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Exotic Vegetation Control In Designated Riparian Areas

ENVIRONMENTAL ASSESSMENT

Located in Farmington Field Office Planning Unit
EA# NM210-05-379

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I. INTRODUCTION

This environmental assessment (EA), identified as the Exotic Vegetation Control in Designated Riparian Areas, discusses the impacts of the proposed action for the removal of invasive/exotic vegetation from designated riparian habitats managed by the Farmington Field Office (FFO). Executive Order 13112 instructs Federal agencies to detect and respond rapidly and control populations of invasive species in a cost-effective and environmentally sound manner. FFO manages 85 individual designated riparian reaches. This EA will fulfill the National Environmental Policy Act (NEPA) requirement for field treatment projects to control any invasive plant species that may be listed on the New Mexico Noxious Weed List (Appendix A) within designated riparian reaches, unless the project may affect a threatened, endangered, or proposed species as listed by the U.S. Fish and Wildlife Service. A section 7 consultation under the Endangered Species Act (ESA) will be required for any field treatment projects that may affect a listed species.

I.1. Purpose and Need for the Action

The purpose of the action is to locally control or manage the spread of the invasive/exotic plant species that invade riparian habitats. Healthy stands of native riparian vegetation protect stream banks, guard against erosion, and contribute to the proper functioning condition (PFC) of riparian areas. Russian olive trees, saltcedar, and other non-woody invasive/exotic plant species can become extremely dense, and in some areas may out compete native riparian vegetation such as cottonwood, willow, reed grass, and sedges. Invasive/exotic plant species may provide some protection from bank erosion, but native species adapted to the southwest are generally considered more efficient and effective at protecting stream banks and provide better wildlife habitat. All of the riparian reaches have some level of invasive/exotic riparian plant species infestation. Most reaches have riparian vegetation communities comprised of mixed stands of native and invasive/exotic species. The invasive/exotic plants include woody species such as saltcedar, Russian olive, and rarely, Siberian elm and non woody plants such as Russian knapweed and thistle species. FFO needs to locally control or slow the spread of invasive/exotic riparian plant species to promote healthy native riparian vegetation communities that protect riparian resources and provide quality wildlife habitat.

I.2. Location

FFO manages 31 river tracts that are scattered along the San Juan River, Animas River, and La Plata River. All of these river tracts have some river bank frontage. Riparian vegetation communities grow along the river banks in varying widths. Riparian vegetation may also grow along secondary channels or other low areas that have permanently saturated soils. Only a small portion of most river tracts support riparian vegetation (see Appendix D for river tract examples). Most of the river tracts are surrounded by private land and have limited access. In addition to the river tracts, FFO manages 54 designated riparian reaches located within ephemeral wash drainages that are tributaries to the rivers. The ephemeral wash systems generally have surface water flows only in response to snow melt or storm runoff events. However these systems do have permanent shallow water tables that support riparian vegetation. Individual field projects to treat exotic plant species may occur on any of the river tracts or designated ephemeral wash riparian reaches listed either within the 2003 Farmington Resource Management Plan (RMP), the 2000 Riparian and Aquatic Habitat Management Plan (HMP), or reaches designated in the future under the guidelines within the HMP; see maps in Attachment A.

I.3. Conformance with Applicable Land Use Plans

The proposed action is in conformance with the Farmington Resource Management Plan (December 2003). The goal of riparian management is to protect riparian systems and facilitate the attainment and maintenance of Proper Functioning Condition as outlined in Technical References 1727-9 and 1737-15. A riparian-wetland is considered to be in Proper Functioning Condition (PFC) when adequate vegetation, landform, or large woody debris is present to: dissipate stream energy associated with high waterflow, filter sediment, improve flood-water retention and ground-water recharge, and develop root masses that stabilize streambanks. This proposed action is also consistent with the Riparian and Aquatic Habitat Management Plan August 2000 (Riparian HMP). The goal of this plan is to maintain, restore, improve, protect, and expand riparian areas so that they are in proper functioning condition for their productivity, biological diversity, and sustainability.

This EA is tiered to the Vegetation Treatment on BLM Lands in Thirteen Western States Environmental Impact Statement (1991). This document analyzed and authorized a variety of treatment methods to achieve desired vegetative conditions on public lands including the application of herbicides, the use of prescribed fire, the use of mechanical equipment, the use of biological agents, and manual control methods. A new Environmental Impact Statement for Conservation and Restoration of BLM Public Lands in Western U.S. is now being prepared. FFO field treatments for the control of exotic weeds in riparian areas will conform to this new EIS when it is completed.

II. PROPOSED ACTION AND ALTERNATIVES TO THE PROPOSED ACTION

II.1 Proposed Action

The proposed action is to treat infestations of invasive/exotic vegetation species on designated riparian areas managed by FFO. All treatments will follow approved integrated weed management methods outlined in either the Vegetation Treatment on BLM Lands in Thirteen Western States Environmental Impact Statement (1991), or the Environmental Impact Statement for Conservation and Restoration of BLM Public Lands in Western U.S. when it becomes available. Treatment methods may include the application of herbicides, the use of prescribed fire, the use of mechanical equipment, the use of biological agents, and manual control methods. Any use of biological control agents must be approved by the U.S. Department of Agriculture (USDA) division of Animal and Plant Health Inspection Service (APHIS), and reviewed and approved by the U.S. Fish and Wildlife Service. For herbicide applications, all instructions and precautions outlined in the appropriate product label will be strictly adhered to. All workers applying herbicide will be under the supervision of a certified pesticide applicator. All treatment projects will be limited to the 100 year floodplain of designated river tracts or designated ephemeral wash riparian areas as outlined in the 2003 RMP and the FFO GIS data base.

II.2 Alternatives to the Proposed Action

1. No Action Alternative
The No Action Alternative would result in invasive/exotic plant species control projects not being completed in riparian habitats. The no action alternative may result in the deterioration of riparian vegetation communities due to an increase in exotic plant species and a decrease in

native riparian vegetation species. The no action alternative is not in compliance with Executive Order 13112 or management prescriptions outlined in the Farmington RMP and the Riparian and Aquatic HMP. The No Action Alternative will not be further discussed in this document.

2. No Herbicide Alternative
The no herbicide alternative would prohibit the use of herbicide. FFO has conducted mechanical and fire treatment of saltcedar and Russian olive with no herbicide in the past. These projects cost several hundred dollars per acre and monitoring results demonstrated that the plants readily resprout after fire and mechanical control. In most cases, each stem cut or burned produced multiple resprouts. Mechanical or fire treatments that do not utilize herbicide treatment of cut stumps or burned stump resprouts may result in higher steam density and deteriorating riparian vegetation communities after treatment. Mechanical and fire treatment on non woody species such as Russian knapweed and leafy spurge also result in resprouting and ineffectual control.

The use of herbicides in riparian areas will be limited to products with labels that are approved for use in riparian areas by the Environmental Protection Agency (EPA), the New Mexico Department of Agriculture – Bureau of Pesticide Management, and the BLM Approved Pesticide List. The elimination of herbicide in an invasive/exotic riparian vegetation control program is not economically or biologically feasible and will not be further discussed in this document.

3. No Biological Control Alternative: Riparian systems managed by FFO contain plant communities that are comprised of a mix of native riparian vegetation and invasive/exotic plant species. A typical riparian area will have saltcedar, Russian olive, and possibly some Russian Knapweed mixed with native species such cottonwood, willow, reed grass, and sedges. Low cost aerial applications of herbicide would not be appropriate for these areas because native riparian species would also be killed. Species specific treatments can cost up to $2,500 per acre and are cost prohibitive for large areas. Any use of biological control agents must be approved by the U.S. Department of Agriculture (USDA) division of Animal and Plant Health Inspection Service (APHIS), and reviewed and approved by the U.S. Fish and Wildlife Service. When biological controls are approved and become available, they may provide a low cost alternative to treat large areas. The no biological control alternative may severely limit the ability of FFO to treat large areas of invasive/noxious plant species infestations and will not be further discussed in this document.

II.3 Identification of Preferred Alternative

The preferred alternative is the proposed action.

III. ENVIRONMENT

III.1General Description of the Farmington Field Office

The landscape of northwest New Mexico, in the area administered by FFO, occupies a transitional zone between the Rocky Mountains of southwest Colorado and the Colorado Plateau of New Mexico. The transitional nature gives the area its unique character and diversity as evidenced by the richness of archaeological, mineral, biological, and recreational resources.

Topographically, the area is characterized by fractured sandstone and shale uplifts varying in elevation from 5,000 to 8,000 feet with annual precipitation ranging from 8 to 14 inches. The soils are more clayey than would be anticipated, which, in combination with climatic tendencies that swing from drought to saturation, create difficult growing conditions. Spring snow melt and summer thunder showers provide the majority of growing season moisture. Vegetative succession tends toward domination by woody species when natural disturbances (fire) are restricted. As a shrub/tree canopy becomes more dense the herbaceous understory tends to decrease causing the soil surface to become exposed.

The public lands managed by FFO provide for numerous multiple-use opportunities including: oil and gas development, livestock grazing, and recreation. In addition, the natural landscape provides for a variety of non-consumptive uses including providing habitat for wildlife and an extensive cultural resource history.

The public lands managed by FFO contain extensive oil and gas reserves, in numerous underground formations which are independently leased. The development of the gas reserves has steadily increased since the 1950's and is expected to continue into the future. This activity impacts the landscape. These impacts are mainly due to the degree of disturbance that is necessary to develop the reserves. Development of a reserve usually requires construction of numerous well sites, access roads, and buried pipelines. These ground disturbing activities cause soil to move across the landscape, either by wind or water. This movement of soil contributes an undetermined amount of sedimentation to water ways.

There are 174 grazing allotments within the FFO area. Of these, 140 (with 325 permittees) are administered under Section 3 of the Taylor Grazing Act, and 34 are administered under Section 15 of the Act. The 34 Section 15 permits are administered under a cooperative agreement with the Navajo Nation, the Bureau of Indian Affairs (BIA), and the BLM. Authorized grazing on public lands administered by the Farmington Field Office total approximately 113,000 Animal Unit Months (AUM's) of active preference, with approximately 30,000 AUM's in suspension.

Recreation on public lands administered by the Farmington Field Office is diverse. Opportunities exist for a variety of recreation activities including: hunting, fishing, camping, off-road vehicle use, rafting, hiking, sight-seeing, and photography, to name a few. Twelve recreation areas, one wilderness, one wilderness study area, and one research natural area are administered by the Farmington Field Office.

III.2 Existing Environment

There are three river systems in the FFO area: Animas River, La Plata River, and San Juan River. The 2003 RMP established the River Tracts Area of Environmental Concern (ACEC). The ACEC units are comprised of small individual BLM tracts of land that contain some river frontage. There are three ACEC units on the Animas River; 10 ACEC units of the La Plata River; and 18 ACEC units on the San Juan River. The ACEC units vary in size from 10 acres to 200 acres, but only a portion of the total acreage is in the floodplain and supports riparian vegetation.

The Lower Largo Canyon Watershed area is approximately 500,000 acres in size and drains into the San Juan River near Blanco NM. The proposed action is consistent with the goals of the 1997 Lower Largo Canyon Watershed Management and Erosion Control Plan to improve watershed resources. Canyon Largo, Blanco Canyon, Carrizo Canyon, Cutter Canyon, and

Palluche (Pioche) Canyon are all located in the Lower Largo Watershed. All of these drainages are characterized by wide shallow channels with occasional vegetated point bars. Riparian vegetation generally exist in strips along active channels. The riparian vegetation is comprised of coyote willow, cottonwood, common reed grass, and saltcedar and Russian olive in various combinations and densities.

Kutz Canyon contains about 6 miles of riparian habitat and enters the San Juan River near Bloomfield NM. This drainage is characterized by a wide shallow channel with occasional vegetated point bars. Riparian vegetation generally exists in strips along active channels. The riparian vegetation is comprised of coyote willow, Cottonwood, common reed, saltcedar, and Russian olive in various combinations and densities.

Gobernador Canyon contains about 4 miles of BLM riparian habitat that enters the San Juan River about 5 miles below Navajo Reservoir. Healthy cottonwoods are present in all age classes and regeneration is occurring. An excellent growth of sedge and sweet clover is present on the banks. Some Russian olive and saltcedar invasion is occurring.

Pump Canyon contains about 4 miles of BLM riparian habitat. The Pump Canyon drainage enters the San Juan River about 10 miles below Navajo Reservoir. The lower 4 miles of BLM is designated as potential habitat in the long term (4 to 10 years) for the southwestern willow flycatcher. The channel in the Pump Canyon project area is about 30 to 100 feet wide and has well established riparian areas on either side of the active channel. Vegetation consists of cottonwood, willow, saltcedar, sedges, and Russian olive.

Ditch Canyon contains about 4 miles of riparian habitat and drains into the Animas River near Cedar Hill NM. The drainage is relatively narrow and the riparian areas are interspersed with areas that support upland vegetation. The riparian areas support coyote willows, sedges, and cottonwoods with some Russian olives becoming established.

FFO continues to survey and monitor ephemeral wash systems and natural springs. FFO developed a riparian Designation Criteria in 2000 (Appendix B) to use when establishing new riparian reaches as authorized in the Riparian HMP. This EA will apply to any riparian areas that may be designated in the future.

Maps of the designated riparian areas are presented in Appendix A.

III.3 Critical Elements

The critical elements subject to requirements specified in statute, regulation, or executive order are listed below. The affects of the implementation of the proposed action or an alternative are described in Section VI - Affected Environment for each of these resource components. Those resource components that are not changed or affected by the proposed action or alternatives are marked with an asterisk and briefly discussed, stating the reason for excluding them from further analysis.

Air Quality*	Prime/Unique Farmlands*
Threatened and Endangered Species	Hazardous/Solid Waste*
Areas of Critical Environmental Concern	Cultural Resources
Native American Religious Concerns*	Riparian/Wetland Areas

Water Quality	Wilderness*
Wild and Scenic Rivers*	Invasive, Nonnative Species
Environmental Justice*	Wildlife

The following critical elements are not affected by the proposed action or alternatives to the proposed action for the reasons stated. These elements will not be discussed further in this document.

1. Air Quality - Air quality will not be affected by invasive/exotic plant species control projects.

2. Native American Religious Concerns – invasive/exotic vegetation are introduced species that can out compete native plant species. Invasive/exotic plant species do not have any religious value to Native Americans.

3. Wild and Scenic Rivers - There are no designated wild and scenic rivers on public lands managed by the Farmington Field Office.

4. Prime /Unique Farmlands - There are no prime/unique farmlands within the project area.

5. Hazardous/Solid Waste - Herbicides used on the project will be handled and disposed according to the instructions on the product label under the supervision of a licensed, certified applicator.

6. Wilderness - The project is not within or near any designated wilderness areas or wilderness study areas.

7. Environmental Justice - The proposed project would benefit the community by improving the health of the native plant vegetative community in riparian areas. Invasive/exotic vegetation species in high densities may impede recreation, wildlife and livestock uses on public land.

IV AFFECTED ENVIRONMENT

This section describes the environment or resources that may be affected by the proposed action or alternatives to the proposed action.

IV.1 Threatened and Endangered Species

According the U.S. Fish and Wildlife Service, there are 10 federally listed threatened, endangered, or candidate plant and animal species with the potential to occur in San Juan County, and an additional three federally listed species with the potential to occur in Rio Arriba Count. These species, their protection status, and a description of the habitat requirements are provided in Table 1. FFO also has special management for six species of concern that may occur in the project area. Table 2 lists the six species of concern that FFO has developed special management.

TABLE 1

Threatened/Endangered/Candidate Species			
Species Name	**Federal Status**	**Habitat**	**Evaluation**
Black-footedferret *(Mustela nigripes*)	Endangered	Typically includes white tailed prairie dog colonies larger than 80 hectares in size	No prairie dogs or prairie dog burrows occur within the proposed project area
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	Endangered	Breeds in riparian habitats that support dense vegetation of appropriate height, density, and area	Some river tracts support designated potential flycatcher habitat.
Interior least tern (*Sterna antillarum*)	Endangered	Found along rivers with broad exposed sandbars and lakes with nearby salt flats.	This species is listed only for Rio Arriba County. There are no flowing rivers, or marshes exist in the Rio Arriba County portion of the project area
Rio Grande silvery minnow *(Hybognathus amarus)*	Endangered with Critical Habitat	Mainstream portions of rivers	This species is listed for drainages in Rio Arriba County that drain into the Rio Grande River system. There are no drainages in the project area that flow into the Rio Grande River
Bald Eagle (*Haliaeetus leucocephalus*)	Threatened	Rivers, large lakes; in open country typically close to water; nests in tall trees or cliffs	There are 3 units of the Bald Eagle ACEC within the project area and wintering bald eagles routinely fly over the 3 river systems in the project area.
Mexican Spotted Owl (Strix occidentalis lucida)	Threatened with critical habiat	Most nests are in caves or on cliff ledges in steep-walled canyons and mixed conifer forests	There is no potential habitat for the MSO in the project area.
Boreal western toad (*Bufo boreas boreas*)	Candidate	Areas near springs, woodlands, meadows and streams	This species is listed only for Rio Arriba County. There is no potential habitat for the toad in the project area.
Yellow-billed cuckoo (*Coccyzus americanus*)	Candidate	Breeds in large blocks of riparian habitats, particularly woodlands with cottonwood and willow	Some river tracts support potential habitat for the yellow-billed cuckoo

Threatened/Endangered/Candidate Species			
Species Name	**Federal Status**	**Habitat**	**Evaluation**

Colorado pikeminnow (*Ptychocheilus lucius*)	Endangered with critical habitat	Occurs in big rivers with warm, swift, turbid waters	Historically existed in project area in the San Juan and Animas Rivers. Now stocked in San Juan River. Critical habitat designated in portions of the San Juan River
Razorback sucker (*Xyrauchen texanus*)	Endangered with Critical Habitat	Mainstream portions of rivers	Historically exited in project area in the San Juan and Animas Rivers. Now stocked in San Juan River. Critical habitat designated in portions of the San Juan River
Knowlton's cactus (*Pediocactus Knowltonii*)	Endangered	Known from one location in rocky alluvial humus soils along the Los Pinos River	No habitat for Knowlton's cactus exist in the project area.
Mancos milk-vetch (*Astragalus humillimus*)	Endangered	Grows in cracks of Point Lookout Sandstone of the Mesa Verde Group	Point Lookout Sandstone does not occur in the project area
Mesa Verde cactus (*Sclerocactus mesae-verdae*)	Threatened	Salt Desert Scrub Communities in the Fruitland and Mancos Shale Formations	PPA geology does not have any Mancos or Fruitland Shale Formations

Table 2

SPECIES OF CONCERN WITH FFO SPECIAL MANAGEMENT	**HABITAT ASSOCIATIONS**	**POTENTIAL TO OCCUR IN PROJECT OR ACTION AREA**
Golden eagle (*Aquila chrysaetos*)	In the west, mostly open habitats in mountainous, canyon terrain. Nests primarily on cliffs and trees.	Golden eagles occasionally nest in cliff habitat near the river and ephemeral wash systems.
Ferruginous hawk *(Buteo regalis)*	Flat or rolling terrain in grasslands, shrub-steppes, and deserts; Prefers elevated nest sites (e.g., buttes, utility poles, trees) but also nests on the ground.	There is no potential nesting habitat for ferruginous hawk in the project area.
American Peregrine Falcon (*Falco peregrinus anatum*)	Breeds in high cliff habitat near wooded or riparian habitat	Peregrines may breed in cliff habitat near river and ephemeral wash areas.

SPECIES OF CONCERN WITH FFO SPECIAL MANAGEMENT	**HABITAT ASSOCIATIONS**	**POTENTIAL TO OCCUR IN PROJECT OR ACTION AREA**
Brack's hardwall cactus (*Sclerocactus cloveriae* ssp *brackii*)	Sandy clay of the Nacimiento Formation in sparse shadscale scrub (5,000-6,000 ft.)	There is no potential habitat for Brack's cactus in the project area.
Aztec gilia (*Aliciella formosa*)	Salt desert scrub communities in soils of the Nacimiento Formation (5,000-6,000 ft).	There is no potential habitat for Aztec gilia in the project area.
Prairie Falcon (*Falco mexicanus*)	Inhabits dry, open country and prairies.	There is no potential habitat for prairie falcon in the project area.

All designated riparian areas within FFO receive management prescriptions authorized in the 2003 RMP outlined either in the River Tracts Area of Critical Environmental Concern (ACEC), or the Ephemeral Wash Specially Designated Area (SDA). All designated riparian areas have been extensively surveyed for the presence and potential habitats of species listed as threatened, endangered, proposed, or candidate by the U.S. Fish and Wildlife Service under the Endangered Species Act (ESA). Surveys are also conducted for species listed as FFO special status species. The southwestern willow flycatcher, bald eagle, Colorado pikeminnow, and razorback sucker are listed species that have the potential to occur in the project area. The yellow-billed cuckoo is a candidate species that has the potential to occur in the project area. Golden eagle and peregrine falcon are FFO special status species that have the potential to occur in the project area. The San Juan River below the bridge at Highway 371 in Farmington is designated by the U.S. Fish and Wildlife Service as critical habitat for the Colorado Pike Minnow.

Southwestern Willow Flycatcher

The southwestern willow flycatcher was federally listed as endangered under ESA in 1995. The southwestern willow flycatcher nests in dense stands of woody riparian vegetation near surface water or saturated soil. The composition of the dense of woody riparian vegetation can vary widely from monotypic exotic species of saltcedar or Russian olive; mixed stands of exotic and native vegetation; to monotypic stands of native vegetation of cottonwood and willows. Patch size of nesting habitat can range from 1 acre to several hundred acres. The birds typically do not utilize narrow strips of vegetation that is less than 30 feet wide. BLM began analyzing the river tracts for southwestern willow flycatcher habitat in 1993; however, only tracts with legal access were analyzed at that time. In 1997, FFO evaluated riparian habitat on all river tracts, intermittent washes, and ephemeral washes. Southwestern willow flycatcher surveys were conducted in riparian habitats. FFO continued surveys, identified 34 tracts that supported potential flycatcher habitat, and prepared the Southwestern Willow Flycatcher Habitat Management Plan in 1998 (SWWF HMP). On most tracts, the designated potential flycatcher habitat was only a small portion of the river tract. The SWWF HMP divided the tracts into the following categories and assigned each tract to a category. There were no tracts rated as currently occupied, one tract was rated as unoccupied currently potential, five tracts were rated

as potential habitat in the short term (1 to 3 years), and 28 tracts were rated as potential habitat in the long term (4 to 10 years) (Table 3).

Table 3

Potential Southwestern Willow Flycatcher Habitat of 34 Riparian Tracts on FFO Land

Tract Name	Size (Riparian Acres)	Habitat Potential
Bradshaw	7	Unoccupied, currently potential.
Blanco	25	Potential flycatcher habitat in the short-term.
Animas #1	15	Potential flycatcher habitat in the short-term.
Animas #3	7	Potential flycatcher habitat in the short-term.
Valdez	60	Potential flycatcher habitat in the short-term.
Subdivision	4	Potential flycatcher habitat in the short-term.
South Bloomfield	41	Potential flycatcher habitat, but long-term.
Gallegos	20	Potential flycatcher habitat, but long-term.
Bull Calf	5	Potential flycatcher habitat, but long-term.
Pump Canyon #2	20	Potential flycatcher habitat, but long-term.
Pump Canyon #3	15	Potential flycatcher habitat, but long-term.
Pump Canyon #1	18	Potential flycatcher habitat, but long-term.
Pump Canyon #4	10	Potential flycatcher habitat, but long-term.
Bloomfield	10	Potential flycatcher habitat, but long-term.
Kutz	5	Potential flycatcher habitat, but long-term.
La Plata #1	6	Potential flycatcher habitat, but long-term.
Jewett Valley	5	Potential flycatcher habitat, but long-term.
Schneider	3	Potential flycatcher habitat, but long-term.
Wheeler	2	Potential flycatcher habitat, but long-term.
Santa Rosa	4	Potential flycatcher habitat, but long-term.
Animas #8	4	Potential flycatcher habitat, but long-term.
La Plata #2	5	Potential flycatcher habitat, but long-term.
La Plata #4	5	Potential flycatcher habitat, but long-term.
La Plata #6	12	Potential flycatcher habitat, but long-term.
La Plata #7	20	Potential flycatcher habitat, but long-term.
La Plata #5	3	Potential flycatcher habitat, but long-term.
La Plata #8	8	Potential flycatcher habitat, but long-term.
La Plata #3	2	Potential flycatcher habitat, but long-term.
Archuleta	3	Potential flycatcher habitat, but long-term.
Simon Canyon	15	Potential flycatcher habitat, but long-term.

Tract Name	Size (Riparian Acres)	Habitat Potential
La Plata Tract	5	Potential flycatcher habitat, but long-term.
Desert Hills	5	Potential flycatcher habitat, but long-term.
La Plata #10	0.5	Potential flycatcher habitat, but long-term.
La Plata #9	6	Potential flycatcher habitat, but long-term.
Total Acres	**385.5**	

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FFO Southwestern Willow Flycatcher Studies

Methods. The FFO conducted surveys for willow flycatchers from 1993 through 2004 following accepted survey protocol (Sogge et al. 1997).

Results. In 1993, nine tracts on the La Plata River were surveyed and no flycatchers were detected. In 1994, no flycatchers were detected during surveys conducted in Pump Canyon and along the La Plata and San Juan Rivers. In 1995, BLM staff surveyed four San Juan River Tracts and nine tracts along the La Plata River. One willow flycatcher was detected on the Gallegos Tract of the San Juan River. In 1996, one tract each on the San Juan and La Plata Rivers were surveyed, with no willow flycatchers detected. Overall, one willow flycatcher was detected during 37 surveys from 1993 through 1996. This bird was observed during the second survey and was not detected again during follow-up surveys. After consulting with the USFWS, it was decided that this bird was likely a migrant.

Thirty-three tracts were surveyed in 1997 and 14 willow flycatchers were detected during the first survey period (May 15 through May 31), one during the second survey period (June 1 through June 21), and none during the third period (June 22 through July 10). Thirty-four tracts were surveyed in 1998 and one willow flycatcher was detected during the first survey period, five during the second period, and none during the third period. In 1999, the six top priority tracts were surveyed and no willow flycatchers were detected. Three tracts were surveyed in 2000 and no willow flycatchers were detected. Six tracts were surveyed in 2001 and no willow flycatchers were detected. Seven tracts were surveyed in 2002 and two willow flycatchers were detected in the first survey period and none during the second or third survey period. Two tracts were surveyed in 2003 and no willow flycatchers were detected in the first survey period, two willow flycatchers were detected in the second survey period, and no flycatchers were detected in the third survey period. Three tracts were surveyed in 2004 and no willow flycatchers were detected.

All willow flycatchers observed during the 12 years of surveys are considered migrants because no evidence of nesting was observed and no birds were detected during the third sampling period. No evidence of nesting southwestern willow flycatchers has ever been documented on any riparian areas managed by FFO. It is evident that willow flycatchers migrate through the area during the spring. However, there is no evidence that the birds that migrate through the area are the southwestern subspecies (extimus); they may be the subspecies adastus that breeds in states north of New Mexico, including Colorado and Utah. The results of the 12 years of surveys are contained in the following tables (Table 4).

Table 4

Results of the 1993 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Number of Birds Observed	Number of Breeding Pairs Confirmed
La Plata River #1	0	0
La Plata River #2	0	0
La Plata River #3	0	0
La Plata River #4	0	0
La Plata River #5	0	0
La Plata River #6	0	0
La Plata River #7	0	0
La Plata River #8	0	0
La Plata River #9	0	0

Results of the 1994 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Number of Birds Observed	Number of Breeding Pairs Confirmed
Gallegos	0	0
Valdez	0	0
Bloomfield	0	0
Pump Canyon Reach 1	0	0
La Plata River #1	0	0
La Plata River #2	0	0
La Plata River #3	0	0
La Plata River #4	0	0
La Plata River #5	0	0
La Plata River #6	0	0
La Plata River #7	0	0

La Plata River #8	0	0
La Plata River #9	0	0

Results of the 1995 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Number of Birds Observed	Number of Breeding Pairs Confirmed
Gallegos	1[a]	0
Valdez	0	0
Bloomfield	0	0
Desert Hills	0	0
La Plata River #1	0	0
La Plata River #2	0	0
La Plata River #3	0	0
La Plata River #4	0	0
La Plata River #5	0	0
La Plata River #6	0	0
La Plata River #7	0	0
La Plata River #8	0	0
La Plata River #9	0	0

Results of the 1996 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Number of Birds Observed	Number of Breeding Pairs Confirmed
Gallegos	0	0
La Plata River #10	0	0

Results of the 1997 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Surveys			Breeding Pairs Confirmed
	May 15-31	June 1- 21	June 22-July 10	
Bradshaw	1	0	0	0
Blanco	1	1	0	0
Animas River #1	0	0	0	0

River Tract Name	Surveys			Breeding Pairs Confirmed
	May 15-31	June 1- 21	June 22-July 10	
Animas River #3	0	0	0	0
Valdez	0	0	0	0
Subdivision	1	0	0	0
South Bloomfield	0	0	0	0
Gallegos	1	0	0	0
Bull Calf	0	0	0	0
Pump Canyon #2	0	0	0	0
Pump Canyon #3	2	0	0	0
Pump Canyon #1	0	0	0	0
Pump Canyon #4	0	0	0	0
Bloomfield	0	0	0	0
Kutz	1	0	0	0
La Plata River #1	0	0	0	0
Jewett Valley	1	0	0	0
Schneider	0	0	0	0
Wheeler	2	0	0	0
Santa Rosa	0	0	0	0
Animas River #8	0	0	0	0
La Plata River #2	0	0	0	0
La Plata River #4	0	0	0	0
La Plata River #6	0	0	0	0
La Plata River #7	0	0	0	0
La Plata River #5	1	0	0	0
La Plata River #8	0	0	0	0
La Plata River #3	0	0	0	0
Simon Canyon	0	0	0	0
La Plata Tract	0	0	0	0

River Tract Name	Surveys			Breeding Pairs Confirmed
	May 15-31	June 1- 21	June 22-July 10	
Desert Hills	0	0	0	0
La Plata River #10	2	0	0	0
La Plata River #9	1	0	0	0
Total	**14**	**1**	**0**	**0**

Results of the 1998 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Surveys			Breeding Pairs Confirmed
	May 15-31	June 1-21	June 22-July 10	
Bradshaw	0	3	0	0
Blanco	0	0	0	0
Animas River #1	0	0	0	0
Animas River #3	0	0	0	0
Valdez	0	0	0	0
Subdivision[a]	0	0	0	0
South Bloomfield	0	0	0	0
Gallegos	0	0	0	0
Bull Calf	0	0	0	0
Pump Canyon #2	0	0	0	0
Pump Canyon #3	0	0	0	0
Pump Canyon #1	0	0	0	0
Pump Canyon #4	0	0	0	0
Bloomfield	0	0	0	0
Kutz	0	1	0	0
La Plata River #1	0	0	0	0
Jewett Valley	0	0	0	0
Schneider	0	0	0	0
Wheeler	0	0	0	0
Santa Rosa	1	0	0	0
Animas River #8	0	0	0	0
La Plata River	0	0	0	0

#2				
La Plata River #4	0	1	0	0
La Plata River #6	0	0	0	0
La Plata River #7	0	0	0	0
La Plata River #5	0	0	0	0
La Plata River #8	0	0	0	0
La Plata River #3	0	0	0	0
Archuleta[b]	0	0	0	0
Simon Canyon	0	0	0	0
La Plata Tract	0	0	0	0
Desert Hills	0	0	0	0
La Plata River #10	0	0	0	0
La Plata River #9	0	0	0	0
Total	**1**	**5**	**0**	**0**

Results of the 1999 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Surveys			Breeding Pairs Confirmed
	May 15-31	June 1-21	June 22-July 10	
Bradshaw	0	0	0	0
Blanco	0	0	0	0
Animas River #1	0	0	0	0
Animas River #3	0	0	0	0
Valdez	0	0	0	0
Subdivision	0	0	0	0
Total	**0**	**0**	**0**	**0**

Note: Three surveys conducted per tract.
Source:BLM unpublished data.

Results of the 2000 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Surveys			Breeding Pairs Confirmed
	May 15-31	June 1-21	June 22-July 10	
Bradshaw	0	0	0	0
Blanco	0	0	0	0
Valdez	0	0	0	0
Total	**0**	**0**	**0**	**0**

Results of the 2001 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Surveys					Breeding Pairs Confirmed
	May 15-31	June 1-21	June 22-July 10			
Bradshaw	0	0	0	NS	NS	0
Blanco	0	0	0	NS	NS	0
Animas 1	0	0	0	NS	NS	0
Animas 3	0	0	0	NS	NS	0
Subdivision	0	0	0	NS	NS	0
Valdez	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**

Notes: Three surveys conducted per tract.
NS = not surveyed.
(a) Five surveys conducted on Valdez Tract

Results of the 2002 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	Surveys					Breeding Pairs Confirmed
	May 15-31	June 1-21	June 22-July 10			
Bradshaw	1	0	0	-	-	0
Blanco	0	0	0	0	0	0
Animas 1	0	0	0	-	-	0
Animas 3	0	0	0	-	-	0
Subdivision	1	0	0	-	-	0

Valdez	0	0	0	0	0	0
La Plata	0	0	0	-	-	o
Total	**0**	**0**	**0**	**0**	**0**	**0**

Results of the 2003 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	**Surveys**					**Breeding Pairs Confirmed**
	May 15-31	**June 1-21**	**June 22-July 10**			
Blanco	0	0	0	0	0	0
Valdez	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**

Results of the 2004 Southwestern Willow Flycatcher Surveys on FFO Land

River Tract Name	**Surveys**					**Breeding Pairs Confirmed**
	May 15-31	**June 1-21**	**June 22-July 10**			
Blanco	0	0	0	0	0	0
Valdez	0	0	0	0	0	0
Gallegos	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**

Each of the 34 river tracts listed in Table 3 contain some designated southwestern willow flycatcher potential habitat. FFO has developed maps for the river tracts that delineate the portion of tract that has the capability to support potential flycatcher habitat (see maps Appendix A). FFO has concentrated survey efforts in the best potential habitats since 1998. In some cases, the potential habitat on some river tracts is in the early stages of development and may not yet support stands of vegetation that are dense enough, tall enough, or large enough to support breeding flycatchers. FFO has established management, conducted cadastral surveys, and constructed boundary fences to promote the improvement of riparian vegetation communities within the river tracts. All of the tracts contain some level of infestations of exotic vegetation. Most of the tracts have some saltcedar and Russian olive that is mixed with the native cottonwood and willow. Most of the tracts also contain some species of non woody exotic species such as knapweeds, thistles, or other forbs listed on the New Mexico Noxious Weed List. There is no critical habitat for the southwestern willow flycatcher as listed by the U.S. Fish and Wildlife Service on any lands managed by FFO. There is no designated potential flycatcher habitat on any of the ephemeral wash riparian areas managed under the Ephemeral Wash SDA.

Bald Eagle

Bald eagles from many locations are migratory during the non-breeding season, with birds from northern locations moving south in the winter. In the winter, bald eagles generally congregate at specific locations that are near water and offer good perch trees and roost sites. Eagles use communal roost sites on their wintering grounds and may use the same roost for several years. Roost sites provide protection from the wind and are located close to their food source. However, eagles that winter away from open water are highly mobile and will travel long distances to locate food. Fish are the major component of the winter diet in many areas, but wintering bald eagles are very opportunistic and will feed on waterfowl, rabbits, rodents, snakes, and carrion. Most bald eagles wintering in Arizona and New Mexico are found near bodies of water, but an appreciable number winter in upland areas away from bodies of water. These eagles feed on carrion in agricultural fields, rangeland, and in piñon-juniper habitat. Roost sites are typically in ponderosa pine up to several miles from water. Eagles move frequently throughout the winter in response to weather conditions and prey availability, and may use a large number of roost sites during the winter.

Approximately 80 to 100 bald eagles migrate to the Four Corners region during the winter. FFO established the Bald Eagle AECE in 1988 and completed the Bald Eagle ACEC Activity Plan in 1992. The plan established 37 individual Bald Eagle ACEC units. The major objective of this plan is to protect the most important bald eagle wintering habitat managed by FFO, as well as protecting the bald eagles that use these areas in the winter. Most units of the ACEC are located around Navajo Reservoir where the majority of the wintering eagles congregate. There are three Bald Eagle ACEC units on the Animas River that area also included in the project area: Animas #1, Animas #3, and Animas #8. Animas #1 is located near the Colorado boarder and is at the confluence of Line Canyon and the Animas River. Animas #1 is a documented night roost site. Some eagles roost in the large cottonwoods along the river, but most fly up Line Canyon and roost in ponderosa pines which grow along the steep canyon walls. Animas #3 and Animas #8 have some large cottonwood trees that provide day perch sites for the eagles. There are no Bald Eagle ACEC units on the San Juan River or the La Plata River, however, bald eagles routinely fly over these river corridors. There are no records of bald eagles nesting on any ACEC units or on any lands managed by FFO.

Colorado Pikeminnow

The Colorado pikeminnow was listed as endangered on March 11, 1967 (32 FR 40001). The reasons for its decline include riverine habitat fragmentation, modification, and degradation of habitat arising from dam construction; and competition and predation from introduced, nonnative fishes. Alterations of natural hydrographs by water storage and release on the rivers inhabited by the Colorado pikeminnow continue to affect the species by changing its environmental cues for spawning and by providing a competitive benefit to non-native fishes. Changes in temperature of water flows released by the major dams within its range have rendered portions of the species historic range uninhabitable.
Critical habitat on the San Juan River was designated by the USFWS in 1994 and includes the San Juan River and its 100-year floodplain from the State Route 371 Bridge in T29N, R13W, Section 17 (New Mexico Meridian) downstream to Neskahai Canyon in the San Juan arm of Lake Powell in T41S, R11E, Section 26 (Salt Lake Meridian) up to the full pool elevation. Known constituent elements of critical habitat include water, physical habitat, and biological environment as required for each particular life stage for each species. The State Route 371 Bridge is in Farmington. There are five separate BLM River Tracts in the project area located downstream from the bridge and within the designated critical habitat for the Colorado

pikeminnow. The River Tract names and lengths are as follows: Bradshaw (0.75 mile), Jewett Valley (0.48 mile), Schneider (0.24 mile), Subdivision (0.76 mile), and Wheeler (0.28 mile). These five tracts were evaluated in 2003 were rated as being in proper functioning condition as outlined in the Riparian Area Management Technical Reference 1737-15. The dominant woody plants on these tracts are cottonwood, willow, saltcedar, and Russian olive.

Razorback Sucker

The wild razorback sucker is known to inhabit the San Juan River, although it is currently very rare. Razorback sucker have been successfully reared and stocked into the river. The razorback sucker was listed by the USFWS on October 23, 1991 as an endangered species. Causes for its decline have been identified as fragmentation of its habitat by construction of dams, manipulation of flows with attendant alterations of temperature and water quality, and the introduction of nonnative fishes. Once abundant throughout the mainstem of the Colorado River and its major tributaries, the species now occupies an estimated 25 percent of its historic range and, where it does occur, its numbers are extremely low. Habitat loss and fragmentation within the occupied range of the razorback sucker continue to threaten the species. Additionally, the populations may be at such critically low levels, with little to no recruitment, that natural repopulation of suitable habitats may not be possible.
Critical habitat has been designated within the 100-year floodplain of the razorback sucker's historical range in the San Juan River basin. This critical habitat is located in San Juan County, New Mexico and San Juan County, Utah, including the San Juan River downstream from The Hogback Diversion (T29N, R16W, Section 9) to the full pool elevation at the mouth of the Neshahai Canyon, and the San Juan arm of Lake Powell. The Hogback Diversion is approximately 10 miles west of Farmington and beyond the western boundary of lands managed by FFO. There is no razorback sucker critical habitat within the project area.

Golden Eagle

FFO has conducted golden eagle surveys for the past 15 years. Golden eagles nest in cliff habitats throughout the lands managed by FFO including cliff habitat near the river and ephemeral wash systems. The eagles typically forage for small mammals such as rabbits and rodents over large areas of upland habitats. Eagles will also feed on carrion when available. Golden eagles are not known to concentrate in riparian areas for foraging, but they will use riparian habitats when prey is available. FFO developed special management for nesting golden eagles in 1992 and revised the management in the Raptor Management Policy Update (2000). The policy prohibits construction, drilling, or completion activities within 1/3 mile of an active golden eagle nest to reduce disturbances to the eagles. There are no golden eagle nests within designated riparian areas, but there may be some active nests within 1/3 mile of designated riparian areas.

American Peregrine Falcon

Peregrine flacons have been known to breed on lands managed by FFO since 1990. They typically breed on high cliffs that overlook, or are near riverine or riparian habitat. Peregrines typically prey on waterfowl and passerine birds that concentrate along rivers and riparian habitats. The peregrine falcon was removed from the U.S. Fish and Wildlife Service endangered species list in 1999. FFO continues protective management for peregrine falcons and included the falcons in the Raptor Management Police. FFO protects active peregrine eyries from disturbances within 1/3 mile of an eyrie.

Yellow-billed cuckoo

The yellow-billed cuckoo was added to the U.S. Fish and Wildlife Service's candidate species list in 2001. Even though the cuckoo does not receive legal protection under the Endangered Species Act, FFO began surveying for cuckoos in 2002. From 1 to 3 yellow-billed cuckoos have been detected per year since 2002. All of the birds have been found in designated river tracts along the San Juan River. Yellow-billed cuckoos are generally thought to breed in large blocks of riparian habitat. All riverine habitat managed by FFO is included in the River Tracts ACEC.

IV.2 Areas of Critical Environmental Concern (ACEC)

The River Tracts ACEC and the Bald Eagle ACEC are included in the 2003 RMP and contain individual units of designated riparian areas. The proposed action of invasive/exotic vegetation control projects may occur on the following units of the River Tracts ACEC: Animas River Tracts 1, 3, and 8; La Plata River tracts 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10; San Juan River tracts Archuleta, Blanco, Bloomfield, Bradshaw, Bull Calf, Desert Hills, Gallegos, Jewett Valley, Kutz, La Plata, Santa Rosa, Schneider, Simon Canyon, South Bloomfield, Subdivision, Valdez, and Wheeler. The 2003 RMP lists management prescriptions for the River Tracts ACEC. One of the prescriptions in the RMP is to analyze invasive, non-native vegetation for the development of vegetation manipulation projects to improve the native riparian vegetation community.

Proposed invasive/exotic vegetation control projects may occur on the following units of the Bald Eagle ACEC: Animas 1, 3, and 8. The three Animas River Units are also listed in the River Tracts ACEC. The 2003 RMP states that any vegetative management within Bald Eagle ACEC units must benefit the purpose of the ACEC. The goal of the Bald Eagle ACEC is to protect wintering habitat for the eagles and minimize habitat loss at any time of year. Most ACEC units have an identified core area surrounded by a buffer zone of approximately one quarter mile on either side, but some of the Animas River units have no core area. Animas River #1 is an established night roost site and does have a designated core area. Animas #1 is located at the confluence of Line Canyon and the Animas River. There is about 5 to 7 acres of habitat that support large cottonwood trees. Some eagles may roost in these trees, but most eagles fly up Line Canyon and roost in large ponderosa pine trees that grow along the canyon walls. Animas #2 and #3 do not have designated core areas and are managed as buffer areas. The 1992 Bald Eagle ACEC Activity Plan states that spraying of noxious weeds can be done directly on the target plants with a backpack sprayer, and additionally states that spraying in this manner would not contribute to any off-site impacts.

Simon Canyon Ephemeral Wash and Simon Canyon River Tract are located within the Simon Canyon Recreation ACEC. Simon Canyon Ephemeral Wash is an established hiking area and is regularly visited by people that camp and fish along the San Juan River. Simon Canyon River Tract is within the New Mexico Game and Fish Department special management trout fishing reach that is know as the "San Juan River Quality Waters", and is a popular fishing destination for people from all across the United States and many foreign countries. BLM established a parking lot and picnic area for hikers and recreational fishing on the Simon Canyon Recreation Area. A management prescription for the Simon Canyon Recreation ACEC states that vegetation treatments must benefit recreation experiences and be approved by the FFO recreation staff. Archuleta and Old Road river tracts are located on the San Juan River downstream from the Simon Canyon Recreation ACEC, and these tracts also provide good trout fishing and are accessed by established parking lots.

IV.3 Invasive/Exotic Vegetation Species

The objective of the FFO weed management program, according to the 2003 RMP, is to detect invasive plant species populations, prevent the spread of new invasive populations, manage exiting populations using the tools of integrated weed management, and eradicate invasive populations, using he safest environmental methods available. Prevention and management of invasive plants assists in improving the health of public lands. The control of invasive/exotic vegetation species in riparian areas is compatible with, and authorized in the following planning documents: Vegetation Treatment on BLM Lands in Thirteen Western States (1991); Bald Eagle ACEC Activity Plan (1992); Southwestern Willow Flycatcher HMP (1998); Riparian and Aquatic HMP (2000); and the Farmington Resource Management Plan (2003).

IV.4 Riparian/Wetlands

The proposed action will be limited to designated riparian areas listed by the Farmington Riparian and Aquatic HMP (2000) or riparian areas that are subsequently identified in the future. The Farmington Field Office (FFO) manages approximately 85 separate riparian reaches containing a total of 120 miles of perennial, intermittent, or ephemeral riparian habitats. The perennial systems flow continuously and include the San Juan, Animas, and La Plata Rivers. Intermittent systems flow for a portion of the year and include some reaches of Largo Canyon and Carrizo Canyon. Ephemeral systems have continuous underground water flow and surface flow during response to precipitation events. Potential riparian areas must meet the definition of riparian outlined in BLM Technical Reference 1737-9 and meet the Farmington Field Office Riparian Designation Criteria (Appendix C) to be classified as riparian.

The goal of the FFO riparian management is to document the progress toward achieving and then maintaining Proper Functioning Condition (PFC) while being managed under the multiple use and adaptive management concepts outlined in the 2000 Riparian and Aquatic Habitat Management Plan. Riparian-wetland areas are considered to be functioning properly when adequate vegetation, landform, or large woody debris are present to dissipate stream energy associated with high waterflow, thereby reducing erosion and improving water quality. The process used to assess proper functioning condition is described in BLM Technical References 1737-9 and 1737-15.

IV.5 Water Quality/Soils

The application of a scheme for relative ranking of hydrogeologic parameters, called DRASTIC, is being used for this proposed project. DRASTIC is an acronym for: Depth to Water, Recharge, Aquifer Media, Soil Media, Topography, Impact of the Vadsoe Zone Media, Conductivity (hydraulic) of the Aquifer. DRASTIC evaluates the relative ground water pollution potential of any hydrogeologic setting. DRASTIC indices, to determine the potential for ground water pollution based upon hydrologic settings, were identified in a previous Environmental Assessment (EA): NM-019-92-3069. These settings and the specific physical attributes that occur with each one have been used to determine the DRASTIC INDEX rating for any of the given locations within the FFO. Five settings were identified, in the EA. that are applicable to the FFO within the Colorado Plateau. They are presented below:

SETTINGS	DESCRIPTION	RATING
4A	Resistant Ridges	88
4B	Consolidated Sedimentary Rock	87
4C	River Alluvium	152
4D	Alluvium and Dune Sand	102
4E	Swamp/Marsh	176

Using this system, the higher the index number (ranging from 0 to 250), the greater the potential for ground water contamination. The proposed treatment areas lie predominately in 4C and some projects may occur in 4E. This setting demonstrates a moderate potential for ground water contamination.

Soil mapping units associated with the proposed action are the Fruitland-Riverwash-Stumble, Blancot-Notal, Sparank-San Mateo, and Riverwash. The Fruitland-Riverwash-Stumble mapping unit consists of elongated areas in the northern part of San Juan County. This map unit consists of deep, nearly level to moderately steep, well drained to somewhat excessively drained soils that formed in alluvium and riverwash. This unit is found on fans and in valleys with slopes of 0 to 20 percent. The Fruitland soils make up about 21 percent of this mapping unit. Fruitland soils are deep and well drained with moderate water erosion potential. They formed in alluvium derived dominantly from sandstone and shale. Fruitland soils are found in fans and in valleys and are typically sandy loams. Riverwash makes up 20 percent of this mapping unit and is found in streambeds, arroyos, and on flood plains. It consists of unstabilized sandy, silty, clayey, and gravelly sediment that is frequently flooded and reworked by water. Stumble soils are on fans and in valleys. These soils are deep and somewhat excessively drained and the hazard of water erosion is slight. They formed in alluvium derived dominantly from sandstone and shale and are typically loamy sands, sands, and gravelly sand. This unit makes up approximately 12 percent of the mapping unit.

The Blancot-Notal mapping unit consists of generally elongated areas in the northern and eastern parts of the San Juan County with slopes of 0 to 5 percent. Theses soils are deep, nearly level to gently sloping well drained to somewhat excessively drained that are formed in alluvium on valley sides and valley bottoms and fans. Runoff is medium and the hazard of water erosion is moderate. Blancot soils are found on fans and in upland valleys. These soils are deep and well drained. They are formed in alluvium derived mainly from sandstone and shale. Texture is typically a loam. Blancot makes up approximately 54 percent of the mapping unit. Notal soils are on fans and valley bottoms and are deep and well drained. They are also formed predominantly in alluvium derived from sandstone and shale and are typically silty clay loam in texture. This unit makes up 24 percent of the mapping unit with the remainder consisting of smaller inclusions.

Rio Arriba County soils associated with this project consist of Sparank-San Mateo and Riverwash. The Sparank-San Mateo is a silt loam, saline, sodic soil with 0 to 3 percent slope and found on broad valleys within the flood plains. These soils are deep and well drained. They are formed from alluvium derived from sandstone and shale. Soil textures consists of silt loam with a subsurface consisting of clay to clay loam. Drainage ranges from very slow for the Sparank to moderate for the San Mateo. Both soils are slightly saline, strongly alkaline, and moderately sodic. Runoff is slow while water erosion is slight to moderate. Riverwash is unstabilized sandy, silty, clayey or gravelly sediments which are flooded and reworked by water. These soils are associated with streams and arroyo bottoms.

The hydrologic setting in the project area includes the San Juan River, Animas River, and La Plata River and numerous ephemeral tributaries to these rivers. BLM manages several small parcels along the river systems. River frontage managed by FFO comprises approximately 7% of the total river frontage. The remaining 93% is owned by other government entities, tribal governments, or private land owners. The ephemeral tributary systems generally have surface flows only in response to snow melt or storm events. However, these systems have subsurface water flow throughout the year.

IV.6 Wildlife

The proposed project area includes all FFO designated riparian areas. The riparian habitats of San Juan, Animas, and La Plata Rivers along with the ephemeral wash tributaries to these rivers totals less than 1 percent of the land managed by FFO. The wildlife habitat within these riparian areas is typical of riparian habitat in all western states in that about 70% of all reptiles, 75% of all amphibian species, 80% of all mammals, and 90% of all bird species which regularly occur in the Colorado Plateau region routinely use riparian areas for food, water, cover or migration routes. Large mammals using riparian areas include: elk, mule deer, bobcat, coyote, and red fox. Small mammals such as the mountain cottontail, muskrat, beaver, blacktail jackrabbit, bats, and various species of mice and voles are also abundant.

Avian species are diverse with songbirds, game birds, raptors, and waterfowl being represented. Songbirds include: American robin, Bullock's oriole, spotted towhee, house finch, black-headed grosbeak, blue grosbeak, Bewick's wren, down woodpecker, flicker, belted kingfisher, and black-billed magpie. Game birds include: Gambel's quail, ringneck pheasant, and mourning dove. Waterfowl species commonly found are: mallard, American widgeon, common goldeneye, common merganser, greeenwing teal, American coot, and Canada goose. Raptors common to the area include Cooper's hawk, sharp-shinned hawk, American kestrel, great horned owl, red-tailed hawk, northern harrier, western screech owl, golden eagle, and bald eagle.

Invertebrate species found on riparian areas are numerous and provide a very valuable food source for songbirds, game birds, and small mammals. The species probably making the largest contribution as a food source for predators include: grasshoppers, dragonflies, damselflies, ground beetles, ants, mosquitoes, and flies.

No formal inventory of amphibians or reptiles has been done on the allotment. Based upon incidental sightings and the available habitat, the following species are probable residents of riparian areas: bull snake, prairie rattlesnake, short-horned lizard, bull frog, leopard frog, toad, and salamander species.

Fish that inhabit the San Juan, Animas, and La Plata River systems include both native and introduced species. The most common native species are the flannel mouth sucker, bluehead sucker, and sculpin. Colorado pikeminnow and razorback suckers are historically native fish and have been recently restocked into the San Juan River. Introduced fish species include the common carp, channel catfish, rainbow trout, and brown trout.

Migratory Birds of Conservation Concern

The vegetation found in the riparian plant communities supports a broad array of avian species. Executive Order 13186 dated January 17, 2001 calls for increased efforts to more fully

implement the Migratory Bird Treaty Act of 1918. In keeping with this mandate, the Farmington BLM has consulted the Partners in Flight Bird Conservation Plan for the State of New Mexico and the U.S. Fish & Wildlife Service's list of Birds of Conservation Concern. A review of these documents, specifically, as they pertain to the Colorado Plateau physiographic area, indicates there are a small number of "priority" avian species (with a known range of distribution in the FFO area) that utilize the riparian habitat types that may be impacted by the proposed project.

SPECIES	HABITAT TYPE	EFFECTS	IMPACT RATING-Low/Moderate/High
Summer Tanager	Riparian	Little impact, nests in trees, significant part of spring/summer diet bees, paper wasps.	Low - moderate
Plumbeous Vireo	Riparian	Little impact, nests in trees, over 90% of diet arthropods, primarily Lepidoptera.	Low - moderate
Black-chinned Hummingbird	Riparian	Potential impact, feeds heavily on nectar, absence of wildflowers due to grazing may cause avoidance of the area for feeding/nesting. The magnitude of this effect will be influenced by the class of livestock, i.e., sheep/goats utilize forbs more heavily than do cattle/horses.	Low - Moderate
Cassin's Kingbird	Riparian	Little impact, nests in trees, feeds on flying insects near nest/berries.	Low - moderate
Violet-green Swallow	Riparian	Little impact, cavity nester. Feeds on flying insects.	Low
Ash-throated Flycatcher	Sage/grass	Little conflict anticipated.	Low
Pinyon jay	Pinyon/juniper	Colony nester in pinyon. Loss of pinyon due to forage enhancement projects may impact jays.	Low

IV.7 Cultural Resources

The proposed project is confined to active floodplains and 100 year floodplains. Active floodplains are considered to be disturbed areas where intact cultural resources do not survive. Floodplains that occasionally flood are generally comprised of unconsolidated sediment that has been deposited from past flood events. The active channel of an intermittent or ephemeral wash system is dynamic and will typically move from side to side within the valley or canyon floor. The 100 year floodplain for riparian areas managed by FFO are considered to be areas that may flood during a 100 year storm event, or areas of the valley or canyon floor where the active channel may meander over time. Some of the 100 year

floodplain may not have supported riparian vegetation for up to 100 years. Cultural resources in 100 year floodplains are rare.

FFO has established ACECs to protect Cultural Resources. Portions of four Cultural ACECs contain designated riparian areas: Crow Canyon, Encinada Mesa-Carrizo Canyon, Superior mesa, and Ashiih Naa'a. The cultural resources protected within these ACECs are located in the uplands above the riparian areas, and there are no known cultural resources within the riparian areas. The boundaries of the ACECs were recorded in aliquant parts for ease of description and riparian resources were inadvertently included.

V ENVIRONMENTAL CONSEQUENCES

V.1 Threatened and Endangered Species and Special Status Species

Southwestern Willow Flycatcher

The southwestern willow flycatcher breeds in dense riparian habitats in all or parts of seven southwestern states including New Mexico. The birds depend on dense stands of woody vegetation larger than 1 acre in size located near surface water or saturated soils. FFO has evaluated all identified riparian habitats for the presence of potential southwestern willow flycatcher habitat. FFO designated portions of Animas River tracts 1, 3, and 8, La Plata River tracts 1 through 10, and San Juan river tracts Archuleta, Blanco, Bloomfield, Bradshaw, Bull Calf, Desert hills, Gallegos, Jewett Valley, Kutz, Sa Plata, Santa Rosa, Schneider, Simon Canyon, South Bloomfield, Subdivision, Valdez, and Wheeler as potential southwestern willow flycatcher habitat. FFO also designated portions of Pump Canyon reaches 1, 2, 3, and 4 as potential southwestern willow flycatcher habitat. With the exception of the 4 reaches in Pump Canyon, there is no designated flycatcher habitat on any of the other reaches of the Ephemeral Wash SDA. FFO has surveyed for flycatchers within designated potential flycatcher habitat since 1993. No breeding southwestern willow flycatchers have ever been detected on any lands managed by FFO; however, willow flycatchers are documented to migrate through the area.

All of the river tracts managed by FFO have some level of invasive/exotic vegetation infestation consisting of woody and non woody species. The typical woody species consist of saltcedar and Russian olive, and the non woody species are typically Russian knapweed and thistle species. The non woody species do not contribute to the necessary vegetation components of breeding habitat, but southwestern willow flycatchers have been documented to nest in dense stands of saltcedar and Russian olive.

The goal of riparian management is to achieve and maintain proper functioning condition of riparian resources. FFO considers invasive/exotic vegetation in riparian areas as a threat to the long term health of riparian resources. Riparian vegetation control projects will have a short term impact on riparian vegetation communities that have mixed stands of native and invasive/exotic vegetation by reducing the overall density of woody vegetation. The long term result of vegetation projects is expected to improve native riparian vegetation communities in the future.

Potential southwestern willow flycatcher habitat could be rendered temporarily unsuitable for period of time between the initial treatment of woody species and the recovery of the native vegetation. Mechanical treatments could interrupt breeding, foraging, or migration activities of

flycatchers from May 1 to August 15. FFO proposes the following mitigation measures to insure there are no impacts to southwestern willow flycatcher:

- No woody vegetation treatment projects may proceed in designated potential southwestern willow flycatcher habitat until a site specific EA is written and consultation with the U.S. Fish and Wildlife Service is completed.

- Non-woody vegetation projects may not be conducted in designated potential southwestern willow flycatcher habitat from May 1 to August 15 unless a protocol survey is completed and the absence of southwestern willow flycatcher is verified. If the absence of southwestern willow flycatcher is verified, non woody vegetation projects may start on July 15.

- Vegetation projects on riparian habitats that are not designated as potential southwestern willow flycatcher habitat, but are adjacent to designated potential flycatcher habitat may not be conducted from May 1 to August 15, unless a protocol survey is completed and the absence of southwestern willow flycatcher on the adjacent designated potential flycatcher habitat is verified. If the absence of southwestern willow flycatcher on adjacent potential flycatcher habitat is verified, vegetation projects may start on July 15.

- The use of herbicides in riparian areas will be limited to products with labels that are approved for use in riparian areas by the Environmental Protection Agency (EPA), the New Mexico Department of Agriculture – Bureau of Pesticide Management, and are on the BLM Approved Pesticide List.

- Any use of biological control agents on riparian lands managed by FFO must be approved by the U.S. Department of Agriculture (USDA) division of Animal and Plant Health Inspection Service (APHIS), and reviewed and approved by the U.S. Fish and Wildlife Service.

Bald Eagle

FFO established the Bald Eagle ACEC to protect the most important bald eagle wintering habitat managed by FFO, as well as to protect the bald eagles that use these areas in the winter. There are three Bald Eagle ACEC units on the Animas River that are also in designated river tract riparian areas: Animas #1, Animas #3, and Animas #8. Animas #1 is located near the Colorado border and is at the confluence of Line Canyon and the Animas River. Animas #1 is a documented night roost site. Some eagles roost in the large cottonwoods along the river, but most fly up Line Canyon and roost in ponderosa pines which grow along the steep canyon walls. Animas #3 and Animas #8 have some large cottonwood trees that provide day perch sites for the eagles. There are no Bald Eagle ACEC units on any other designated riparian areas listed in the River Tracts ACEC or the Ephemeral Wash SDA.
Bald eagles generally use large cottonwoods for day perches in the three Animas River ACEC units. The control of invasive/noxious vegetation will promote the growth and expansion of cottonwood woodland habitats in the ACEC units. Bald eagles are not known to utilize saltcedar or Russian olive for perches or roosts. Current FFO management authorizes the treatment of invasive/exotic plants in Bald Eagle ACEC units in the 1992 Bald Eagle Activity Plan that states that any spraying of noxious weeds can be done directly on the target plants with a backpack

sprayer, and the RMP that states that any vegetative management must benefit the purpose of the ACEC.

FFO manages approximately 7 % of the Animas, San Juan, and La Plata River corridors. The majority of the land along the rivers is private and developed for farming and residential housing. Bald eagles that winter along the river corridors are acclimated to the presence of people. However, the presence of people and machinery in the three Animas ACEC units during the winter may cause a temporary disturbance to eagles. In addition, the Bald Eagle ACEC Activity Plan prohibits disturbances within ACEC units from November 1 to March 31. The following mitigation measure would assure that projects to control invasive/exotic vegetation would have no impact to bald eagles.

- Vegetation projects may not be carried out in Bald Eagle ACEC units from November 1 to March 31.

Colorado Pikeminnow and Razorback Sucker

Critical habitat on the San Juan River for the Colorado pikeminnow and razorback sucker was designated by the USFWS in 1994. The project area includes critical habitat for the Colorado pikeminnow from State Route 371 Bridge in Farmington, to the lower extent of FFO lands at the Hogback. There are five separate BLM River Tracts located below the bridge and above the Hogback. There is no critical habitat for the razorback sucker in the project area. No wild Colorado pikeminnows or razorback suckers have been captured between the bridge and the Hogback, but both fishes are stocked in this portion of the river and stocked fish have been recaptured. The five river tracts downstream from Farmington are currently rated as being in proper functioning condition. All of the tracks have infestations of saltcedar, Russian olive, and Russian knapweed. The infestations of exotic vegetation may cause deteriorating vegetation conditions in the future.

Vegetation treatments could help FFO to maintain proper functioning condition in the 5 river tracts that are located in the designated critical habitat. Water quality could be impacted by herbicides entering the river and degrading water quality. The following mitigation measure will insure no impacts to the endangered fishes or the water quality of the San Juan River:

- The use of herbicides in riparian areas will be limited to products with labels that are approved for use in riparian areas by the Environmental Protection Agency (EPA), the New Mexico Department of Agriculture – Bureau of Pesticide Management, and are on the BLM Approved Pesticide List.

Golden Eagle

Golden eagles nest in cliff habitats throughout the lands managed by FFO including cliff habitat near the river and ephemeral wash systems. Golden eagles are not known to concentrate in riparian areas for foraging, but they will use riparian habitats when prey is available. FFO developed special management for nesting golden eagles, ferruginous hawk, and prairie falcon in 1992 and revised the management in the Raptor Management Policy Update (2000). The policy prohibits construction, drilling, or completion activities within 1/3 mile of an active golden eagle

nest. There are no golden eagle nests within designated riparian areas, but there may be some active nests within 1/3 mile of designated riparian areas. The following mitigation measure will insure there are no impacts to golden eagles:

- No vegetation projects will be conducted from March 1 to June 30 within 1/3 mile of an active nest of any raptor identified for special management in the FFO Raptor Management Policy.

American Peregrine Falcon

Peregrine flacons typically breed on high cliffs that overlook, or are near riverine or riparian habitat. Peregrines typically prey on waterfowl and passerine birds that concentrate along rivers and riparian habitats. The peregrine falcon was removed from the U.S. Fish and Wildlife Service endangered species list in 1999. FFO continues protective management for peregrine falcons and included the falcons in the Raptor Management Policy. FFO protects active peregrine eyries from disturbances within 1/3 mile. The presence of a crew and machinery may disturb nesting peregrines and the following mitigation measure will insure there are no impacts to the birds:

- No vegetation projects will be conducted from March 1 to June 30 within 1/3 mile of an active nest of any raptor identified for special management in the FFO Raptor Management Policy.

Yellow-billed Cuckoo

All of the yellow-billed cuckoos that have been found during three years of surveys were found in, or near designated southwestern willow flycatcher potential habitat on river tracts along the San Juan River. Yellow-billed cuckoos are generally thought to breed in large blocks of riparian habitat. The yellow-billed cuckoos that have been located on FFO lands have been in mixed riparian vegetation communities of cottonwoods, Russian olive, saltcedar. The cottonwood woodlands would benefit from removal of saltcedar and Russian olive in the long term, but the short term impact would be reduced density and reduced complexity of the riparian vegetation community. In other areas of the New Mexico, yellow-billed cuckoos have been observed during the breeding season in dense stands of Russian olive trees and saltcedar. Jim Travis reported in the Yellow-Billed Cuckoo Life History Synopsis (April 2002) that favored breeding habitats in New Mexico included mixed cottonwood/Russian olive in the Rio Grande Valley, and monocultures of saltcedar in the Pecos River Valley. Mr. Travis's report would suggest that yellow-billed cuckoo chose breeding habitat by vegetation height and density and not by specific plant species.

The dense stands of cottonwood, Russian olive and saltcedar riparian habitats in the project area are located on units of the River Tracts ACEC and have been designated as potential southwestern willow flycatcher habitat in the 1998 SWWF HMP. Habitat for yellow-billed cuckoo is already protected and managed under guidelines established in the River Tracts ACEC and the 1998 SWWF HMP. No woody vegetation treatment projects may proceed in designated potential southwestern willow flycatcher habitat until a site specific EA is written and consultation with the U.S. Fish and Wildlife Service is completed. The EA for a woody vegetation treatment project would also analyze impacts to yellow-billed cuckoo. No impacts to yellow-billed cuckoo are expected because the habitat used by the bird is already under special management from the SWWF HMP and the River Tracts ACEC.

V.2 Areas of Critical Environmental Concern (ACEC)

The River Tracts ACEC and the Bald Eagle ACEC are included in the project area. One of the prescriptions for the River Tracts ACEC in the RMP is to analyze invasive, non-native vegetation for the development of vegetation manipulation projects to improve the native riparian vegetation community. The 1992 Bald Eagle ACEC Activity Plan states that spraying of noxious weeds can be done directly on the target plants with a backpack sprayer. Vegetation projects to control invasive/exotic species on the River Tracts and Bald Eagle ACEC are in compliance with existing planning outlined in the 2003 RMP. The removal of invasive/exotic vegetation in these ACEC units may improve the native vegetation community, contribute to the achievement and maintenance of PFC, and improve wildlife habitat.

Archuleta, Simon Canyon, and Old Road river tracts, and Simon Canyon Ephemeral Wash are designated riparian areas that receive significant levels of recreation from hiking and fishing. These four areas are accessed by established parking lots. The presences of a crew treating weeds either by mechanical means or by the application of herbicide may disturb recreationists. The disturbance may be from the noise of machinery, or by the recreationist not being familiar with the safety aspects of the herbicide that may be used. Hikers and fishermen use trails to access Simon Canyon and the San Juan River. Invasive/exotic vegetation can overgrow the access trails and curtail access or make the recreation experience less enjoyable. The following mitigation measure will insure there are no negative impacts occur due to improper vegetation treatment:

- The use of herbicides in riparian areas will be limited to products with labels that are approved for use in riparian areas by the Environmental Protection Agency (EPA), the New Mexico Department of Agriculture – Bureau of Pesticide Management, and are on the BLM Approved Pesticide List. All instructions and precautions outlined in the appropriate product label will be strictly adhered to. All workers applying herbicide will be under the supervision of a certified pesticide applicator.

- Any use of biological control agents on riparian lands managed by FFO must be approved by the U.S. Department of Agriculture (USDA) division of Animal and Plant Health Inspection Service (APHIS), and reviewed and approved by the U.S. Fish and Wildlife Service.

- Any vegetation treatments within the Simon Canyon Recreation ACEC, Archuleta river tract, and Old Road river tract will be conducted in the winter months between November 1 and March 31 to minimize the number of recreationists that may be using the area. A sign will be posted in the parking lot to inform the public that a vegetation treatment is being done, and if the treatment includes the application of herbicide, a product label will also be attached to the sign. The vegetation treatment must benefit recreation experiences and be approved by the FFO recreation staff. Consultation with the FFO Recreation Staff will occur prior to any treatments within Simon Canyon Recreation ACEC.

V.3 Invasive/Non Native Species

The objective of the FFO weed management program, according to the 2003 RMP, is to detect invasive plant species populations, prevent the spread of new invasive populations, manage exiting populations using the tools of integrated weed management, and eradicate invasive populations, using the safest environmental methods available. Prevention and management of invasive plants assists in improving the health of public lands. The control of invasive/exotic vegetation species in riparian areas is compatible with, and authorized in the following planning documents: Vegetation Treatment on BLM Lands in Thirteen Western States (1991); Bald Eagle ACEC Activity Plan (1992); Southwestern Willow Flycatcher HMP (1998); Riparian and Aquatic HMP (2000); and the Farmington Resource Management Plan (2003). The following mitigation measure will insure there are no negative impacts occur due to improper vegetation treatment:

The use of herbicides in riparian areas will be limited to products with labels that are approved for use in riparian areas by the Environmental Protection Agency (EPA), the New Mexico Department of Agriculture – Bureau of Pesticide Management, and are on the BLM Approved Pesticide List. All instructions and precautions outlined in the appropriate product label will be strictly adhered to. All workers applying herbicide will be under the supervision of a certified pesticide applicator.

- Any use of biological control agents on riparian lands managed by FFO must be approved by the U.S. Department of Agriculture (USDA) division of Animal and Plant Health Inspection Service (APHIS), and reviewed and approved by the U.S. Fish and Wildlife Service.

V.4 Riparian/Wetlands

The proposed action will be limited to designated riparian areas listed by the Farmington Riparian and Aquatic HMP (2000) or riparian areas that are subsequently identified in the future. The goal of the FFO riparian management is to document the progress toward achieving and then maintaining Proper Functioning Condition (PFC) while being managed under the multiple use and adaptive management concepts outlined in the 2000 Riparian and Aquatic Habitat Management Plan. All designated riparian habitats managed by FFO have some level of invasive/exotic vegetation species infestation. The most common invasive/exotic species are saltcedar, Russian olive, Russian knapweed, and thistle species. All designated riparian habitats have mixed vegetation communities of native species and invasive/exotic species. Healthy native riparian vegetation communities contribute to stream bank stability and wildlife habitat. Increased densities of invasive/exotic vegetation species may result stream bank instability and a reduction in the value of wildlife habitat. The following mitigation measure will insure there are no negative impacts occur due to improper vegetation treatment:

- The use of herbicides in riparian areas will be limited to products with labels that are approved for use in riparian areas by the Environmental Protection Agency (EPA), the New Mexico Department of Agriculture – Bureau of Pesticide Management, and are on the BLM Approved Pesticide List. All instructions and precautions outlined in the appropriate product label will be strictly adhered to. All workers applying herbicide will be under the supervision of a certified pesticide applicator.

- Any use of biological control agents on riparian lands managed by FFO must be approved by the U.S. Department of Agriculture (USDA) division of Animal and Plant Health Inspection Service (APHIS), and reviewed and approved by the U.S. Fish and Wildlife Service.

V.5 Water Quality/Soils

The proposed project area is entirely within designated riparian areas. Riverwash soil types makes up the majority of the project area. Riverwash soils are found in streambeds, arroyos, and on flood plains. It consists of unstabilized sandy, silty, clayey, and gravelly sediment that is frequently flooded and reworked by water. Some Stumble and Notal soils may be found on fans and in valleys bottoms. Stumble soils are deep and somewhat excessively drained and the hazard of water erosion is slight. They form in alluvium derived dominantly from sandstone and shale and are typically loamy sands, sands, and gravelly sand. The DRASTIC INDEX rating for the proposed treatment areas lies predominately in 4C and 4E classifications. These classifications indicate a moderate potential for ground water contamination. The following mitigation measure will minimize potential impacts for ground water contamination:

- The use of herbicides in riparian areas will be limited to products with labels that are approved for use in riparian areas by the Environmental Protection Agency (EPA), the New Mexico Department of Agriculture – Bureau of Pesticide Management, and are on the BLM Approved Pesticide List. All instructions and precautions outlined in the appropriate product label will be strictly adhered to. All workers applying herbicide will be under the supervision of a certified pesticide applicator.

V.6 Wildlife

Riparian areas are important habitat that is used to some degree by approximately 75% of all wildlife species that inhabit lands managed by FFO. Wildlife species that use, or may depend on riparian habitats have evolved to utilize native riparian vegetation. Infestations of invasive/exotic vegetation are generally thought to reduce the quality of riparian habitats for wildlife. However, there are some instances when invasive/exotic plants are used by native wildlife species. The southwestern willow flycatcher is known to nest in monotypic stands of saltcedar or Russian olive in Arizona and in the southern portion of New Mexico. There are no monotypic stands of saltcedar in the project area, and there have not been any documented flycatcher nesting in the project area. Saltcedar is little utilized by other wildlife species. The impacts of removing saltcedar from potential southwestern willow flycatcher habitat are discussed in the Threatened and Endangered Species section above.

Russian olive produces fruits which are small and large seeded. The Russian olive fruits remain on the trees long after the leaves have fallen, providing food for several species of birds throughout the winter and spring. Significant populations of robins have been observed to overwinter in Russian olive habitat along the river systems in the project area. The large dense stands of Russian olive within the project area are located on the river tracts and are generally designated as potential southwestern willow flycatcher habitat. These stands of Russian olive would be managed under the same constraints for potential southwestern willow flycatcher habitat outlined in the Threatened and Endangered species section listed above. The ephemeral

wash riparian reaches also have infestations of Russian olive. Typically, ephemeral was riparian areas have scattered Russian olive trees that do not form continuous canopy covered and have not been observed to an importing wintering habitat for birds. The removal of scattered Russian olive trees in ephemeral wash systems would result in a low impact to wildlife. Non woody invasive/exotic species such as knapweed species and thistle species are not considered an important component of wildlife habitat. The implementation of the proposed action would limit the spread of invasive/exotic vegetation and promote native riparian vegetation for the benefit of wildlife.

V.7 Cultural Resources

Native Americans traditionally collected native riparian vegetation such as willows and reed grasses. Projects to control invasive/exotic vegetation in active floodplain riparian areas may improve native riparian vegetation including willows and reed grasses. The proposed projects will not negatively impact cultural resources within active floodplains. Occasionally, cultural resources less than 100 years old may be found in 100 year floodplains. A management prescription in the 2003 RMP for Crow Canyon, Encinada Mesa-Carrizo Canyon, and Ashiih Naa'a cultural ACECs states that vegetation modification is not allowed. The RMP also states on page seven that this prescription could limit the ability of BLM to control noxious weeds. Exceptions to this prescription will be allowed when site-specific environmental analysis indicates such treatments are necessary to maintain or improve public land health or control noxious weeds when it can be demonstrated such treatments will not adversely impact the resources for which the specially designated area was created. The following mitigation measure will minimize potential impacts to cultural resources:

- All proposed invasive/exotic riparian vegetation treatments either within 100 year floodplains or designated cultural ACECs will be reviewed by the FFO cultural staff and site specific environmental analysis will be conducted when necessary.

VI SUMMARY OF MITIGATION MEASURES

- No woody vegetation treatment projects may proceed in designated potential southwestern willow flycatcher habitat until a site specific EA is written and consultation with the U.S. Fish and Wildlife Service is completed.

- Non woody vegetation projects may not be conducted in designated potential southwestern willow flycatcher habitat from May 1 to August 15 unless a protocol survey is completed and the absence of southwestern willow flycatcher is verified. If the absence of southwestern willow flycatcher is verified, non woody vegetation projects may start on July 15.

- Vegetation projects on riparian habitats that are not designated as potential southwestern willow flycatcher habitat, but are adjacent to designated potential flycatcher habitat may not be conducted from May 1 to August 15, unless a protocol survey is completed and the absence of southwestern willow flycatcher on the adjacent designated potential flycatcher

habitat is verified. If the absence of southwestern willow flycatcher is verified, vegetation projects may start on July 15.

- The use of herbicides in riparian areas will be limited to products with labels that are approved for use in riparian areas by the Environmental Protection Agency (EPA), the New Mexico Department of Agriculture – Bureau of Pesticide Management, and are on the BLM Approved Pesticide List. All instructions and precautions outlined in the appropriate product label will be strictly adhered to. All workers applying herbicide will be under the supervision of a certified pesticide applicator.

- Any use of biological control agents on riparian lands managed by FFO must be approved by the U.S. Department of Agriculture (USDA) division of Animal and Plant Health Inspection Service (APHIS), and reviewed and approved by the U.S. Fish and Wildlife Service.

- No vegetation projects will be conducted from March 1 to June 30 within 1/3 mile of an active nest of any raptor identified for special management in the FFO Raptor Management Policy.

- Any vegetation treatments within the Simon Canyon Recreation ACEC, Archuleta river tract, and Old Road river tract will be conducted in the winter months between November 1 and March 31 to minimize the number of recreationists that may be using the area. A sign will be posted in the parking lot to inform the public that a vegetation treatment is being done, and if the treatment includes the application of herbicide, a product label will also be attached to the sign. The vegetation treatment must benefit recreation experiences and be approved by the FFO recreation staff. Consultation with the FFO Recreation Staff will occur prior to any treatments within Simon Canyon Recreation ACEC.

- All proposed invasive/exotic riparian vegetation treatments either within 100 year floodplains or designated cultural ACECs will be reviewed by the FFO cultural staff and site specific environmental analysis will be conducted when necessary.

VII. CUMMULATIVE IMPACATS

Invasive/exotic vegetation infestations on FFO designated riparian areas have progressed over the past 25 years to the point that all designated riparian areas have some level of infestation. On some riparian areas, invasive/exotic plant species may now be a major component of the vegetation community. As stands of invasive/exotic vegetation become dense, native vegetation may not be able to compete. Riparian areas dominated by invasive/exotic vegetation species may not be stable enough to resist high water flow events, and riparian areas may not be able to attain or maintain proper functioning condition. Native wildlife species adapted to native riparian vegetation communities, and the degradation of native riparian plant communities could have a negative impact on wildlife species, including species listed under the Endangered Species Act.

VIII. COORDINATION

U.S. Fish and Wildlife Service
New Mexico Department of Game and Fish
Forest Guardians
New Mexico Public Lands Council
New Mexico Environment Department
Dale Wirth - FFO soil conservationist
John Hansen - FFO wildlife biologist
Eddy Williams - FFO weeds coordinator

Principle preparer: Barney Wegener, Natural Resource Specialist