2009 Willow Flycatcher Surveys at Two Albuquerque Sites: Montano Southwest and the Rio Grande Nature Center



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EXECUTIVE SUMMARY

The Southwestern Willow Flycatcher (Empidonax traillii extimus) is a federally endangered migrant songbird breeding locally in riparian areas of New Mexico. The U.S. Army Corps of Engineers manages riparian habitat in the Rio Grande bosque in the Albuquerque, New Mexico metropolitan area, some of which is potential Willow Flycatcher habitat. Since 2004, they have contracted Hawks Aloft to conduct Willow Flycatcher surveys at two bosque sites: Montano Southwest and the Rio Grande Nature Center. In May 2009, a single Willow Flycatcher was detected at Montano Southwest. However, no further detections were made during two subsequent surveys. Habitat at Montano Southwest and the Rio Grande Nature Center, although offering a fairly dense understory layer relative to other sites in the Albuquerque area, may be suboptimal for breeding Southwestern Willow Flycatchers. But, this year's detection provides evidence that Montano Southwest and the Rio Grande Nature Center could serve as important stopover sites for migrating Willow Flycatchers, including the federally endangered Southwestern subspecies. For this reason, we recommend that the U.S. Army Corps of Engineers continue to maintain as dense a structure of riparian vegetation as possible at these sites.

In June 2009, we observed a territorial Willow Flycatcher on two different occasions during general avian transect surveys northeast of the Rio Bravo Bridge in south Albuquerque. Although the habitat patch where the observations were made is relatively small, it does meet the general criteria for Southwestern Willow Flycatcher breeding habitat in terms of vegetation density and composition, prey availability, and

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proximity to water. Based on these factors, we recommend establishing a Willow Flycatcher survey route at Rio Bravo Northeast in 2010.

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INTRODUCTION

Riparian corridors provide important habitat for breeding birds in arid regions of the western United States (Ellis 1995). Although western riparian areas occupy less than one percent of the landscape, many support more breeding bird species than surrounding upland habitats (Powell and Steidl 2000, Gates and Giffen 1991, Knopf et al. 1988). Because riparian areas provide breeding habitat for many bird species, it is important to maintain or improve them to the best possible condition. It is especially important to maintain riparian areas that host rare or endangered species.

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is a federally endangered migrant songbird which has a relatively large breeding population in New Mexico (Hatten and Sogge 2007, and Ahlers 2005). Southwestern Willow Flycatchers inhabit dense riparian vegetation, including both native (e.g., cottonwood, *Populus* spp., and willow, *Salix* spp.) and exotic (e.g., salt cedar, *Tamarix* spp., and Russian olive, *Elaeagnus angustifolia*) woody plants (Sogge et al. 2003). Suitable habitat for Southwestern Willow Flycatcher is usually in close proximity to water or saturated soils (Sedgwick 2000).

During migration, Southwestern Willow Flycatchers are joined by non-endangered subspecies of Willow Flycatcher (e.g., *E. t. adastus*), which migrate through the state and breed further north (Sogge et al. 1997). Because of morphological and vocal similarities, it is difficult to distinguish between Southwestern Willow Flycatchers and other migrant subspecies of Willow Flycatcher. However, Willow Flycatchers found late in the breeding season in New Mexico (i.e., late June through mid July) are probably territorial birds belonging to the Southwestern subspecies, because migrants belonging to

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the other subspecies are not expected during this time (Sogge et al. 1997). Therefore, surveys documenting Willow Flycatcher presence can often provide an indication of local Southwestern Willow Flycatcher status.

The United States Army Corps of Engineers conducts habitat restoration in the Rio Grande bosque in the Albuquerque, New Mexico metropolitan area. They contracted Hawks Aloft to conduct Willow Flycatcher surveys at two bosque sites: Montano Southwest and the Rio Grande Nature Center. At Montano Southwest (formerly known as the Graham Property), we have conducted annual Willow Flycatcher surveys since 2004. At the Rio Grande Nature Center, we conducted surveys in 2004, and 2006-2009. Although we have observed nine Willow Flycatchers during surveys in the migration period or during non-survey visits (see Table 2), we have not documented birds late in the season that would confirm the presence of Southwestern Willow Flycatchers. Continued annual surveys are important to document Southwestern Willow Flycatchers and to ensure that management activities do not impact flycatchers currently present in the habitat. In this report, we present results of 2009 Willow Flycatcher surveys at Montano Southwest and the Rio Grande Nature Center, and provide information on Willow Flycatcher observations at Rio Bravo Northeast during general avian transect surveys.

STUDY AREA

Montano Southwest

Montano Southwest is located near the southeast corner of Coors Boulevard and Montano Road, in the bosque on the west side of the Rio Grande in Albuquerque, New Mexico (Fig. 1). We surveyed all appropriate habitat within a 42-ha woodland patch

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(elevation 1500 m) east of the Bosque School. Riparian vegetation consisted of mature cottonwood canopy with dense understory vegetation dominated by Russian olive, willow, and salt cedar. Although the Rio Grande bosque has undergone considerable understory thinning in the Albuquerque area for restoration and fire suppression, clearing within an approximately 100-m strip along the river at Montano Southwest has generally been avoided for the purpose of maintaining potential Willow Flycatcher habitat. In 2009, as in previous years, there was no surface water or saturated soil in the habitat. The Middle Rio Grande Conservancy District drain and the Rio Grande bordered the site on the west and east, respectively.

Rio Grande Nature Center

The Rio Grande Nature Center is located across the river from Montano Southwest, near the west end of Candelaria Road, in Albuquerque, New Mexico (Fig. 1). We surveyed a 7-ha woodland patch (elevation 1500 m) consisting of cottonwoods, willows, Russian olive, and salt cedar. Some understory clearing has been conducted at the Rio Grande Nature Center since 2004, but in fall of 2007, major clearing in the area was conducted for the construction of a minnow channel. This project, to help increase populations of the Rio Grande silvery minnow (*Hybognathus amarus*), had an obvious impact on the vegetation in portions of the survey area. Due to the inherently dynamic nature of understory vegetation, there is a possibility of an increase in potential flycatcher habitat due to this project (Brodhead et al, 2007) within only a few years. The site is bordered by the Rio Grande on the west, and the new minnow channel runs through the surveyed area.

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METHODS

Willow Flycatcher surveys followed the standardized protocol developed by Sogge et al. (1997). All observers were trained to follow this protocol and certified to conduct Willow Flycatcher surveys under Hawks Aloft's Federal Fish and Wildlife Permit (TE835139-0). A single observer conducted all surveys at Montano Southwest and the Rio Grande Nature Center in 2009. In accordance with established protocol (Sogge et al. 1997), we conducted surveys during three survey periods: 15-31 May, 1-21 June, and 22 June through 10 July. At both sites we conducted three surveys, one in each of the three survey periods. Our survey dates at Montano Southwest were 22 May, 5 June, and 30 June. At the Rio Grande Nature Center, the survey dates were 29 May, 15 June, and 10 July. We conducted consecutive surveys at each site at least five days apart, beginning within a half-hour of sunrise and concluding within four hours.

During surveys, observers walked slowly through the survey area, stopping every 20-30 m or so to cover potential habitat patches. At each stop, surveyors listened for flycatcher vocalizations. If none were heard, taped vocalizations of a Southwestern Willow Flycatcher were played for 15-30 seconds, followed by one or two minutes of observation. We recorded Universal Transverse Mercator (UTM) coordinates (North American Datum 27) for each Willow Flycatcher observed. Because several species appear similar to Willow Flycatchers (e.g., Dusky Flycatcher, *E. oberholseri*, and Gray Flycatcher, *E. wrightii*), positive identification of a Willow Flycatcher required that the observer hear the distinctive "fitz-bew" song (Sedgwick 2000). To distinguish Southwestern Willow Flycatchers from other subspecies that issue a similar song, we

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concluded that if Willow Flycatchers were observed in the third survey period, they were Southwestern Willow Flycatchers. Migrating Willow Flycatchers were not expected during this time (Sogge et al. 1997). Flycatchers observed only during the first two survey periods might also be Southwestern Willow Flycatchers, but the possible presence of the migrating *adastus* subspecies makes identification uncertain during this time. We present a list of all avian species observed during surveys (Appendix 1) and provide copies of original Willow Flycatcher survey data forms (Appendix 2).

RESULTS

We observed no Willow Flycatchers during 2009 surveys at the Rio Grande Nature Center (Table 1). At Montano Southwest, one Willow Flycatcher was identified during the first survey period, on 22 May (Table 1). We also conducted general avian transect surveys three times per month in addition to the standardized Willow Flycatcher surveys. Willow Flycatchers were not observed during these songbird transects. Overall, we observed 42 bird species during flycatcher surveys, 32 at Montano Southwest and 34 at the Rio Grande Nature Center (Appendix 1).

Table 1. Summary of Willow Flycatcher surveys conducted at Montano Southwest and the Rio Grande Nature Center in Albuquerque, New Mexico in 2009.

Site	Survey	Date	Duration (hr)	Number of Flycatchers
Montano Southwest	1	22 May	1:41	1
Montano Southwest	2	5 June	1:13	0
Montano Southwest	3	30 June	1:14	0
Rio Grande Nature Center	1	29 May	1:18	0
Rio Grande Nature Center	2	15 June	1:10	0
Rio Grande Nature Center	3	10 July	0:58	0

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On 5 June, a singing Willow Flycatcher was documented northeast of the Rio Bravo Bridge in south Albuquerque (NAD27 UTM coordinates: 347572, 3877220) during a general avian transect survey. On 16 June, a singing Willow Flycatcher was again documented in the same location. Despite the playing of taped vocalizations in an effort to elicit a response, no further conclusive observations of Willow Flycatcher were made during subsequent avian transect surveys. But, on 7 July, a non-vocalizing *Empidonax* flycatcher briefly flew in to the playing of Willow Flycatcher vocalizations at the location of the earlier observations. Based on this behavior, and the fact that no other *Empidonax* species would normally be expected in the bosque during that time, it is possible the responding bird also was a Willow Flycatcher.

Table 2. Number of Willow Flycatchers detected by Hawks Aloft, Inc. at Montano Southwest and the Rio Grande Nature Center in Albuquerque, New Mexico from 2004-2009. We indicate incidental observations (occurring during non-survey visits to the site) of Willow Flycatchers in parentheses. A dash (-) indicates that a survey was not conducted by Hawks Aloft. Survey 1 was conducted 15-31 May; Survey 2 was conducted 1-21 June; and Surveys 3-5 were conducted 22 June – 10 July.

Site	Survey	2004	2005	2006	2007	2008	2009
Montano Southwest	1	0	0(1)	1(1)	0	2	1
Montano Southwest	2	0	0(1)	0(1)	0	0	0
Montano Southwest	3	0	0	0	0	0	0
Montano Southwest	4	0	-	-	-	-	-
Montano Southwest	5	0	-	-	-	-	-
Rio Grande Nature Center	1	0	-	0	0	0	0
Rio Grande Nature Center	2	0	-	0(1)	0	0	0
Rio Grande Nature Center	3	0	-	0	0	0	0
Rio Grande Nature Center	4	0	-	0	0	-	-
Rio Grande Nature Center	5	0	-	0	0	-	-

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DISCUSSION

Our surveys offer no evidence that Southwestern Willow Flycatchers breed at Montano Southwest or the Rio Grande Nature Center. In central New Mexico, the presence of singing Willow Flycatchers during the third survey period (i.e., 22 June through 10 July) is considered strong evidence of territorial Southwestern Willow Flycatchers (Sogge et al. 1997). Since 2004, we have observed no Willow Flycatchers during six third-period surveys at Montano Southwest and five third-period surveys at the Rio Grande Nature Center (Table 2).



Location of a Willow Flycatcher near the Rio Grande at Montano Southwest

Habitat at Montano Southwest and the Rio Grande Nature Center is suboptimal for breeding Southwestern Willow Flycatchers. Both survey sites contain understory vegetation, especially Russian olive, but they lack the high density typical of

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Southwestern Willow Flycatcher breeding sites (Sogge et al. 1997). Although adjacent to the Rio Grande, these sites were dry and no surface water was present throughout the patches, further limiting suitability for breeding Southwestern Willow Flycatchers. There also is evidence of habitat reduction at both sites. Understory along the west side of the survey area at Montano Southwest has been increasingly thinned in recent years. At the Rio Grande Nature Center, a portion of densely-vegetated drainage was cleared in the fall of 2007 season to install a new Silvery Minnow channel. Although this new minnow ditch was flooded in early summer 2009, it had dried up by the end of June. In addition, Brown-headed Cowbirds were detected numerous times at both sites, and the understory patches at these sites may be too small to protect breeding Southwestern Willow Flycatchers from parasitism (Brodhead et al 2007).

Despite the limited potential for hosting breeding Southwestern Willow Flycatchers, Montano Southwest and the Rio Grande Nature Center still hold potential value for the conservation of this species. Because much of the Rio Grande bosque understory has been thinned in the Albuquerque metropolitan area for fire control or for restoration purposes, these two Willow Flycatcher survey sites are among the few remaining areas with relatively dense understory vegetation. Migrating Willow Flycatchers might be attracted to Montano Southwest and the Rio Grande Nature Center as the best available options along the Middle Rio Grande for refueling and for resting cover. Our observations of Willow Flycatchers at Montano Southwest in 2009, 2008, 2006, and 2005 provide evidence that these sites are used by migrants. Migrating Willow Flycatchers might include the endangered Southwestern subspecies. Yong and Finch (1997) suggested that the Middle Rio Grande provides important stopover habitat for

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Southwestern Willow Flycatchers to replenish energy stores. Potential use of these sites by Southwestern Willow Flycatchers, even if only during the migration season, provides strong justification for efforts to maintain these pockets of relatively dense understory. We recommend that the U.S. Army Corps of Engineers continue surveys to gain the most current information on Willow Flycatcher (and Southwestern Willow Flycatcher) status at Montano Southwest. But, we recommend discontinuing flycatcher surveys at the Rio Grande Nature Center, based on the marginal habitat quality and the fact that no Willow Flycatchers have been detected during formal surveys over the past six years. However, we strongly urge the U.S. Army Corps of Engineers to continue to vigilantly protect potential habitat patches at both locations.

In contrast to Montano Southwest and the Rio Grande Nature Center, the habitat present at Rio Bravo Northeast is potentially suitable for breeding Southwestern Willow Flycatchers. Although the habitat patch at Rio Bravo Northeast is small (approximately 0.5 ha), it is densely vegetated, supports standing water through at least the end of June during years of normal run-off, and appears to support a dense insect prey base. The vegetation consists of a dense coyote willow understory generally exceeding 2 m in height, interspersed with intermediate-sized Russian olive and cottonwoods. Because the habitat patch is located below the river bank, it supports standing water throughout the spring run-off, and a moist substrate well into July. The presence of a territorial Willow Flycatcher for at least two weeks during June 2009 supports the idea of the location as a potential breeding site. Thus, we recommend the establishment of Willow Flycatcher surveys at Rio Bravo Northeast beginning in 2010, and urge vigilant protection of this potentially important habitat patch.

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Potential Willow Flycatcher habitat at Rio Bravo Northeast

ACKNOWLEDGMENTS

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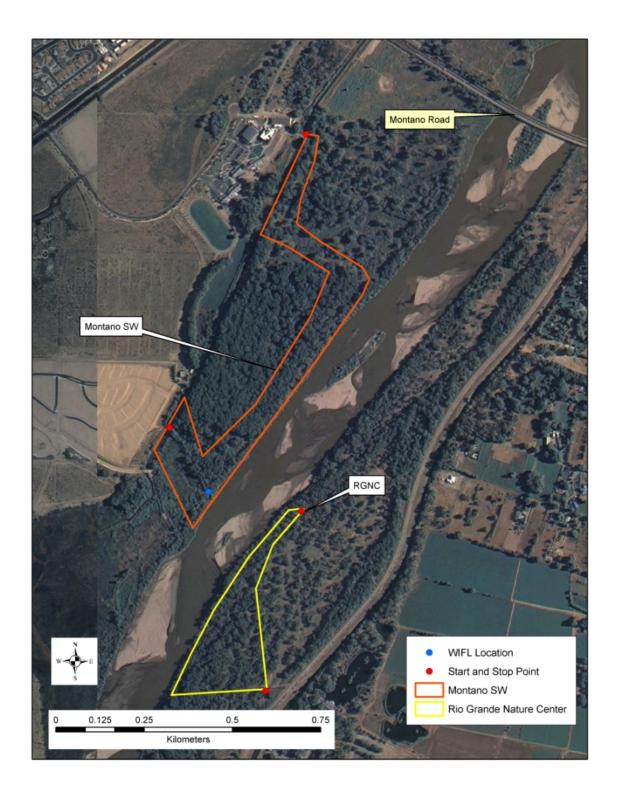


Figure 1. Location of a Willow Flycatcher at Montano Southwest, and survey areas of Montano Southwest and the Rio Grande Nature Center in Albuquerque, New Mexico in 2009.

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Appendix 1. List of 42 bird species observed during Willow Flycatcher surveys at two Albuquerque, New Mexico sites in 2009. We indicate species observed (X) during three surveys at Montano Southwest and three surveys at the Rio Grande Nature Center.

					Rio Grar	
	Monta	ıno Sou	thwest	N	ature Ce	enter
Species	1	2	3	1	2	3
American Crow		X				
American Kestrel						X
American Robin					X	
Ash-throated Flycatcher	X	X	X	X	X	X
Bewick's Wren	X	X	X	X	X	X
Black Phoebe	X	X				X
Black-capped Chickadee	X	X	X	X		X
Black-chinned Hummingbird	X	X	X	X	X	X
Black-headed Grosbeak	X	X	X	X	X	X
Blue Grosbeak	X	X	X	X	X	X
Brown-headed Cowbird	X	X	X	X		X
Canada Goose	X			X	X	X
Cliff Swallow			X			
Common Yellowthroat	X	X	X	X	X	X
Cooper's Hawk	X	X	X		X	
Downy Woodpecker		X	X		X	X
Eastern Bluebird					X	
European Starling				X		
Gray Catbird					X	
Great Egret					X	
Greater Roadrunner					X	
House Finch	X	X		X	X	X
Indigo Bunting	X					
Lesser Goldfinch					X	X
Mallard	X	X	X	X	X	X
Mourning Dove	X	X	X	X	X	X
Northern Flicker	X	X	X		X	X
Northern Rough-winged Swallow		X			X	
Red-winged Blackbird						X
Ring-necked Pheasant	X	X	X		X	X
Spotted Sandpiper		_	X		X	X
Spotted Towhee	X	X	X	X	X	X
Summer Tanager	X	X	X	X	X	X
Swainson's Hawk	**		X			**
Warbling Vireo		X				
Western Grebe	X	23		X	X	
Western Kingbird	X			41	4.1	
Western Tanager	41					X

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				I	Rio Grar	nde
	Monta	no Sou	thwest	N	ature Ce	enter
Species	1	2	3	1	2	3
Western Wood-Pewee	X	X				
White-breasted Nuthatch	X		X	X	X	X
Wood Duck	X	X	X			
Yellow-breasted Chat	X	X	X	X	X	

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Appendix 2. Data forms from 2009 Willow Flycatcher surveys at Montano Southwest and the Rio Grande Nature Center in Albuquerque, New Mexico.

Site Name M	ontano Some Los Gri	uthwa	est		Clavetic	tate NM	County Ber	nalillo
								_ feet / feter (circle one
Is copy	of USGS map m	arked wi	th survey a	rea and WII	L sightii	igs attached	d (as required)?	Yes \ No
Site Coordinate		39021	9	E 3462	74			im NADZI (NAD27 preferre
								12
	** 1	ill in ac	lditional	site inforn	nation o	n back oj	f this page **	
Survey# Observer(s)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign, If Yes, Describe	Comments about this survey (e.g., bird behavior, evidence pairs or breeding, number of nests, nest contents or number
(Full Name)		33.10-500	(41.5.10.5		1.30.33	180,863.0	Y or N	fledges seen; potential threats
Garber	Date 5/22/09 Start 0552 Stop 0733 Total hrs 1:41	١	0	0	2	Y	И	
2 Gail Garber	Date 6 5 09 Start 0548 Stop 0701 Total hrs 1:13	0	0	0	И	·Y	2	
3 Gail Garber	Date 6 30 07 Start 0 600 Stop 07 14 Total hrs 1:14	0	0	0	7	Y	Ŋ	
4	Date Start Stop Total hrs							
5	Date Start Stop Total hrs							
Overall Site S	ummary	Adults	Pairs	Territories	Nests	Were any W	IFLs color-banded?	Yes No
(Total resident W		0	0	0	0	If yes, report of form	color combination(s) in the comments section on bac
Reporting Indiv	idual Gail G	mit#TE	835139-			Departmen	eport Completed at (or other state)	7/31/09 Permit#

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Affiliation Howks Aloff, Inc. Site Name Montano South Lock Did you verify that this site name is consistent with that used in previous years? (S) No (circle one) If site was surveyed hast year, did you survey the same general area this year? (S) No If no, summarize in comments below. Did you survey the same general area during each visit to this site this year? (S) No If no, summarize in comments below. Did you survey the same general area during each visit to this site this year? (S) No If no, summarize in comments below. Management Authority for Survey Area (circle one): Management Authority for Survey Area (circle one): Management Authority for Survey Area (circle one): Management Entity or Owner (e.g., Tonto National Forest) U.S. Army Cerps of Engineers Length of area surveyed: Soo m. (specify units, e.g., miles = mil, kilometers = km, meters = m) Wegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one): Native broadleaf plants (entirely or almost entirely, includes high-elevation willow) Mixed native and exotic plants (mostly native) Memory and the site of the complete of the plants (mostly native) Management and the control plants (mostly native) Mixed native and exotic plants (mostl	Reporting Individ	hual Gail Gan	-ber		Phone # (505) 8	28-9455
Did you verify that this site name is consistent with that used in previous years? No (circle one) If name is different, what name(s) was used in the past?	Affiliation How	oks Aloft I	nc.		E-mail gail@has	uksaloft, org
If name is different, what name(s) was used in the past? Called "Graham Properts 2000 if you survey the same general area this yea?" (3) No If no, summarize in comments below. Did you survey the same general area during each visit to this site this year? (3) No If no, summarize in comments below. Management Authority for Survey Area (circle one): Management Authority for Survey Area (circle one): Management Authority for Survey Area (circle one): Management Entity or Owner (e.g., Tonto National Forest) (1, 5, Arrung Corps of Engineers) Length of area surveyed: Accord (2, 3) Tonto National Forest) (1, 5, Arrung Corps of Engineers) Length of area surveyed: Notice broadleaf plants (entirely or almost entirely, includes high-elevation willow) Mixed native and exotic plants (mostly native) Mixed native and exotic plants (mostly exotic) Exotic/introduced plants (entirely or almost entirely) Identify the 2-3 predominant tree/shrub species: Cotton wood, Russian olive, cagota willow, salt cederates average height of canopy (Do not put a range): Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? Mass surface water or saturated soil present at or adjacent to site? M	Site Name Mo	ntano South	west		Date Report Complete	ed 7/31/09
As surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) Vas surface water or saturated soil present at or adjacent to site? (specify units) (specify units) Vas surface water or saturated soil present at or ad	f name is differe f site was survey	nt, what name(s) was ed last year, did you s	used in the past? co. survey the same gener	lled "Graham al area this year? (Te3/	No If no, summarize	r to 2006 e in comments below.
Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one): Native broadleaf plants (entirely or almost entirely, includes high-elevation willow) Mixed native and exotic plants (mostly native) Mixed native and exotic plants (mostly exotic) Exotic/introduced plants (entirely or almost entirely) Identify the 2-3 predominant tree/shrub species: Cottonwood, Russian olive, cougets willow, salt celeratery average height of canopy (Do not put a range): 5m (specify units) Was surface water or saturated soil present at or adjacent to site? 6/2 / No (circle one) Distance from the site to surface water or saturated soil: 0-100 m (specify units) Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (circle one) Fyes, describe in comments section below. Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey oute in relation to worth, and location of any willow flyeatchers or willow flyeatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall ite and describe any unique habitat features.	Management Aut Name of Manage	hority for Survey Area ment Entity or Owner	a (circle one): (e.g., Tonto National	Forest) U.S. Ar	County State Tri	bal Private
Mixed native and exotic plants (mostly native) Mixed native and exotic plants (mostly exotic) Exotic/introduced plants (entirely or almost entirely) Identify the 2-3 predominant tree/shrub species: Cottonwood, Russian olive, cogota willow, salt cedar Average height of canopy (Do not put a range): 5m (specify units) Was surface water or saturated soil present at or adjacent to site? ⊘/No (circle one) Distance from the site to surface water or saturated soil: ○-100 m (specify units) Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes ⊘ (circle one) If yes, describe in comments section below. Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features. Comments (attach additional sheets if necessary) WIFL Detection Locations: Date Detected NUTM EUTM Date Detected NUTM EUTM 5/22/209 3383208 3246 298	Length of area su	rveyed: 800 m	(specify units, e.g., n	niles = mi, kilometers =	km, meters = m)	
Mixed native and exotic plants (mostly exotic) Mixed native and exotic plants (mostly exotic) Exotic/introduced plants (entirely or almost entirely) Identify the 2-3 predominant tree/shrub species: Cottonwool, Russian olive, cogota willow, salt celor Average height of canopy (Do not put a range): 5m	Vegetation Chara	cteristics: Overall, are	the species in tree/sh	rub layer at this site con	nprised predominantly	of (check one):
Mixed native and exotic plants (mostly exotic) Exotic/introduced plants (entirely or almost entirely) Identify the 2-3 predominant tree/shrub species: Cottonwood, Russian olive, cogota willow, salt cedar Average height of canopy (Do not put a range): 5m (specify units) Was surface water or saturated soil present at or adjacent to site? 6/2/No (circle one) Distance from the site to surface water or saturated soil: 0-100 m (specify units) Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes 6/2/(circle one) If yes, describe in comments section below. Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of MFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to batch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features. Comments (attach additional sheets if necessary) WIFL Detection Locations: Date Detected NUTM EUTM Date Detected NUTM EUTM 5/22/09 3899208 34/6298	Native bro	oadleaf plants (entirely	y or almost entirely, ir	ncludes high-elevation w	rillow)	
Exotic/introduced plants (entirely or almost entirely) Identify the 2-3 predominant tree/shrub species: Cottonwood, Russian olive, cogota willow, salt ceder Average height of canopy (Do not put a range): Was surface water or saturated soil present at or adjacent to site? Mo (circle one) Distance from the site to surface water or saturated soil: O-100 m (specify units) Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (circle one) If yes, describe in comments section below. Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features. Comments (attach additional sheets if necessary) WIFL Detection Locations: Date Detected NUTM EUTM Date Detected NUTM EUTM 5/22/09 3889208 346298	Mixed nat	ive and exotic plants ((mostly native)		1,970	
Average height of canopy (Do not put a range):	Mixed nat	ive and exotic plants	(mostly exotic)		1920	
Was surface water or saturated soil present at or adjacent to site?	Evotic/int	roduced plants (entire	ly or almost entirely)			
Was surface water or saturated soil present at or adjacent to site?	L. AOHO IIII					
Was surface water or saturated soil present at or adjacent to site? (specify units) Distance from the site to surface water or saturated soil: (specify units) Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (so (circle one)) If yes, describe in comments section below. Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features. Comments (attach additional sheets if necessary) WIFL Detection Locations: Date Detected NUTM EUTM Date Detected NUTM EUTM 5/22-109 38892-08 3462-98		redominant tree/shrub	species: Cottonu	sood, Russian	olive, coyote i	illow, salt cedar
Distance from the site to surface water or saturated soil: O-100 m (specify units) Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (No) (circle one) If yes, describe in comments section below. Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to satch, and location of any willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features. Comments (attach additional sheets if necessary) WIFL Detection Locations: Date Detected N UTM E UTM Date Detected N UTM E UTM 5/22-109 3889208 3-46298	Identify the 2-3 pt			sood, Russian		oillow, salt cedar
Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to batch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features. Comments (attach additional sheets if necessary) WIFL Detection Locations: Date Detected N UTM E UTM Date Detected N UTM E UTM 5/22-109 3889208 346298	Identify the 2-3 pt			sood, Russian		sillow, salt cedar
of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features. Comments (attach additional sheets if necessary) WIFL Detection Locations: Date Detected N UTM E UTM Date Detected N UTM E UTM 5/22/09 3889208 346298	Identify the 2-3 p Average height of Was surface water Distance from the	r or saturated soil pres site to surface water of	sent at or adjacent to so or saturated soil:	site? @/No (circle	(specify units)	
Date Detected N UTM E UTM Date Detected N UTM E UTM 5/22/09 3889208 346298	Identify the 2-3 properties of the Average height of Was surface water Distance from the Did hydrological	r or saturated soil pres site to surface water conditions change sign	sent at or adjacent to sor saturated soil: _O.	site? @/No (circle	(specify units)	
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5/22/04 5884208 346248	Identify the 2-3 per Average height of Average height of Was surface water Distance from the Did hydrological of yes, describe in Remember to attact of WIFL detection patch, and location NOT substitute for site and describe a Comments (attach WIFL Detection I	r or saturated soil pres- site to surface water of conditions change sign comments section beloth a copy of a USGS quist. Also include a skett in of any willow flycater in the required USGS quist unique habitat featurated in additional sheets if numbers and includes a sketter of the required the state of the required the state of the required the state of the sketter of the sket	sent at or adjacent to sor saturated soil: Or inificantly among visit low. uad/topographical mach or aerial photographers or willow flycate quad map. Please inchitures. eccessary)	site? No (circle 100 m (specify un s) (did the site flood or d) (specify un s) (did the site flood or d) (specify un s) (did the site flood or d) (specify under the site floo	(specify units) e one) its) lry out)? Yes No urvey area, outlining the location, patch shape, s sketches or photograph r of the patch, exterior of	(circle one) e survey site and location urvey route in relation to as are welcomed, but DO of the patch, and overall
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The state of the s	Identify the 2-3 per Average height of Average height of Was surface water Distance from the Did hydrological of yes, describe in Remember to attact of WIFL detection patch, and location NOT substitute for site and describe a Comments (attach WIFL Detection I	r or saturated soil pressite to surface water of conditions change sign comments section below that of any willow flycater the required USGS quay unique habitat feat additional sheets if no coations: N UTM N UTM N I	sent at or adjacent to sor saturated soil: On initicantly among visit low. uad/topographical match or aerial photographers or willow flycate quad map. Please inchitures. eccessary)	site? No (circle 100 m (specify un s) (did the site flood or d) (specify un s) (did the site flood or d) (specify un s) (did the site flood or d) (specify under the site floo	(specify units) e one) its) iry out)? Yes No urvey area, outlining the location, patch shape, s a sketches or photograph r of the patch, exterior	(circle one) e survey site and location urvey route in relation to as are welcomed, but DO of the patch, and overall
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<u>Hawks Aloft, Inc.</u> P.O. Box 10028 Albuquerque, NM 87184 (505) 828-9455 Page 18 of 20

N_31 N_3: **]	589448 599153 Fill in ad	h survey a		L sightii		ΓM Date	feet / welets (circle one) Yes \(\sum_{No} \) Yes \(\sum_{No} \) Yes \(\sum_{No} \)
N 31 N 35 **]	589448 599153 Fill in ad		E 34646	0	U	ΓM Date	
** j	Fill in ad		E 3464				im NAD27 (NAD27 preferred
**] (m/d/y) ey time	Fill in aa	lditional .	site inforn			LIVI Zon	e 13
(m/d/y) vey time	Number		one myorn	ation o	on back of	this nage **	
ey time			11-1	1			
1 1	of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence pairs or breeding, number of nests, nest contents or number fledges seen; potential threats
5 29 09 0557 0715 hrs 1:18	0	0	0	7	7	7	
0615	0	0	0	7	7	7	
1 10 09 0600 0658	0	0	0	7	4	7	Market Market
)	Adults	Pairs	Territories	Nests			
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Reporting Individ	ual Gail Gar	ber	38	Phone # (505)	828-9455
ffiliation Has	IKS Aloft IN	nc		E-mail gaile	leted 7/31/09
ite Name Rio	Grande Natu	ire Center		Date Report Comp	leted 7/31/09
			ed in previous years?	/ No (circle one)	
f name is differer	nt, what name(s) was	s used in the past?	eral area this year?	No. 16-1	alon la composante tratam
I site was survey Did you survey th	e same general area	during each visit to the	his site this year?	No If no, summa	rize in comments below.
danagement Auti	nority for Survey An	ea (circle one):	(ederal Municipal	County State	Tribal Private
Name of Manager	nent Entity or Owne	er (e.g., Tonto Nationa	al Forest) U.S. A-		
	1172	(manifermite a a	miles - mi kilomaters -	les maters = m)	0
Length of area sur	veyed: 1.2 Nm	(specify units, e.g.,	miles = mi, kilometers =	kin, meters – m)	
Vegetation Charac	eteristics: Overall, ar	re the species in tree/s	shrub layer at this site con	nprised predominar	ntly of (check one):
Native bro	adleaf plants (entire	ly or almost entirely,	includes high-elevation w	villow)	Tun-
Mixed nat	ive and exotic plants	s (mostly native)			TO THE REAL PROPERTY.
Minad	ive and exotic plants	(mostly evotic)			
Niixeu nat	ive and exotic plants	s (mostly exotic)			
Exotic/intr	oduced plants (entir	rely or almost entirely)		
Identify the 2-3 pr	edominant tree/shru	b species: cotto	nwood, Russian c	live, salt o	cedar
Average height of	canony (Do not nut	a range): 13 m	eters	(specify units)	
			site? (2)/No (circle 50 mers(specify un		
Distance from the	site to surface water	r or saturated soil: 1- gnificantly among vis		its)	(circle one)
Distance from the Did hydrological of If yes, describe in	site to surface water conditions change si comments section b	r or saturated soil: 1- gnificantly among vis elow.	SO meters (specify un	its) lry out)? Yes /No	
Distance from the Did hydrological of fyes, describe in Remember to attact of WIFL detection patch, and location NOT substitute for	site to surface water conditions change si comments section b th a copy of a USGS s. Also include a ske to of any willow flycar the required USGS	r or saturated soil: 1- gnificantly among vis elow. quad/topographical m etch or aerial photogra tchers or willow flycat quad map. Please inc	its (did the site flood or d tap (REQUIRED) of the s taph showing details of site teher nests detected. Such	its) Pry out)? Yes / Co urvey area, outlining location, patch shap is ketches or photog	(circle one) g the survey site and location to, survey route in relation to raphs are welcomed, but DO ior of the patch, and overall
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