the bald eagle is no longer protected by the ESA, the provisions of the Bald and Golden Eagle Protection Act continue to govern management to protect bald and golden eagles. The federal delisting of the bald eagle will not affect the bald eagle's New Mexico state status as "threatened." Management for the bald eagle will continue as stated under the 2003 FFO RMP, and the designated Areas of Critical Environmental Concern for the bald eagle will not change from those described in the 2003 FFO RMP. Bald eagles have been observed in the FFO along the Animas and San Juan Rivers, but they do not nest in the planning area.

2.3.2 Burrowing Owl

The burrowing owl is considered a species of concern by the USFWS and is protected by the MBTA. In 2003, the USFWS developed a conservation plan (BTP-R6001-2003) to guide land managers through the decision making process implemented when there is potential for any type of project to adversely affect burrowing owls or any of the resources that support them. In July 2007, the New Mexico Department of Game and Fish developed guidelines and recommendations for burrowing owl surveys and mitigation based, in part, on the USFWS's conservation plan. In northwestern New Mexico, burrowing owls are generally associated with burrows created by the Gunnison's prairie dog towns, as well as ground squirrels and foxes. Over the past five years, the BLM has surveyed and mapped Gunnison prairie dog towns within much of the FFO. Maps and GIS layers of known prairie dog towns are available upon request. Prairie dog towns will be considered designated potential habitat for burrowing owls. Proposed

activities are required to seasonally avoid negative impacts on and disturbance of burrowing owls. A preconstruction survey for burrowing owls is required for proposed projects scheduled to be constructed within designated potential habitat during the nesting season of April 1 to July 31. Areas within a 164-foot radius of occupied burrowing owl nests cannot be disturbed from April 1 to August 15. After August 15, any activity that will cause destruction of a nest burrow can only begin after confirmation that the nest burrow is no longer occupied.

2.3.3 Mountain Plover

The mountain plover was listed by the USFWS as a proposed species for listing under the ESA on February 16, 1999. The BLM designated potential mountain plover habitat and established mountain plover management in the September 2002 Biological Assessment. The USFWS determined that listing the mountain plover was not warranted on September 9, 2003. The FFO will continue to manage mountain plover according to the 2002 Biological Assessment. Under that Biological Assessment, a preconstruction survey for mountain plover is required for proposed projects scheduled to be constructed within designated potential habitat during the nesting season of April 1 to July 31. Occupied mountain plover designated habitat cannot be disturbed from April 1 to July 31.

2.3.4 Yellow-billed Cuckoo

The USFWS added the yellow-billed cuckoo to the list candidate species under the ESA on July 25, 2001. The BLM conducted surveys to determine the presence of yellow-billed cuckoo and found individuals in wooded portions of designated riparian areas and river tracts in the FFO. River tracts and ephemeral wash riparian areas are closed to wood cutting, and existing oil and gas leases are subject to no surface occupancy stipulations in active floodplains. A preconstruction survey for yellow-billed cuckoo would be required for any proposed right-of-way or any other project that may impact wooded habitat in a river tract or designated ephemeral wash riparian area during the breeding season of April 1 to August 31. Occupied yellow-billed cuckoo habitat cannot be disturbed from April 1 to August 31.

2.3.5 Raptors

Additional migratory birds considered to be Special Management Species in the FFO include American peregrine falcon (*Falco peregrinus anatum*), ferruginous hawk (*Buteo regalis*), and prairie falcon (*Falco mexicanus*). Current BLM policy prohibits construction, drilling or completion activities within 0.3-mile from active raptor nests during the breeding season, between March 1 and June 30. Golden eagle nests are protected from February 1 to June 30. These buffer widths and timing may be altered in the future to enhance protection of nesting raptors during sensitive periods.

2.4 IMPACT ASSESSMENT

2.4.1 Threats

The greatest threat to migratory birds in the planning area is the continued loss or degradation of habitat due to ongoing human development activities and habitat disturbance. Migratory birds rely on a wide variety of habitats throughout their lifecycle, including wintering, nesting, and stopover areas. As such, migratory bird survival is vulnerable to human disturbances across many spatial and seasonal conditions. Additional threats specific to migratory birds include collisions with human infrastructure, poisoning from pesticide use, and predation by introduced predators (USFWS 2002). Diseases including botulism, avian cholera, salmonellosis, and West Nile virus pose significant threats to migratory bird populations, as do severe weather conditions and climate change.

Specific threats to bird species identified by the Intermountain West Joint Venture for Bird Habitat Conservation Areas 1 and 2 within the FFO include:

- Extensive and rapidly expanding oil and natural gas development on BLM-managed lands
- Overgrazing of sagebrush shrublands and sagebrush control projects

- Grassland fragmentation
- Drought-related infestation and die-off of pinyon pine
- Livestock and exotic species damaging riparian habitat along the San Juan River (IWJV 2005)

2.4.2 Direct and Indirect Impacts

Extensive habitat loss fragmentation has occurred throughout northwestern New Mexico as a result of clearing for industrial development and oil and gas exploration (Wickersham and Wickersham 2007). Currently, San Juan County in northwestern New Mexico is one of the largest natural gas producing counties in New Mexico (BLM 2003). Natural gas development has fragmented habitats that were once relatively undisturbed by vegetation clearing for the new well pad developments and associated infrastructure including roads and pipeline rights-of-way. In a study by Wickersham and Wickersham (2007), the authors observed the density of gray vireos in oil and gas developed areas, modelled habitat preferences, and provided management recommendations. The objectives of the study were to establish baseline estimates of gray vireo densities, identify where high density natural gas wells dominate the landscape, and identify habitat characteristics that may be important to the species during the breeding season. The results indicated that the density of natural gas wells and the proximity of wells to roads did not appear to influence gray vireo distribution in the San Juan Basin. However, the overall density of natural gas wells in the study area was relatively high, and it was difficult to delineate areas of contiguous habitat in the study area. Additional studies were recommended to evaluate impacts of natural gas drilling on migratory bird distribution and density.

2.4.3 Cumulative Impacts

The rate of natural gas development in the San Juan Basin has accelerated in recent years and is projected to continue into the foreseeable future. Migratory birds in the planning area will continue to be subject to habitat fragmentation and loss, nest disturbance, loss of prey species, and disruption of breeding seasons. It is important that wildlife managers continue to monitor bird counts and breeding success and work to minimize disturbances in important wildlife habitat areas.

2.5 MIGRATORY BIRD CONSERVATION

2.5.1 Current Conservation Planning

Wildlife management under the 2003 FFO RMP emphasizes the perpetuation of a biologically diverse plant and animal community. The FFO also determines the numbers, habitat needs, and distribution of non-threatened and endangered bird species, including migratory songbirds. The protection and enhancement of wildlife habitat is accomplished through an aggressive program of habitat improvement projects, designation of Specially Designated Areas with wildlife friendly management prescriptions, and the application of mitigation measures on key wildlife lands where oil and gas reserves are being developed. Stipulations are applied to oil and gas activities to mitigate impacts on wildlife. Priority wildlife management activities conducted in the FFO will continue to include migratory bird point count surveys, nesting colony surveys, and habitat assessments.

Under the 2010 MOU with the USFWS (WO-230-2010-04), the BLM shall consult avian conservation plans to identify species at greater conservation risk based on threats to the species or their habitats. These lists and plans include:

- USFWS BCC
- NMPIF New Mexico Bird Conservation Plan
- Comprehensive Wildlife Conservation Strategy for New Mexico
- Gray Vireo Recovery Plan
- The North American Waterbird Conservation Plan
- BLM Interim Management Policy for Migratory Birds
- Recovery plans and conservation plans/strategies prepared for federally-listed and candidate species

The BLM should consider the goals and objectives established in these bird conservation plans in National Environmental Policy Act analyses of actions that have potential to negatively or positively affect migratory bird species of concern and implement protective measures necessary for protection of migratory birds.

2.5.2 Additional Conservation Measures

The BLM will continue to develop conservation partnerships with other federal and state agencies, tribes, conservation groups, ranchers and other landowners to maintain migratory bird populations and habitats in the planning area.

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Chapter 3: References

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