2004 WILLOW FLYCATCHER SURVEYS IN SOUTHERN COLORADO ANNUAL REPORT

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EXECUTIVE SUMMARY

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is a federally endangered songbird that breeds locally in riparian areas in the southwestern United States, as far north as the San Luis Valley, Colorado. The Colorado Division of Wildlife identified eleven sites in southern Colorado with potential Southwestern Willow Flycatcher habitat. We surveyed some of the sites (i.e., Sego Springs, La Garita Creek, Lil'pop, Alamosa North and Alamosa South) as a continuation of long-term monitoring to document population changes. We surveyed the other sites (i.e., Mill Creek, Cat Creek, Elk Creek, Cow Camp, Spectacle Lake, and Luder's Creek) for the first time in 2004 to document presence or absence of Willow Flycatchers.

We observed Willow Flycatchers at each of the sites monitored in previous years, indicating that these sites continue to provide suitable habitat. Compared to 2003, we observed a similar number of Willow Flycatchers at these sites; however, we observed considerably fewer during the first and third survey periods at the Alamosa National Wildlife Refuge (i.e., Lil'pop, Alamosa North and Alamosa South). The lack of green foliage on willows at the refuge likely affected the number of observations during the first survey. The relative lack of observations during the third survey at the refuge indicates fewer breeding flycatchers in 2004; however, the reason for this apparent decline is unclear. We found Willow Flycatchers at La Garita Creek for the first time in 2004, but only during the first survey period.

We observed no Willow Flycatchers at sites we monitored for the first time in 2004. As required for project-related surveys, we conducted five surveys at Mill Creek, Elk Creek,

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Cow Camp, and Spectacle Lake. Because we observed no Willow Flycatchers, we suggest that projects at these sites probably would have little impact on this species.

We recommend annual surveys at Sego Springs, La Garita Creek, Lil'pop, Alamosa North and Alamosa South to further document population changes and evaluate breeding potential for Willow Flycatchers. Because sites at Alamosa National Wildlife Refuge (i.e., Lil'pop, Alamosa North, and Alamosa South) potentially support a sizeable population of Southwestern Willow Flycatcher, we recommend more intense territory monitoring at these sites to better evaluate breeding numbers and determine reproductive success.

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INTRODUCTION

Riparian areas provide important habitat for breeding birds in 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 (Stauffer and Best 1980, Knopf et al. 1988, Gates and Giffen 1991, Powell and Steidl 2000). Because riparian areas provide breeding habitat for many bird species, it is important to maintain them. It is especially important to identify and maintain those that host rare and endangered species.

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is a federally endangered songbird that breeds locally in riparian areas in the southwestern United States, as far north as the San Luis Valley, Colorado (U.S. Fish and Wildlife Service 1995, 2002). Non-endangered subspecies of Willow Flycatcher breed further north and east, including *E. t. adastus*, *E. t. campestris*, and *E. t. trailii* (Sogge et al. 1997). Prime Southwestern Willow Flycatcher habitat includes areas with dense riparian vegetation greater than 10 m wide, and in close proximity to water or saturated soils (Sogge et al. 1997, Sedgwick 2000, U.S. Fish and Wildlife Service 2002). Breeding habitat varies with four major categories of vegetation: (1) monotypic high-elevation willow (*Salix* spp), (2) monotypic exotic, (3) native broadleaf, and (4) mixed native/exotic (Sogge et al. 1997). Because the Southwestern Willow Flycatcher is a riparian obligate species (Bureau of Land Management 1998), activities that alter habitat along riparian corridors can greatly impact flycatcher populations. Loss and alteration of riparian habitat on the breeding grounds is widely cited as a reason for its endangered status (Sogge et al. 1997, Finch et al. 2000, Marshall and Stoleson 2000).

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The Colorado Division of Wildlife identified eleven sites in southern Colorado with potential Southwestern Willow Flycatcher habitat. These sites are managed by the Colorado Division of Wildlife, the Bureau of Land Management, the USDA Forest Service, and the U.S. Fish and Wildlife Service. Southwestern Willow Flycatcher surveys address a variety of objectives, depending on the site. Some surveys are a continuation of long-term monitoring to document population changes. Others are surveys that document presence or absence of flycatchers at a new site. Because of morphological and vocal similarities, it is difficult to distinguish between Southwestern Willow Flycatchers and other, non-endangered subspecies of Willow Flycatcher. However, information on Willow Flycatcher distribution helps determine the potential for Southwestern Willow Flycatcher at a site, and in some cases, the feasibility of management projects. In 2002 and 2003, Hawks Aloft surveyed a variety of sites in southern Colorado to document presence or absence of Willow Flycatchers. In 2004, Hawks Aloft conducted Willow Flycatcher surveys at the eleven sites identified by Colorado Division of Wildlife, some of which we had not previously surveyed. We present Willow Flycatcher numbers at each site and assess the potential suitability of each site for Southwestern Willow Flycatchers.

STUDY AREA

We conducted Willow Flycatcher surveys at eleven sites in Alamosa, Conejos, and Saguache Counties, Colorado (Fig. 1). The Colorado Division of Wildlife manages the Sego Springs site. The Bureau of Land Management manages the La Garita Creek, Mill Creek and Cat Creek sites. The USDA Forest Service manages the Luder's Creek, Elk Creek, Cow Camp, and Spectacle Lake sites. The U.S. Fish and Wildlife Service manages the Lil'pop, Alamosa North, and Alamosa South sites at the Alamosa National Wildlife Refuge.

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Colorado Division of Wildlife

Sego Spring State Wildlife Area – This survey area included 1.4 km of the Conejos River, east of Manassa, Colorado in Conejos County (Fig. 2). The elevation at Sego Springs was approximately 2300 m, and dominant vegetation included coyote willow (Salix exigua) and narrowleaf cottonwood (Populus angustifolia). Part of the survey area bordered two small ponds surrounded by willow and numerous protruding snags. The survey area included patches of flooded willow between the ponds and the Conejos River. We surveyed Sego Springs in 2003.

Bureau of Land Management

La Garita Creek – This survey area included 2.2 km of La Garita Creek, north of Del Norte, Colorado in Saguache County (Fig. 2). The elevation at La Garita was approximately 2400 m, and dominant vegetation included alder (*Alnus* spp.) and patchy willows up to 5 m tall. Alders leafed out sooner than willows in 2004, and La Garita was one of the few sites in the region with green vegetation early in the season. We surveyed La Garita Creek in 2003, and reported that water was confined to a small beaver pond. In 2004, water was relatively plentiful in the creek throughout the survey area.

Mill Creek – This survey area included approximately 0.6 km of Mill Creek, north of Saguache, Colorado in Saguache County (Fig. 3). Mill Creek was a high elevation site (i.e., 2600 m) with a variety of native vegetation, including cottonwood, aspen (*P. tremuloides*), and willow. The site contained a dense patch of vegetation extending along the creek about 200 m. Outside that patch, willows were sparse and widely spaced.

Cat Creek – This survey area included 1.8 km of Cat Creek, south of Monte Vista, Colorado in Conejos County (Fig. 4). Cat Creek was a high elevation site (i.e., 2500 m), and

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the dominant vegetation included narrow, but dense, willow patches in a steep-walled canyon. We surveyed a portion of the Cat Creek site in 2002 but not in 2003.

USDA Forest Service

Luder's Creek – This survey area included a total of 1.9 km in three sections, each northwest of Saguache, Colorado in Saguache County (Fig. 5). Luder's Creek was a high elevation site (i.e., 2600 m), and the dominant vegetation included willows averaging 2 m tall along a stream. Willows were relatively dense in the first section but narrow and sparse in the second. The third section was a small patch of dense willows in a forested ravine. We did not conduct flycatcher surveys at Luder's Creek before 2004.

Elk Creek – This survey area included 2.0 km along the Conejos River, west of Antonito, Colorado in Conejos County (Fig. 6). The survey area began near the Elk Creek Campground and continued along the river. Elk Creek was a high elevation site (i.e., 2600 m), and the dominant vegetation included willows near the campground, that were sparse and heavily grazed along the river. We did not conduct flycatcher surveys at Elk Creek before 2004.

Cow Camp – This survey area included 2.8 km along the Conejos River, north of the Elk Creek survey area in Conejos County (Fig. 6). Cow Camp was similar in elevation and vegetation as Elk Creek. We did not conduct flycatcher surveys at Cow Camp before 2004.

Spectacle Lake – This survey area included 3.1 km along the Conejos River in Conejos County, and it was a northwest extension of the Cow Camp survey route (Fig. 6). Spectacle Lake was similar in elevation and vegetation as Elk Creek and Cow Camp. We did not conduct flycatcher surveys at Spectacle Lake before 2004.

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U.S. Fish and Wildlife Service

We surveyed approximately 22.8 km of riparian habitat along the Rio Grande in three sections, from just east of Alamosa, Colorado to the eastern border of the Alamosa National Wildlife Refuge (Fig. 7). The elevation along the Rio Grande at the refuge was about 2300 m, and dominant vegetation included patches of willow 4 m tall with scattered cottonwoods.

Lil' Pop – This survey area was recently acquired by the refuge and included the northernmost 6.6 km of the river on the refuge. Lil'pop contained patches of dense willow, as well as several patches of dead willow. We began conducting Willow Flycatcher surveys at Lil'pop in 2003.

Alamosa North – The survey area included approximately 5.4 km of the Rio Grande, connecting the Lil'pop and Alamosa South survey routes. We conducted flycatcher surveys at Alamosa North in 2002, but we extended the route in 2004 to incorporate part of the river that was previously included in Alamosa South. We redefined the survey route boundaries along the Rio Grande to shorten the Alamosa South route, allowing us to survey the entire length of the river on the refuge comfortably in three mornings (i.e., one site per morning).

Alamosa South – The survey route included approximately 10.7 km of the Rio Grande extending from the southern end of Alamosa North to the southeast refuge boundary. This area of the refuge was dominated by isolated patches of coyote willow, narrow-leaf cottonwood, and elm (*Ulmus* spp), with a mean canopy height of about 4 m. Water flowed in the Rio Grande during all three survey periods, but we reported less water at Alamosa South than at Lil'pop and Alamosa North.

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METHODS

Southwestern Willow Flycatcher surveys followed the protocol developed by Sogge et al. (1997), in accordance with the Federal Endangered Species Act. We conducted surveys during three periods: 15-31 May, 1-21 June, and 22 June - 17 July 2004. We surveyed each site once during each period; however, we added two extra surveys in the final period at four of the sites. Surveys at Mill Creek, Elk Creek, Cow Camp, and Spectacle Lake were considered to be project-related; therefore, we surveyed these sites five times as required by Southwestern Willow Flycatcher survey protocol (Sogge et al. 1997). We conducted surveys at a site at least five days apart, beginning each within an hour of sunrise and concluding within four hours. Observers walked slowly through the site either along a riparian corridor or in a zig-zag pattern to cover more extensive habitat patches. Observers stopped every 20 to 30 m and listened for flycatcher vocalizations. If none were heard, we played taped vocalizations of a Southwestern Willow Flycatcher for 15 to 30 seconds, followed by one to two minutes of observation. We recorded Universal Transverse Mercator coordinates (North American Datum 27) for each Willow Flycatcher observed. Because several flycatcher species appear similar to Willow Flycatchers (e.g., Dusky Flycatcher, E. oberholseri), positive identification of a Willow Flycatcher required that the observer hear the distinctive "fitz-bew" song. In addition to recording the presence or absence of Willow Flycatchers, we also recorded other species seen or heard while conducting surveys (Appendix A). We photographed representative habitat at each site and provide images on a CD attached to this report.

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RESULTS

We observed Willow Flycatchers at 5 of 11 sites in southern Colorado in 2004 (Table 1). We recorded 47 Willow Flycatcher locations, representing a minimum of 36 different individuals. Only five individuals were detected during the third survey period. We did not record Willow Flycatchers at any of the sites requiring five surveys. We also did not record Willow Flycatchers at any of the sites at or above 2500 m. Dusky Flycatchers, rather than Willow Flycatchers, were common in riparian habitat at the higher elevation sites.

Colorado Division of Wildlife

We observed two Willow Flycatchers at Sego Springs in 2004. We recorded the first flycatcher during the first survey in the flooded willow patch near the ponds. We added the second flycatcher observation during the third survey, approximately 750 m from where we located the first. It is unknown if these were locations for the same bird. Because we observed one flycatcher in the third survey, we consider that there was a minimum of one flycatcher territory at Sego Springs. We have observed 1-3 flycatchers at Sego Springs each year from 2002-2004.

Bureau of Land Management

We observed six Willow Flycatchers at La Garita Creek in 2004, all during the first survey. We noticed several other flycatchers during this survey, but we were unable to identify them as Willow Flycatchers, because they were silent. Although two Willow Flycatchers engaged in a song duel in the same tree during the first survey, we detected no flycatchers in subsequent surveys. Therefore, it is unlikely there were any breeding Willow Flycatcher territories at La Garita in 2004. We did not observe Willow Flycatchers during any of the surveys in 2003.

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We did not observe Willow Flycatchers in five surveys at Mill Creek or in three surveys at Cat Creek in 2004.

USDA Forest Service

We did not observe Willow Flycatchers in three surveys at Luder's Creek or in five surveys at Elk Creek, Cow Camp, and Spectacle Lake in 2004. During the fifth survey at Cow Camp on 12 July, we located a flycatcher nest with several young nearing fledging age. We were unable to identify the species associated with the nest, but it might have belonged to one of several Dusky Flycatcher pairs present at the site.

U.S. Fish and Wildlife Service

We observed 17 Willow Flycatchers at Lil'pop in 2004, representing a minimum of 13 different individuals. We recorded all observations during the first two surveys; therefore, we can not be certain that any breeding Willow Flycatchers were present at the site. We made an effort to locate flycatchers during the third survey, as well as during a subsequent visit, by prolonging observation time at coordinates where Willow Flycatcher were recorded earlier in the season. Although flycatchers were not observed during the third survey, there were more flycatchers found at the site in 2004 (n=17) than in 2003 (n=1).

We observed 11 Willow Flycatchers at Alamosa North in 2004, representing a minimum of 6 different individuals. We recorded three flycatchers during the third survey; therefore, we consider there was a minimum of three territories at the site.

We observed 11 Willow Flycatchers at Alamosa South in 2004, representing a minimum of 10 different individuals. We recorded only one flycatcher during the third survey; therefore, we can not be certain that there was more than one territory at the site.

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Although the route was slightly shorter in 2004, we estimated considerably fewer territories at Alamosa South in 2004 (n=1) than in 2003 (n=24).

Surveying the entire stretch of the Rio Grande at Alamosa National Wildlife Refuge for the first time in 2004 (22.2 km), we observed 39 Willow Flycatchers, representing a minimum of 29 different individuals and 4 territories. Surveying less distance in 2003 (about 20 km), we observed 50 Willow Flycatchers, representing a minimum of 25 different individuals and 24 territories. In 2004, 74% (29 of 39) of the observations at the refuge occurred during the second survey, whereas only 10% (4 of 39) occurred during the third survey. In 2003, 48% (24 of 50) of the observations at the refuge occurred during the third survey.

DISCUSSION AND RECOMMENDATIONS

We observed Willow Flycatchers at 5 of 11 sites in southern Colorado in 2004, indicating that some sites provide habitat conditions suitable for this species. It is unclear, however, if the birds observed were migrant or breeding Willow Flycatchers. It is also unclear if the birds observed were Southwestern Willow Flycatchers or another subspecies. Our lack of observations during the third survey is an indication that perhaps most of the birds were migrants. However, we found many flycatchers during the third survey in 2003, indicating that some sites host a considerable breeding population, at least when conditions (e.g., water availability) allow. We recommend increased territory and nest monitoring at sites where we assumed Willow Flycatcher breeding status in 2003 or 2004. Further study will better quantify the breeding population and provide information on reproductive success.

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We observed no Willow Flycatchers during project-related surveys requiring five visits. Habitat patches were small or linear, rendering these sites relatively unsuitable for Willow Flycatchers (Sogge and Marshall 2000). All of these sites were higher in elevation (i.e., about 2600 m) than sites where we observed Willow Flycatchers. Willow Flycatchers are known to breed at this elevation (Sogge and Marshall 2000); however, they may prefer lower elevation sites in southern Colorado. We observed numerous Dusky Flycatchers at the project-related sites (i.e., Mill Creek, Elk Creek, Cow Camp, and Spectacle Lake), as well as at another high elevation site, Luder's Creek. Dusky Flycatchers appeared to fill the niche vacated by Willow Flycatchers at the high elevation sites.

Colorado Division of Wildlife

We observed Willow Flycatchers, including potential breeders, at Sego Springs during the last three years, indicating that this site has habitat conditions worth maintaining. Sego Springs has several dense willow patches that should improve for flycatchers as they mature. In 2004, ample water was present in the Conejos River and the springs, with some runoff in the willows. Maintaining water at Sego Springs should ensure continued use of that site by Willow Flycatchers in the future. We recommend annual surveys at Sego Springs to document future use.

Bureau of Land Management

Conditions at La Garita Creek improved for Willow Flycatchers in 2004, resulting in six observations during the first survey. In 2003, we described habitat at La Garita Creek as marginal, with few willows and limited water availability. In 2004, water was more plentiful in the creek, and many of the willow patches appeared suitable for flycatchers. Our results in 2004 demonstrate the advantage of multi-year surveys at a site to more informatively

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evaluate the potential for Willow Flycatchers. Willows throughout our survey area in southern Colorado did not leaf out until the second flycatcher surveys. Unlike many of our sites, La Garita Creek contained a considerable number of alders that had leafed out by the first survey. The presence of dense, green vegetation early in the season at La Garita Creek might have attracted Willow Flycatchers, resulting in more observations during the first survey than at any other site. The flycatchers we observed might have been migrants passing through the region, or they might have been breeders that moved to other sites in the San Luis Valley once the willows at those sites leafed out. Although apparently not a current breeding site, this portion of La Garita Creek might be valuable as a migration stopover site, prompting a need for protection (Finch et al. 2000). We recommend annual surveys at La Garita Creek.

We observed no Willow Flycatchers in five surveys at Mill Creek and three surveys at Creek Creek, indicating these sites were relatively unsuitable. Vegetation might have been too sparse at Mill Creek and too narrow at Cat Creek.

USDA Forest Service

We observed no Willow Flycatchers at USDA Forest Service sites. We surveyed the Conejos River sites five times without observations, indicating that future projects at these sites probably would have little impact on Willow Flycatchers.

U.S. Fish and Wildlife Service

We found a different temporal and spatial distribution of Willow Flycatchers along the Rio Grande in 2004, relative to 2003. Although we found four flycatchers along the river during the third survey, indicating probable breeding, our total was substantially less than the 24 and 19 recorded during the third surveys in 2003 and 2002, respectively. Willow

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Flycatchers might become less vocal and less responsive to tape playback as the season progresses, thereby complicating detection in the third survey; however, we surveyed Lil'pop and Alamosa North in the first half of the third survey period in 2004, and detection probability should not have been considerably different from 2003. The flycatcher population along the Rio Grande might reflect the level of habitat saturation elsewhere. For example, if suitable habitat patches are plentiful in southern Colorado, Willow Flycatchers might be less inclined to remain at the Alamosa sites in high density.

In 2004, we observed that Willow Flycatcher locations appeared to shift to Lil'pop and away from the other sections of the river. We considered that Lil'pop contained the most suitable habitat patches at the refuge, whereas observers in 2003 described Lil'pop as poor habitat. Because of this apparent shift, we suggest that Willow Flycatchers might readily abandon sites from previous years and move to sites with better conditions. The relative lack of observations during the first survey at the refuge, where willows had not leafed out, along with the relative abundance at La Garita Creek, where vegetation had leafed out, support the adaptability of Willow Flycatchers. We recommend long-term monitoring along the entire stretch of the river on the refuge, especially during the third survey period, to better assess potential breeding numbers. Because Southwestern Willow Flycatchers have been confirmed at Alamosa National Wildlife Refuge (Owen and Sogge 1997), and the refuge potentially supports a sizable breeding population, we recommend more intense territory monitoring to accurately determine breeding numbers and reproductive success.

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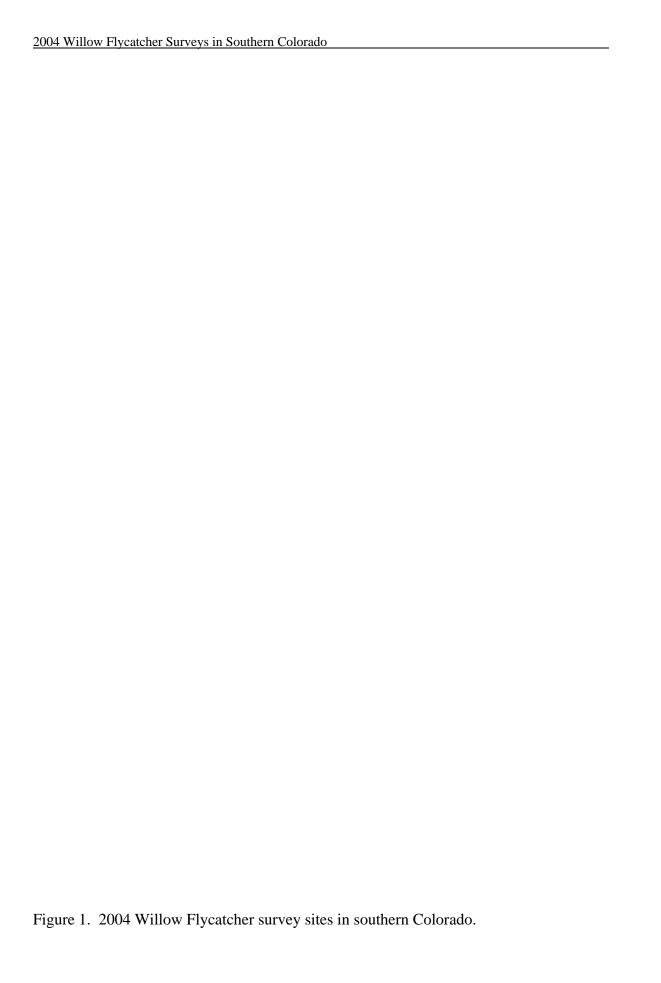
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Table 1. Number of adult Willow Flycatchers detected in southern Colorado during 2004 surveys at sites managed by the Colorado Division of Wildlife (CDOW), the Bureau of Land Management (BLM), the USDA Forest Service (USFS), and the U.S. Fish and Wildlife Service (USFWS). We conducted more than one survey during period 3 at the sites indicated by an asterisk*.

	Management	Survey	Survey period			
Survey area	agency	length (km)	1	2	3	
Sego Springs State Wildlife Area	CDOW	1.4	1	0	1	
La Garita Creek	BLM	2.2	6	0	0	
Mill Creek*	BLM	0.6	0	0	0	
Cat Creek	BLM	1.8	0	0	0	
Luder's Creek	USFS	1.9	0	0	0	
Elk Creek*	USFS	2.0	0	0	0	
Cow Camp*	USFS	2.8	0	0	0	
Spectacle Lake*	USFS	3.1	0	0	0	
Lil'pop	USFWS	6.6	4	13	0	
Alamosa North	USFWS	5.4	2	6	3	
Alamosa South	USFWS	10.7	0	10	1	

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Figure 8. Willow Flycatcher survey routes and locations at Lil'pop, Alamosa North, and Alamosa South sections of the Rio Grande on the Alamosa National Wildlife Refuge, Colorado. Survey routes shown are an enlarged section of the Alamosa East, Colorado USGS Quad Map.

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Appendix A. Universal Transverse Mercator coordinates for Willow Flycatcher Survey routes in southern Colorado in 2004.

Site	Boundary	Easting	Northing
Alamosa North	Start	430996	4141342
Alamosa North	End	427415	4143884
Alamosa South	Start	433789	4133792
Alamosa South	End	431000	4141226
Cat Creek	Start	389384	4138778
Cat Creek	End	387673	4139105
Cow Camp	Start	375229	4111075
Cow Camp	End	373356	4112978
Elk Creek	Start	378659	4109563
Elk Creek	End	377022	4108812
La Garita	Start	387326	4185924
La Garita	End	385211	4185849
Lil'pop	Start	424736	4146714
Lil'pop	End	427415	4143884
Luder's Creek Reach 1	Start	361977	4226442
Luder's Creek Reach 1	End	362309	4225599
Luder's Creek Reach 2	Start	363523	4222007
Luder's Creek Reach 2	End	364033	4221552
Luder's Creek Reach 3	Start	364469	4220829
Luder's Creek Reach 3	End	364317	4220797
Mill Creek	Start	383171	4218293
Mill Creek	End	382690	4217929
Sego Springs	Start	421309	4116226
Sego Springs	End	422000	4117221
Spectacle Lake	Start	373301	4112999
Spectacle Lake	End	371898	4115415

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Appendix B. Bird species observed during 2004 surveys for Willow Flycatcher in southern Colorado. Sites include Lil'pop (LP), Alamosa North (AN), Alamosa South (AS), Cat Creek (CT), La Garita (LG), Sego Springs (SS), Elk Creek (EC), Cow Camp (CW), Spectacle Lake (SL), Luder's Creek (LU), and Mill Creek (MC).

Species	LP	ΛNI	ΛC	СТ	LG	SS	EC	CW	SL	LU	MC
Pied-billed Grebe	X	AIN	Ab	CI	LU	טט	LC	CW	ВL	LU	IVIC
American Bittern	X	X	X			X					
	X	X	Λ		X	X					
Black-crowned Night Heron	X	X	X		Λ	Λ					
Snowy Egret Great Blue Heron	X	Λ	Λ								
		v	v			v					
White-faced Ibis	X	X	X			X					
Sandhill Crane	X	37				37	37	37	37		
Canada Goose	X	X	37	37	37	X	X	X	X		
Mallard	X	X	X	X	X	X	X	X	X		
Gadwall	X	X	X			X			X		
Green-winged Teal							X				
Northern Pintail	X	X									
Nothern Shoveler		X									
Cinnamon Teal		X	X			X					
Ruddy Duck			X								
Redhead		X	X		X	X					
Common Merganser		X	X			X	X	X	X		
Sora			X								
American Coot		X	X			X					
Killdeer	X	X	X			X			X		
American Avocet		X									
Spotted Sandpiper	X	X			X	X	X	X	X		
Wilson's Phalarope			X								
Common Snipe	X	X	X			X	X				
Black Tern		X									
American Kestrel			X	X	X	X					
Prairie Falcon											X
Northern Harrier			X								
Red-tailed Hawk	X		X		X	X					
Swainson's Hawk		X									
Mourning Dove	X	X	X		X	X				X	X
Rock Pigeon					X						11
Great Horned Owl	X	X	X		71						
White-throated Swift	71	71	7.1		X						
Broad-tailed Hummingbird				X	71		X	X	X	X	X
Belted Kingfisher	X			Λ	X	X	1	11	X	11	11
Northern Flicker	X	X	X	X	Λ	X	X	X	X	X	X
	Λ	Λ	Λ	Λ		Λ	Λ	Λ	Λ	Λ	X
Hairy Woodpecker						\mathbf{v}				v	Λ
Downy Woodpecker						X	v	v	v	X	v
Red-naped Sapsucker							X	X	X	X	X

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Appendix B Continued

Appendix B Continued	I D	4 N.T	A C	OT.	1.0	00	ГС	CIII	O.T.	T T T	MO
Species	LP	AN	AS	CT	LG	SS	EC	CW	SL	LU	MC
Say's Phoebe	3.7	X	T 7			T 7					
Western Kingbird	X		X			X					
Eastern Kingbird	3 7	T 7	T 7	T 7	T 7	X	7.7	T 7	7.7		3 7
Western Wood-Pewee	X	X	X	X	X	X	X	X	X	**	X
Olive-sided Flycatcher										X	
Dusky Flycatcher				X	X		X	X	X	X	X
Hammond's Flycatcher	***	•	•		**	•		X			
Willow Flycatcher	X	X	X		X	X	• •		•	**	
Cordilleran Flycatcher					X		X		X	X	
Gray Flycatcher								X			X
Horned Lark	X				X						
Tree Swallow	X	X	X			X	X	X	X		
Violet-green Swallow		X			X	X	X	X	X	X	X
Northern Rough-winged	X	X	X		X	X					
Swallow											
Cliff Swallow	X	X		X	X						
Bank Swallow						X					
Barn Swallow	X	X	X		X	X					
Black-billed Magpie	X	X		X	X	X	X	X	X		
Steller's Jay									X	X	
Clark's Nutcracker										X	
Common Raven					X		X	X	X	X	
American Crow	X		X		X		X		X		
Black-capped Chickadee	X	X	X				X		X		X
Mountain Chickadee							X		X	X	X
Bushtit				X							
Red-breasted Nuthatch									X	X	
Pygmy Nuthatch										X	
House Wren	X	X	X	X	X	X	X	X	X	X	X
Rock Wren				X	X	X					X
Ruby-crowned Kinglet							X	X	X	X	X
Blue-gray Gnatcatcher											
Western Bluebird									X		X
Mountain Bluebird							X	X		X	X
Townsend's Solitaire									X	X	
Veery							X				
Hermit Thrush								X	X	X	X
American Robin	X	X	X	X	X	X	X	X	X	X	X
Gray Catbird				X	X	X					
Northern Mockingbird											
Cedar Waxwing											
European Starling		X			X	X	X				
Warbling Vireo				X	X		X	X	X	X	X
Orange-crowned Warbler								X	X	X	

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Appendix B Continued

Species Scottinued	I D	A NT	4 C	СТ	1.0	CC	EC	CW	CT	T T T	MC
Species Windowski Law	LP	AN	AS		LG	SS	EC	CW	SL	LU	MC
Virginia's Warbler		3 7		X			v	X	37	3 7	v
Yellow-rumped Warbler	v	X	v	v	v	v	X	X	X	X	X
Yellow Warbler	X	X	X	X	X	X	X	X	X	3 7	X
MacGillivray's Warbler	37		37	37	X	37		X	X	X	
Wilson's Warbler	X	37	X	X	X	X			X		
Common Yellowthroat		X	X		X	X					
Yellow-breasted Chat	37			37		X					
Rose-breasted Grosbeak	X	3.7		X	3.7	3 7	T 7				
Black-headed Grosbeak	X	X	•		X	X	X				
Blue Grosbeak	X	X	X			X					
Spotted Towhee				**		X	**	• •	•	**	•
Green-tailed Towhee				X		X	X	X	X	X	X
Vesper Sparrow	X		X		X						
Savannah Sparrow	X	X	X								
Song Sparrow	X	X	X	X	X	X	X	X	X	X	
Sage Sparrow	X		X								
Cassin's Sparrow	X		X								
Chipping Sparrow							X	X	X		
Brewer's Sparrow	X										
Dark-eyed Junco							X	X	X	X	X
White-crowned Sparrow					X	X	X	X	X		
Lincoln's Sparrow				X	X	X	X	X	X	X	
Western Meadowlark	X	X	X		X	X					X
Yellow-headed Blackbird	X	X	X			X					
Red-winged Blackbird	X	X	X		X	X	X	X	X		
Brewer's Blackbird	X	X	X		X		X	X	X		X
Brown-headed Cowbird	X	X	X	X	X	X	X	X	X	X	
Common Grackle		X			X				X		
Great-tailed Grackle	X					X					
Western Tanager				X			X		X		
House Sparrow	X	X									
Bullock's Oriole					X						
American Goldfinch	X	X	X	X	X	X					
Lesser Goldfinch						X					
Pine Siskin							X	X	X	X	X
House Finch	X	X	X							X	
Evening Grosbeak					X						

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Appendix C. Universal Transverse Mercator coordinates and numbers of Willow Flycatchers detected during survey 1 (15-31 May), 2 (1-21 June), and 3 (22 June – 17 July) at 11 sites in southern Colorado in 2004. All UTM coordinates (easting, northing) are in zone 13S North American Datum 27.

Site	Survey	Date	Easting	Northing
Alamosa North	1	25 May 04	430482	4142326
Alamosa North	1	25 May 04	430220	4142658
Alamosa North	2	2 June 04	429625	4142921
Alamosa North	2	2 June 04	429819	4142796
Alamosa North	2	2 June 04	430215	4142694
Alamosa North	2	2 June 04	430302	4142679
Alamosa North	2	2 June 04	430872	4142091
Alamosa North	2	2 June 04	430872	4142091
Alamosa North	3	28 June 04	428421	4143273
Alamosa North	3	28 June 04	430234	4142642
Alamosa North	3	28 June 04	430234	4142642
Alamosa South	2	4 June 04	431057	4139716
Alamosa South	2	4 June 04	431153	4137539
Alamosa South	2	4 June 04	431153	4137539
Alamosa South	2	4 June 04	431153	4137539
Alamosa South	2	4 June 04	431469	4137453
Alamosa South	2	4 June 04	431469	4137453
Alamosa South	2	4 June 04	431469	4137191
Alamosa South	2	4 June 04	431760	4136730
Alamosa South	2	4 June 04	431939	4136837
Alamosa South	2	4 June 04	432451	4135092
Alamosa South	3	16 July 04	431811	4136745
La Garita Creek	1	27 May 04	387293	4185928
La Garita Creek	1	27 May 04	386955	4185926
La Garita Creek	1	27 May 04	386532	4185776
La Garita Creek	1	27 May 04	386307	4185849
La Garita Creek	1	27 May 04	386291	4185851
La Garita Creek	1	27 May 04	385724	4185838
Lil'pop	1	24 May 04	425404	4146098
Lil'pop	1	24 May 04	425867	4145147
Lil'pop	1	24 May 04	425867	4145147
Lil'pop	1	24 May 04	426064	4144681
Lil'pop	2	1 June 04	425261	4146656
Lil'pop	2	1 June 04	425205	4146173
Lil'pop	2	1 June 04	425343	4146122
Lil'pop	2	1 June 04	425723	4146171
Lil'pop	2	1 June 04	425410	4145646
Lil'pop	2	1 June 04	425190	4145485
Lil'pop	2	1 June 04	425901	4145153
Lil'pop	2	1 June 04	426047	4144978

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Appendix C Continued

Site	Survey	Date	Easting	Northing
Lil'pop	2	1 June 04	426047	4144978
Lil'pop	2	1 June 04	426067	4144569
Lil'pop	2	1 June 04	427123	4144334
Lil'pop	2	1 June 04	427156	4144205
Lil'pop	2	1 June 04	427314	4143760
Sego Springs	1	24 May 04	421127	4116221
Sego Springs	3	29 June 04	421692	4116730

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Appendix D. Data forms for 2004 Willow Flycatcher surveys in areas managed by the Colorado Division of Wildlife, USDA Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife Service

Site Name S USGS Quad Na	me Mana	ssa, Co	0		Elevation	n 2344	County Co	feet /meters (circle one)
	s: Start: N_L		6	E 0421	309	u	TM Dat	No Yes No No NAD 27 (NAD 27 preferred) ne 13 S
	**	Fill in ac	ditional	site infor	mation	on back o	f this page **	
Survey# Observer(s) (Full Name)	Date (m/d/y) Suryey 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 Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Mike Stake	Date 5/24/04 Start .05:50 Stop 09:32 Total hrs 3:40	1	0	0	2	Y	¥	Strong willow potential as willows grow up Burn area? Many snags and cowbirds.
2 Aaron Gallagher	Date 6/3/04 Start 06:15 Stop 09:20 Total hrs 3	0	0	0	7	. Y.	Y	Lots of green willow > 12 feet to Understory in west open. Boggy in east with standing pools of water
3 Aaron Gallagher	Date 6/29/04 Start 06:00 Stop 09:00 Total hrs 3	1	1		2	7	Y	WIFL song detected before tape playback.
4	Date Start - Stop Total hrs							
5	Date Start Stop Total hrs							5
verall Site Sum	imary	Adults	Pairs	Territories	Nests	Were any WIF	Ls color-banded?	Yes No
Total resident WIFI		1,	1	1	0	If yes, report of form	olor combination(s)	in the comments section on back

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Submit original form by August Ist. Retain a copy for your records.

Reporting Individ	dual Mike Sta	ke				328-9455
Affiliation Ha	WKS Aloft, 3	nc.				hawksaloft.org
Site Name See	go Springs			_Date Rep	ort Complet	ed 7/26/04
If name is differe If site was survey	nt, what name(s) was ed last year, did you	used in the past?survey the same gener	d in previous years? Yes ral area this year? Yes is site this year? Yes	DNo Ifn	o, summariz	e in comments below.
		a (circle one): (e.g., Tonto National	Federal Municipal Forest) Colorado			
Length of area sur	rveyed: 2 miles	(specify units, e.g., r	miles = mi, kilometers =	km, meter	rs = m)	
Vegetation Chara	cteristics: Overall, are	the species in tree/sh	rub layer at this site con	mprised pr	edominantly	of (check one):
Native bro	adleaf plants (entirely	or almost entirely, in	ncludes high-elevation v	villow)		
Mixed nat	ive and exotic plants	(mostly native)				
Mixed nati	ive and exotic plants	(mostly exotic)				
Exotic/intr	oduced plants (entire	ly or almost entirely)				
Identify the 2-3 pr	edominant tree/shrub	species: Willow	v, Cottonwo	od	4	
Average height of	canopy (Do not put a	range): 4 met	rers	(specify	y units)	
			ite? (Yes) No (circle) meters (specify un			
Did hydrological c If yes, describe in c	onditions change sign comments section bel	ificantly among visits	(did the site flood or d	ry out)?	Yes No	(circle one)
of WIFL detections patch, and location NOT substitute for	. Also include a sketc of any willow flycatch	h or aerial photograph ners or willow flycatch nad map. Please inclu	o (REQUIRED) of the su a showing details of site her nests detected. Such de photos of the interior	location, pa sketches or	atch shape, su r photograph	rvey route in relation to s are welcomed, but DO
Comments (attach a	additional sheets if ne	cessary)				A
	·					
						120200-01-0
VIFL Detection Lo	cations:		1			
Date Detected	N UTM	EUTM	Date Detected	NUTM	1 -	EUTM
24 May 04	4116221	0421127	Date Detected	I TO TH	1	1 D O I IVI
29 June 04	4116730	0421692		1		
				5		
	7 2					

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	V	Villow Fly	catcher Su	rvey and De	etection .	Form (revis	ed April, 2004)	
Site Name L	a Garita	Creek .				State_CO	County Sa	guache .
USGS Quad N	Name Twin	Moun	tains S	E, CO	Elevatio	n 2382		feet / meters (circle one)
	es: Start: N		24.	E 0385	326		JTM Da	TYES No NAD 27 (NAD 27 preferred) ne 13S
				site infori	nation	on back o	f this page **	
Survey # Observer(s) (Full Name)	Date (m/d/y) Suryey 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 Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Mike Stake	Date 5/27/04 Start .05:45 Stop 08:45 Total hrs 3	6	0	0	2	Y	4	Alders leafed out but willows not yet. Many suitable clumps of vegetation. Fair water flow.
2 Aaron Gallagher	Date 6/11/04 Start 06:10 Stop 08:20 Total hrs 2:10	0	0	0	2	7.	Y	Willows leafed
3 Aaron Gallagher	Date 7/6/04 Start 06:00 Stop 08:30 Total hrs 2:30	0	0	0	. N	Y	Υ	
4	Date Start Stop Total hrs							
5	Date Start Stop Total hrs					2		
Overall Site Sur	mmary	Adults	Pairs	Territories	Nests	Were any WIF	FLs color-banded?	Yes No
(Total resident WII	FLs only)	0	0	0	0	If yes, report of form	color combination(s)	in the comments section on back

Reporting Individual Mike Stake Date Report Completed 7/26/04

US Fish and Wildlife Service Permit #_TE835139-2 AZ Game and Fish Department (or other state) Permit #_____

Submit original form by August Ist. Retain a copy for your records.

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Reporting Individ	ual Mike Sta	ke		Phone # (505) 8:	28 - 9455
Affiliation Hau	uks Aloft, Inc	V.			hawksaloft.org
Site Name La	Garita Creek			Date Report Complete	d 7/26/04
If name is different If site was surveye	t this site name is cons t, what name(s) was us id last year, did you su e same general area du	sed in the past? rvey the same genera!	area this year? Yes/	No If no, summarize	in comments below.
	ority for Survey Area nent Entity or Owner (County State Tri of Land Mar	
Length of area sur	veyed: 2.8 miles (specify units, e.g., mi	les = mi, kilometers =	km, meters = m)	
Vegetation Charac	teristics: Overall, are t	he species in tree/shru	b layer at this site con	nprised predominantly	of (check one):
Native broa	adleaf plants (entirely o	or almost entirely, inc	ludes high-elevation w	rillow)	
Mixed nativ	ve and exotic plants (m	ostly native)	100 110	E	
Mixed nativ	ve and exotic plants (m	ostly exotic)			
Exotic/intro	duced plants (entirely	or almost entirely)			34.
Identify the 2-3 pre	dominant tree/shrub sp	pecies: Alder,	Willow	· ·	
Average height of c	anopy (Do not put a ra	ange): 5 mete	rs	_ (specify units)	
Distance from the signal point in the signal p	a copy of a USGS quade Also include a sketch of any willow flycatche he required USGS quade quantum habitat feature dditional sheets if necessary with the first section of the sketch o	icantly among visits (v. d/topographical map (or aerial photograph s rs or willow flycatcher d map. Please include es. essary) + Survey See	did the site flood or draw REQUIRED) of the such the wing details of site lands are the photos of the interior	ry out)? Yes No (out)? Yes No	survey site and location rvey route in relation to are welcomed, but DO f the patch, and overall
Recouse of	alder comor	nent this s	ite had leafe	ed out before	most others
in the San	wis Valley. F	irst survey so	ong disputes a	bserved.	011103
11.7			,		
VIFL Detection Loc	cations:				
Date Detected	NUTM	EUTM	Date Detected	NUTM	EUTM
27 May 04	4185928	0387293	27 May 04	4185851	0386291
27 May 04	4185926	0386955	27 May 04	4185838	0385724
7 May 04	4185776	0386532			
7 May 04	4185849	0386307		1	
		The second			

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Site Name Mill Co	reek	· · · Sta	ate CO_County	Saguache .
USGS Quad Name La	ughlin Gulch, C	O Elevation	2620	feet / meters (circle one)
Is copy of USGS	S map marked with surv	ey area and WIFL sighting	gs attached (as requ	uired)? 🗵 Yes 🗌 No
Site Coordinates: Start:	N 4218293	E 0383171	UTM	Datum_NAD27(NAD27 preferred
Stop:	N 4217929	E 0382690	UTM	Zone 135

** Fill in additional site information on back of this page **

	33							
Survey# Observer(s) (Full Name)	Date (m/d/y) Suryey 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 Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
I Aaron Gallagher	Date 5/28/04 Start 06:00 Stop 07:50 Total hrs 2	0	0	0	7	2	7	
2 Aaron Gallagher	Date 6/17/04 Start 06:00 Stop 07:30 Total hrs 1:30	0	0	0	2	, N	N	A lot of open space; willow mixed with cottonwood, Not a lot of willow. Willow not dense
3 Aaron Gallagher	Date 6/24/04 Start 06:10 Stop 07:10 Total hrs 1	0	0		. 7	2	N	
·	Date 7/5/04 Start 06:00 Stop 07:30 Total hrs 1:30	0	0	0	2	2	N	
Gallagher	Date 7/11/04 Start 06:00 Stop 07:30 Total hrs 1:30	0	0	0	2	2	Ν	Willows condensed in about 200 meter length mixed with cottonwood. Willows 10-20% of vegetation
verall Site Sum	imary	Adults	Pairs	Territories	Nests	Were any WIF	Ls color-banded?	Yes No
Total resident WIFI otal survey hrs_	1	0,	0	0	0	If yes, report of form	olor combination(s)	in the comments section on back

Reporting Individual Mike Stake Date Report Completed 7/26/04

US Fish and Wildlife Service Permit #TE835 139 - 2 AZ Game and Fish Department (or other state) Permit #

Submit original form by August 1st. Retain a copy for your records.

<u>Hawks Aloft, Inc.</u> P.O. Box 10028 Albuquerque, NM 87184 (505) 828-9455 Page 37 of 54

Reporting Indi	vidual Mike S	itake		Phone # (505)	828-9455
	awks Aloft,	Inc.		E-mail mstake@	hawksaloft.ord
Site Name_M	ill Creek			Date Report Complet	ed //26/09
If name is diffe	rent, what name(s) w	as used in the past?	sed in previous years?		
			neral area this year? Ye		
Did you survey	the same general are	a during each visit to	this site this year? Yes	/ No If no, summariz	e in comments below.
	uthority for Survey A gement Entity or Own		(Federal) Municip nal Forest) Burea		ibal Private
Length of area s	surveyed: 0.25 n	(specify units, e.g	., miles = mi, kilometers	= km, meters = m)	
Vegetation Char	racteristics: Overall,	are the species in tree	shrub layer at this site c	omprised predominantly	of (check one):
Native b	roadleaf plants (entir	ely or almost entirely	, includes high-elevation	willow)	
Mixed n	ative and exotic plant	s (mostly native)			
Mixed n	ative and exotic plant	s (mostly exotic)			
Exotic/in	troduced plants (enti	rely or almost entirel	y)		
Identify the 2-3 p	predominant tree/shru	ib species: Asper	n, Alder, Will	ow /	
Average height o	of canopy (Do not pu	a range):40	feet	(specify units)	
12					
			o site? (Yes)/ No (circ I meter (specify u		
	conditions change si		sits (did the site flood or	dry out)? Yes / No	(circle one)
	-1	16 1. 1	(DECLIDED) CI		
of WIFL detection patch, and location	ns. Also include a ske n of any willow flyca	etch or aerial photogra tchers or willow flyca	nap (REQUIRED) of the aph showing details of sit tcher nests detected. Suc	e location, patch shape, so h sketches or photograph	urvey route in relation to s are welcomed, but DO
	or the required USGS any unique habitat fe		clude photos of the interior	or of the patch, exterior of	of the patch, and overall
site and describe	any unique natitat le	atures.			
	additional sheets if		(3) C		
			*		
	-				
WIFL Detection I	o actional .				
Date Detected	NUTM	E UTM	Date Detected	NUTM	EUTM
	-				-
	-				1
				1.	
					-

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	N	illow Fly	catcher Su	rvey and De	etection l	Form (revis	ed April, 2004)	
Site Name	Cat Creek					State CO	County Co	nejos
USGS Quad N	lame Greeni	e Mour	ntain, (20	Elevatio	1 2540		feet /meters (circle one)
Is cop	y of USGS map	marked w	ith survey o					Yes 🗌 No
Site Coordinat		41391		E 0389				tum NAD 27 (NAD27 preferred
	**	Fill in a	dditional	site inform	mation	on back o	f this page **	
Survey# Observer(s) (Full Name)	Date (m/d/y) Suryey 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 Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number fledges seen; potential threats)
1_Aaron Gallagher	Date 5/27/04 Start 06:00 Stop 08:30 Total hrs 2:30	0	0	0	Z	2	N	Willows dense in patches, Potential habita Possible WIFL but no song,
2 Aaron Gallagher	Date 6/10/04 Start 06:30 Stop 09:30 Total hrs 3	0	0.2	0	7	,Y.	N	
3 Aaron Gallagher	Date 6/30/04 Start 06:00 Stop 07:30 Total hrs 1:30	0	0	. 0	2	2	Υ	
4	Date Start - Stop Total hrs							
5	Date Start Stop Total hrs			,	-			
Overall Site Sur	nmary	Adults	Pairs	Territories	Nests	Were any WII	FLs color-banded?	Yes No
Total resident WII	FLs only)	0		0		If yes, report of	color combination(s)	in the comments section on back

Reporting Individual Mike Stake Date Report Completed 7/26/04
US Fish and Wildlife Service Permit # TE835139-2 AZ Game and Fish Department (or other state) Permit #

Submit original form by August Ist. Retain a copy for your records.

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Reporting Indiv	ridual Mike S	itake		Phone # (505)	828-9455
Affiliation H	awks Aloft,	Inc.			@hawksaloft.org
Site Name_ C	at Creek		*	Date Report Comp	eted 7/26/04
If name is differ If site was surve	ent, what name(s) was	as used in the past? a survey the same ger	sed in previous years? (Y See Comment neral area this year? Yes this site this year? (Yes)	s/No If no, summar	ize in comments below. Notice in comments below.
	uthority for Survey A ement Entity or Own		Federal Municip		Tribal Private anagement
Length of area s	urveyed: 1.1 Km	1 (specify units, e.g.	, miles = mi, kilometers	= km, meters = m)	
Vegetation Char	acteristics: Overall, a	re the species in tree	shrub layer at this site co	omprised predominant	ly of (check one):
Native b	roadleaf plants (entire	ely or almost entirely	, includes high-elevation	willow)	
Mixed na	ative and exotic plant	s (mostly native)			
Mixed na	ative and exotic plant	s (mostly exotic)			
Exotic/in	troduced plants (entir	ely or almost entirely	y)		49
Identify the 2-3 p	oredominant tree/shru	b species: Salix	exigua, Eric	ameria sp., P	inus ponderosa
Average height o	f canopy (Do not put	a range): 2.5 n	neters	(specify units)	
			o site? Yes/No (circ Ometers (specify u		
	conditions change si		sits (did the site flood or	dry out)? Yes (No	(circle one)
of WIFL detection patch, and location NOT substitute fo	ns. Also include a ske n of any willow flycat	tch or aerial photogra chers or willow flyca quad map. Please inc	aph showing details of sit tcher nests detected. Suc	e location, patch shape, h sketches or photograp	the survey site and location survey route in relation to ohs are welcomed, but DO of the patch, and overall
	additional sheets if i this area so		2002		1
		1			
				et -	
WIFL Detection L	ocations:	,			-
Date Detected	NUTM	E UTM	Date Detected	NUTM	E UTM
	+		*		
	,				

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Site Name Luder	's Creek	· · · Sta	te CO County_	Saguache
USGS Quad Name No		Elevation	2590	feet (meters)(circle one)
Is copy of USG	S map marked with surv	vey area and WIFL sighting	s attached (as requ	uired)? 🗵 Yes 🗌 No
Site Coordinates: Start:	N 4226442	E 0361977	UTM*	Datum NAD 27 (NAD27 preferred)
Stop:	N 4225599	E 0362309	UTM*	Zone 13 S
10	** Fill in addition	nal site information on	back of this pa	ge **

Survey# Observer(s) (Full Name)	Date (m/d/y) Suryey 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 Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
I Mike Stake	Date 5/28/04 Start .05:56 Stop 09:01 Total hrs 3	0	0	0	2	Y (1)	Y	Willows not much taller than 2 m. Small stream.
2 Aaron Gallagher	Date 6/8/04 Start 06:30 Stop 10:30 Total hrs_4	0	0	0	2	, , ,	Y	Willows leafed out.
3 Aaron Gallagher	Date 7/15/04 Start 06:50 Stop 10:00 Total hrs 3:10	0	0	0	2	2	2	
4	Date Start - Stop Total hrs							
5	Date Start Stop Total hrs							
Overall Site Sun	mary	Adults	Pairs	Territories	Nests	Were any WIF	FLs color-banded?	Yes (No)
(Total resident WIF Total survey hrs	Ls only)	0,	0	0	0			in the comments section on back

Reporting Individual Mike Stake Date Report Completed 7/26/04

US Fish and Wildlife Service Permit # TE835139 - 2 AZ Game and Fish Department (or other state) Permit #

Submit original form by August Is. Retain a copy for your records.

* Also ... reach 2 start 4222007-363523 stop 4221552-364033
reach 3 start 4220829-364469 stop 4220797-364317

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	vidual Mike		A	Phone # (505) 8	328-4455
	lawks Aloft,	Inc.			hawksaloft.org
Site Name L	uder's Creek			Date Report Complete	ted 7/26/04
Did you verify If name is diffe If site was surve Did you survey Management A Name of Management Length of area s	that this site name is rent, what name(s) we eyed last year, did yo the same general are uthority for Survey Agement Entity or Ownsurveyed: 1.3 mi	consistent with that us as used in the past?u survey the same gen a during each visit to the circle one): area (circle one): are (e.g., Tonto Nation (e.g., specify units, e.g.,	eral area this year? Yes this site this year? Yes Federal Municipal Forest U.S. miles = mi, kilometers	Yes/No (circle one) Nes/No If no, summarize No If no, summarize pal/County State Treforest Service	te in comments below. te in comments below. tibal Private
Native b	roadleaf plants (entir	ely or almost entirely,	includes high-elevation	n willow)	
Mixed n	ative and exotic plant	s (mostly native)			8
Mixed na	ative and exotic plant	s (mostly exotic)			
Exotic/in	ntroduced plants (enti	rely or almost entirely)		**
dentify the 2-3	predominant tree/shru	nb species: Willo	w		
		a range): 2 m		(specify units)	
		gnificantly among vis	meters (specify to	dry out)? Yes No	(circle one)
f yes, describe in temember to atta f WIFL detection atch, and location IOT substitute for the and describe comments (attach	n comments section be ach a copy of a USGS ans. Also include a ske on of any willow flycar or the required USGS any unique habitat fer additional sheets if	quad/topographical metch or aerial photographichers or willow flycate quad map. Please includes.	ph showing details of si ther nests detected. Suc lude photos of the inter-	survey area, outlining the te location, patch shape, such sketches or photograph or of the patch, exterior of	urvey route in relation to s are welcomed, but DO
f yes, describe in Remember to atta f WIFL detection atch, and location IOT substitute for the and describe comments (attach	n comments section be ach a copy of a USGS ans. Also include a ske on of any willow flycar or the required USGS any unique habitat fer additional sheets if	quad/topographical metch or aerial photographichers or willow flycate quad map. Please includes.	oh showing details of si ther nests detected. Su	te location, patch shape, so ch sketches or photograph for of the patch, exterior o	urvey route in relation to s are welcomed, but DO
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emember to atta f WIFL detection atch, and location OT substitute for te and describe comments (attach	n comments section be ach a copy of a USGS ans. Also include a ske on of any willow flycar or the required USGS any unique habitat fer additional sheets if	quad/topographical metch or aerial photographichers or willow flycate quad map. Please includes.	ph showing details of si ther nests detected. Suc lude photos of the inter-	te location, patch shape, so ch sketches or photograph for of the patch, exterior o	urvey route in relation to s are welcomed, but DO
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fyes, describe in temember to atta f WIFL detection atch, and locatio OT substitute for te and describe comments (attach Stream	ach a copy of a USGS ach a copy of a USGS ach a look include a ske an of any willow flycar or the required USGS any unique habitat fe additional sheets if	quad/topographical metch or aerial photographichers or willow flycate quad map. Please includes.	ph showing details of si ther nests detected. Suc lude photos of the inter-	te location, patch shape, so ch sketches or photograph for of the patch, exterior o	urvey route in relation to s are welcomed, but DO
fyes, describe in temember to atta f WIFL detection atch, and locatio OT substitute for te and describe comments (attach Stream	acomments section be ache a copy of a USGS ans. Also include a ske on of any willow flycator the required USGS any unique habitat fer additional sheets if a control of the	quad/topographical metch or aerial photographichers or willow flycate quad map. Please included attres.	the showing details of sicher nests detected. Such the photos of the interior of willow	te location, patch shape, so ch sketches or photograph for of the patch, exterior o	arvey route in relation to s are welcomed, but DO f the patch, and overall
emember to atta f WIFL detection atch, and locatio OT substitute for te and describe comments (attach Stream	acomments section be ache a copy of a USGS ans. Also include a ske on of any willow flycator the required USGS any unique habitat fer additional sheets if a control of the	quad/topographical metch or aerial photographichers or willow flycate quad map. Please included attres.	the showing details of sicher nests detected. Such the photos of the interior of willow	te location, patch shape, so ch sketches or photograph for of the patch, exterior o	arvey route in relation to s are welcomed, but DO f the patch, and overall
f yes, describe in the member to atta f WIFL detection atch, and location for substitute for the and describe comments (attach Stream	acomments section be ache a copy of a USGS ans. Also include a ske on of any willow flycator the required USGS any unique habitat fer additional sheets if a control of the	quad/topographical metch or aerial photographichers or willow flycate quad map. Please included attres.	the showing details of sicher nests detected. Such the photos of the interior of willow	te location, patch shape, so ch sketches or photograph for of the patch, exterior o	arvey route in relation to s are welcomed, but DO f the patch, and overall

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Site Name El	K 1	Creek	8			tate CO	County	Con	
USGS Quad Nam	ie_l	_aJara	Canyon,	CO	Elevation	2590			feet (meters)(circle one)
Is copy o	of US	GS map n	narked with si	irvey area	and WIFL sightin	gs attach	ed (as req	uired)?	Yes □ No
Site Coordinates:	Star	: NH	109563	E_	0378659	Ţ	JTM -	Datu	m NAD 27(NAD27 preferred
	Stop	: N 4	108812	E_	0377022	t	JTM	Zone	135

** Fill in additional site information on back of this page **

Survey# Observer(s) (Full Name)	Date (m/d/y) Suryey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N		Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Aaron Gallagher	Date 5/31/04 Start	0	0	0	2	Y	Υ	
2 Aaron Gallagher	Date 6/14/04 Start 06:00 Stop 08:30 Total hrs 2:30	0	0	0	2	, ү.	Y	No willow habitat along Elk Creek outside Elk Creek campground
3 Aaron Gallagher	Date 6/21/04 Start 07:00 Stop 09:30 Total hrs 2:30	0	0	. 0	-2	Ŋ	Y	Most willow habitat centered around confluence at Conejos river and Elk Creek. Zig-zag route
4 Aaron Gallagher	Date 7/1/04 Start. 06:00 Stop 08:30 Total hrs 2:30	0	0	0	2	2	Y	
5 Aaron Gallagher	Date 7/8/04 Start 06:10 Stop 08:10 Total hrs 2	0	0	0	2	Y	Y	
Overall Site Sur	nmary	Adults	Pairs	Territories	Nests	Were any WIF	Ls color-banded?	Yes No
(Total resident WIF		0,	0	0	0	If yes, report of form	olor combination(s)	in the comments section on back

Reporting Individual Mike Stake Date Report Completed 7/26/04

US Fish and Wildlife Service Permit # TEB35139-2 AZ Game and Fish Department (or other state) Permit #

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Hawks Aloft, Inc. P.O. Box 10028 Albuquerque, NM 87184 (505) 828-9455 Page 43 of 54

Affiliation Hawks Aloft, Inc. Email mstake@hawksaloft.org Date Report Completed 7/26/04 Did you verify that this site name is consistent with that used in previous years? Yes/No (circle one) NA If name is different, what name(s) was used in the past? If site was surveyed last year, did you survey the same general area this year? Yes/No If no, summarize in comments below. If site was surveyed last year, did you survey the same general area this year? Yes/No If no, summarize in comments below. If site was surveyed last year, did you survey the same general area this year? Yes/No If no, summarize in comments below. Management Authority for Survey Area (circle one): Make the survey defended of the survey area (specify units): Make authority of formation of canopy (Do not part a range): Management Authority for Survey Area (circle one): Maked native and exotic plants (entirely or almost entirely): Maked native and exotic plants (entirely or almost entirely): Maked native and exotic plants (entirely or almost entirely): Maked native and exotic plants (entirely or almost entirely): Maked native and exotic plants (entirely or almost entirely): Maked native and exotic formation tree/shrub species: Willow Maked native and exotic plants (entirely or almost entirely): Maked native and exotic formation tree/shrub species: Male for the species of the site to surface water or saturated soil: 3-70 meter(specify units): Maked native and exotic format		vidual Mike			Phone # (505)	828-9455
Did you verify that this site name is consistent with that used in previous years? Yes / No (circle one) NA If name is different, what name(s) was used in the past? If site was surveyed last year, did you survey the same general area this year? Yes / No If no, summarize in comments below. If site was surveyed last year, did you survey the same general area during each visit to this site this year? Yes / No If no, summarize in comments below. If you survey the same general area during each visit to this site this year? Yes / No If no, summarize in comments below. Management Authority for Survey Area (circle one): Management Authority for Survey Area (circle one): Management Entity or Owner (e.g., Tonto National Forest) Municipal/County State Tribat Private Name of Management Entity or Owner (e.g., Tonto National Forest) Length of area surveyed: I mile			, Inc.		E-mail mstake	@ hawks aloft, org
If name is different, what name(s) was used in the past? If site was surveyed last year, did you survey the same general area this year? Yes / No If no, summarize in comments below. If site was surveyed last year, did you survey the same general area during each visit to this site this year? Yes / No If no, summarize in comments below. Management Authority for Survey Area (circle one): Management Authority for Survey Area (circle one): Management Entity or Owner (e.g., Tonto National Forest) Name of Management Entity or Owner (e.g., Tonto National Forest) Length of area surveyed: Length of area surveyed: Length of area surveyed: Mixed native broadleaf plants (entirely or almost entirely, includes high-elevation willow) Mixed native and exotic plants (mostly native) 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: Willow Average height of canopy (Do not put a range): Mass surface water or saturated soil present at or adjacent to site? So No (circle one) Distance from the site to surface water or saturated soil: 3	Site Name E	Elk Creek			Date Report Comp	leted 7/26/04
If name is different, what name(s) was used in the past? If site was surveyed last year, did you survey the same general area this year? Yes / No If no, summarize in comments below. If site was surveyed last year, did you survey the same general area during each visit to this site this year? Yes / No If no, summarize in comments below. Management Authority for Survey Area (circle one): Management Authority for Survey Area (circle one): Management Entity or Owner (e.g., Tonto National Forest) Name of Management Entity or Owner (e.g., Tonto National Forest) Length of area surveyed: Length of area surveyed: Length of area surveyed: Mixed native broadleaf plants (entirely or almost entirely, includes high-elevation willow) Mixed native and exotic plants (mostly native) 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: Willow Average height of canopy (Do not put a range): Mass surface water or saturated soil present at or adjacent to site? So No (circle one) Distance from the site to surface water or saturated soil: 3	Did was world:	that this site name i	a aquaistant suith that :	and in municipality	Zer /Me (closte ene)	
If site was surveyed last year, did you survey the same general area during each visit to this site this year? Yes? No If no, summarize in comments below. Management Authority for Survey Area (circle one): Management Authority for Survey Area (circle one): Management Entity or Owner (e.g., Tonto National Forest) Name of Management Entity or Owner (e.g., Tonto National Forest) Length of area surveyed: Length of area surveyed: Length of area surveyed: Mixed native and exotic 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: Willow Average height of canopy (Do not put a range): 3 meters (specify units) Was surface water or saturated soil present at or adjacent to site? (specify units) Was surface water or saturated soil present at or adjacent to site? (specify units) Management Authority for Survey Area (circle one) Distance from the site to surface water or saturated soil: 3-70 meter(specify units) Remember to attach a copy of a USGS quand/topographical map (REQUIRED) of the survey area, outlining the 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 quand map. Please include photos of the interior of the patch, exterior of the patch, and overall lite and describe any unique habitat features. Comments (stach additional sheets if necessary)					res / No (circle one)	NA
Did you survey the same general area during each visit to this site this year? Tes No If no, summarize in comments below. Management Authority for Survey Area (circle one): Management Entity or Owner (e.g., Tonto National Forest) Run Grande Not note: Length of area surveyed: I frule (specify units, e.g., miles = mi, kilometers = km, meters = m) 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 exotic) Exotic/introduced plants (entirely or almost entirely) Identify the 2-3 predominant tree/shrub species: Willow Average height of canopy (Do not put a range): 3 meters (specify units) Was surface water or saturated soil present at or adjacent to site? (specify units) Was surface water or saturated soil present at or adjacent to site? (specify units) Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes for (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 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 ite and describe any unique habitat features. Comments (strach additional sheets if necessary)	If site was surv	eved last year did v	on survey the same or	eneral area this year? Vi	e/No Ifno cumma	rize in comments balow a
Management Authority for Survey Area (circle one): Pederal	Did you survey	the same general ar	rea during each visit to	this site this year? (Yes	YNo If no, summar	ize in comments below.
Name of Management Entity or Owner (e.g., Tonto National Forest) Length of area surveyed: Irnle (specify units, e.g., miles = mi, kilometers = km, meters = m) 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 2-5 predominant tree/shrub species: Willow Average height of canopy (Do not put a range): 3 meters (specify units) Was surface water or saturated soil present at or adjacent to site? So No (circle one) Distance from the site to surface water or saturated soil: 3-70 meter(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 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 ite and describe any unique habitat features. Comments (attach additional sheets if necessary)						
Length of area surveyed: rough (specify units, e.g., miles = mi, kilometers = km, meters = m) Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):						
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<u>Hawks Aloft, Inc.</u> P.O. Box 10028 Albuquerque, NM 87184 (505) 828-9455 Page 44 of 54

Site Name Cow Co	amp		· Stat	e CO County	Conejos
USGS Quad Name Sp	ectacle Lake,	0.0	Elevation	2592	feet / meters (circle one)
Is copy of USGS	map marked with surve	y area and	WIFL sightings	attached (as req	quired)? 🗆 Yes 🗌 No
Site Coordinates: Start:	N 4111075	E 03	75229	UTM	Datum_NAD 27 (NAD27 preferred)
Stop:	N 4112978.	E 03	73356	UTM	Zone 13S

** Fill in additional site information on back of this page **

Survey# Observer(s) (Full Name)	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 Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
I_Aaron Gallagher	Date 5/26/04 Start 06:00 Stop 09:20 Total hrs 3:20	0	0	0	2	Y	Y	
2 Aaron Gallagher	Date 6/15/04 Start 06:05 Stop 08:30 Total hrs 2:25	0	0,	0	2	7	Y	Willows leafed out.
3 Aaron Gallagher	Date 6/22/04 Start 06:30 Stop 09:30 Total hrs 3	0	0	0	. 7	2.	Υ	
4 Aaron Gallagher	Date 7/2/04 Start O6:15 Stop 08:30 Total hrs 2:15	0	0.	0	2	2	Y	
5_Aaron Gallagher	Date 7/12/04 Start 06:30 Stop 08:30 Total hrs 2	0	0	0	7	Y	Y	Found nest of a flycatcher (unknown species) with 2-3 almost fledged young 4111055 - 0374912
Overall Site Sum	ımary	Adults	Pairs	Territories	Nests	Were any WIF	Ls color-banded?	Yes No
(Total resident WIF) Total survey hrs	Ls only)	0,	0	0	0	If yes, report of form	olor combination(s)	in the comments section on back

Reporting Individual Mike Stake Date Report Completed 7/26/04
US Fish and Wildlife Service Permit # TE835139-2 AZ Game and Fish Department (or other state) Permit # _____

Submit original form by August 1st. Retain a copy for your records.

Hawks Aloft, Inc. P.O. Box 10028 Albuquerque, NM 87184 (505) 828-9455 Page 45 of 54

Reporting Indiv	vidual Mike	Stake		Phone # (505)	828-9455
	awks Aloft,	Inc.			@ hawksaloft.org
Site Name C	low Camp			Date Report Comp	oleted 7/26/04
If name is differ If site was surve	rent, what name(s) we eyed last year, did yo	vas used in the past? ou survey the same ger	sed in previous years? Ye neral area this year? Ye this site this year? Yes	s/No If no, summa	rize in comments below.
Management An Name of Manag	uthority for Survey A	Area (circle one): ner (e.g., Tonto Nation	Federal Municip		Tribal Private nal Forest
Length of area s	surveyed: 1.5 mi	les (specify units, e.g.	, miles = mi, kilometers	= km, meters = m)	
Vegetation Char	racteristics: Overall	are the enecies in tree	/shrub layer at this site c	omnriced predominan	tly of (check one):
,					my of (check one).
Native b	roadleaf plants (entir	rely or almost entirely	, includes high-elevation	willow)	
Mixed n	ative and exotic plan	its (mostly native)			8
Mixed na	ative and exotic plan	ts (mostly exotic)			
Exotic/in	stroduced plants (ent	irely or almost entirely	v)		**
	in oddeed plants (elit				
Identify the 2-3 p				. *	
	predominant tree/shr	ub species: Willo	w .	(specify units)	
	predominant tree/shr		w .	(specify units)	
Average height o	predominant tree/shr of canopy (Do not pu er or saturated soil p	ta range): 3.0 r	w .	le one)	
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Average height of Was surface water Distance from the Did hydrological If yes, describe in Remember to attach and location NOT substitute for the and describe comments (attack wife and describe wife and describe wife and describe wife and describe comments (attack wife).	predominant tree/shr of canopy (Do not put er or saturated soil put e site to surface wated conditions change son comments section to each a copy of a USGS ens. Also include a sk en of any willow flycat or the required USGS any unique habitat for the additional sheets if	resent at or adjacent to the ror saturated soil: 3.0 research at or adjacent to the ror saturated soil: 3.0 research at or aerial photographical metch or aerial photographic or aerial photographic search at chers or willow flycated and map. Please indeatures.	o site? Yes) No (circe-70 meters (specify usits (did the site flood or map (REQUIRED) of the aph showing details of site to the cher nests detected. Succlude photos of the interior	le one) nits) dry out)? Yes No survey area, outlining e location, patch shape h sketches or photogra or of the patch, exterio	the survey site and location, survey route in relation to uphs are welcomed, but DO or of the patch, and overall

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Site Name Specto	icle Lake		State CO Cou	inty Conejos
USGS Quad Name 50	ectacle Lake, C	0 El	evation 2674	feet /meters (circle one)
Is copy of USG	S map marked with surv	ey area and WIFI	sightings attached (as	required)? 🗵 Yes 🗌 No
Site Coordinates: Start:	N 4112999	E 03733	1	Datum NAD 27(NAD27 preferred
Stop:	N 4115415	E 03718	98 UTM	Zone 13 S
	www. Trays to J. Jan.	al sita informa	tion on hack of thi	c nava **

** Fill in additional site information on back of this page *

Survey# Observer(s) (Full Name)	Date (m/d/y) Suryey 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 Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
I Mike Stake	Date 5/26/04 Start 06:00 Stop 09:58 Total hrs 4	0	0	0	7	Y	Υ	A couple of thick willow patches. Willows not leafed out yet Many DUFL
2 Aaron Gallagher	Date 6/16/04 Start CG: 05 Stop O9: 05 Total hrs 3	0	0	0	2	2	Y	Willows leafed out.
3 Aaron Gallagher	Date 6/23/04 Start 06:05 Stop 09:00 Total hrs 3	0	0		. 2	2	Υ	
4 <u>Aaron</u> Gallagher	Date 7/3/04 Start 06:30 Stop 08:30 Total hrs 2	0	0	0	7	N	Y	
5 Aaron Gallagher	Date 7/13/04 Start 06:00 Stop 09:00 Total hrs 3	0	0	0	2	2	Y	
Overall Site Sun	nmary	Adults	Pairs	Territories	Nests	Were any WIF	Ls color-banded?	Yes No
(Total resident WIF Total survey hrs	Ls only)	0,	0	0	0	If yes, report of form	color combination(s)	in the comments section on back

Reporting Individual Mike Stake Date Report Completed 7/26/04

US Fish and Wildlife Service Permit # TE835139-2 AZ Game and Fish Department (or other state) Permit #

Submit original form by August Ist. Retain a copy for your records.

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Reporting Indi	vidual Mike St	ake		Phone # (505)	
	lawks Aloft.				hawksaloft.org
Site NameS	pectacle La	ke		Date Report Comple	eted 7/26/04
If name is diffe	rent, what name(s) wa	as used in the past?	ed in previous years? Ye		ze in comments below.
			his site this year? Yes		
Management A Name of Manag	uthority for Survey A gement Entity or Own	rea (circle one): er (e.g., Tonto Nation	(Federal) Municip		ribal Private
Length of area s	surveyed: 2.6 mile	(specify units, e.g.,	miles = mi, kilometers	= km, meters = m)	
Vegetation Char	racteristics: Overall a	are the species in tree/s	shrub layer at this site of	omprised predominantly	v of (check one):
			THE R. P. LEWIS CO. LANSING MICH.		or (oncor onc).
Native b	roadleaf plants (entire	ely or almost entirely,	includes high-elevation	willow)	
Mixed n	ative and exotic plant	s (mostly native)		2, 11 4	
Mixed na	ative and exotic plant	s (mostly exotic)			
	0.00				
Exotic/in	troduced plants (entir	rely or almost entirely))		
Identify the 2-3 p	predominant tree/shru	b species: Willow	w, Alder	(specify units)	
Identify the 2-3 p	predominant tree/shru		w, Alder	(specify units)	v.
Identify the 2-3 p Average height of Was surface water	oredominant tree/shru of canopy (Do not put er or saturated soil pre	a range): 5.5 n	w, Alder	le one)	2 .
Identify the 2-3 p Average height of Was surface wate Distance from the	oredominant tree/shru of canopy (Do not put er or saturated soil pro e site to surface water	a range): 5.5 n esent at or adjacent to or saturated soil: 0 gnificantly among visi	neters site? (es) No (circ	le one) nits)	(circle one)
Average height of Average height of Average height of Was surface water Distance from the Did hydrological f yes, describe in the Average height of the Av	oredominant tree/shrup of canopy (Do not put of canopy of a USGS) of a comments section be canopy of a USGS of a copy of a USGS of any willow flycator the required USGS	esent at or adjacent to or saturated soil: Ognificantly among visielow. Quad/topographical match or aerial photographers or willow flycate quad map. Please incl	site? Ves No (circ meters (specify units (did the site flood or ap (REQUIRED) of the soloh showing details of site there nests detected. Such	dry out)? Yes /No survey area, outlining the location, patch shape, so	(circle one) e survey site and location to the survey route in relation to the sare welcomed, but DO of the patch, and overall
Average height of Average height of Was surface water Distance from the Did hydrological f yes, describe in Remember to atta of WIFL detection atch, and location IOT substitute for the Average has been supported by the Average has been also been according to the Average has bea	oredominant tree/shru of canopy (Do not put er or saturated soil pre e site to surface water conditions change sign comments section be ch a copy of a USGS ons. Also include a ske n of any willow flycat	esent at or adjacent to or saturated soil: Ognificantly among visielow. Quad/topographical match or aerial photographers or willow flycate quad map. Please incl	site? Ves No (circ meters (specify units (did the site flood or ap (REQUIRED) of the soloh showing details of site there nests detected. Such	dry out)? Yes /No survey area, outlining the location, patch shape, so	e survey site and location survey route in relation to his are welcomed, but DO
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Average height of Average heig	oredominant tree/shruff canopy (Do not put er or saturated soil presented to surface water conditions change sign comments section because Also include a sken of any willow flycator the required USGS any unique habitat feat additional sheets if respectively.	esent at or adjacent to or saturated soil: Ognificantly among visicelow. quad/topographical match or aerial photographical of the sor willow flycated quad map. Please inclusives.	site? Ves No (circ meters (specify units (did the site flood or ap (REQUIRED) of the soloh showing details of site there nests detected. Such	dry out)? Yes /No survey area, outlining the location, patch shape, so	e survey site and location survey route in relation to his are welcomed, but DO
Average height of Average height of Average height of Was surface water Distance from the Did hydrological of Yes, describe in Remember to attach of WIFL detection atch, and location NOT substitute for ite and describe ite and	oredominant tree/shrup of canopy (Do not put of canopy (Do not canopy of a USGS) of a comments section be canopy of a USGS of any willow flycat of the required USGS of any unique habitat feat additional sheets if reconstructions:	esent at or adjacent to or saturated soil: Ognificantly among visicelow. quad/topographical match or aerial photographers or willow flycate quad map. Please inclatures.	site? Ves No (circ meters (specify unts (did the site flood or ap (REQUIRED) of the showing details of site ther nests detected. Such unde photos of the interior	dry out)? Yes /No survey area, outlining the location, patch shape, so his sketches or photograph or of the patch, exterior	e survey site and location survey route in relation to ns are welcomed, but DO of the patch, and overall
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Average height of Average height of Average height of Was surface water Distance from the Did hydrological of Yes, describe in Remember to attach of WIFL detection atch, and location NOT substitute for ite and describe ite and	oredominant tree/shrup of canopy (Do not put of canopy (Do not canopy of a USGS) of a comments section be canopy of a USGS of any willow flycat of the required USGS of any unique habitat feat additional sheets if reconstructions:	esent at or adjacent to or saturated soil: Ognificantly among visicelow. quad/topographical match or aerial photographers or willow flycate quad map. Please inclatures.	site? Ves No (circ meters (specify unts (did the site flood or ap (REQUIRED) of the showing details of site ther nests detected. Such unde photos of the interior	dry out)? Yes /No survey area, outlining the location, patch shape, so his sketches or photograph or of the patch, exterior	e survey site and location survey route in relation to ns are welcomed, but DO of the patch, and overall
Average height of Average heig	oredominant tree/shrup of canopy (Do not put of canopy (Do not canopy of a USGS) of a comments section be canopy of a USGS of any willow flycat of the required USGS of any unique habitat feat additional sheets if reconstructions:	esent at or adjacent to or saturated soil: Ognificantly among visicelow. quad/topographical match or aerial photographers or willow flycate quad map. Please inclatures.	site? Ves No (circ meters (specify unts (did the site flood or ap (REQUIRED) of the showing details of site ther nests detected. Such unde photos of the interior	dry out)? Yes /No survey area, outlining the location, patch shape, so his sketches or photograph or of the patch, exterior	e survey site and location survey route in relation to ns are welcomed, but DO of the patch, and overall

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Site Name L USGS Quad N	ame Alam	osa E	ast, co		Elevation	n 2306	County A I	feet /meters (circle on
	es: Start: N_0 Stop: N_	41467	(<u>u</u>	E 042	1736	<u>U</u>	TM Da	tum_NAD 27 (NAD 27 preferr
Survey# Observer(s) (Full Name)	Date (m/d/y) Suryey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories		Detected?	Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this surve (e.g., bird behavior, evidence pairs or breeding, number of nests, nest contents or number fledges seen; potential threat
1 Aaron Gallagher	Date 5/24/04 Start 06:30 Stop IV:30 Total hrs 5	Ч	0	0	N	2	Z	
2 Aaron Gallagher	Date 6/1/04 Start 06:00 Stop 1:00 Total hrs 5	13	0	0	2	٠γ.	Y	Willows at leas 10 feet tall. WIF in areas near standing mars Willows leafing out
3_Aaron Gallagher	Date 6/25/04 Start 06:16 Stop 09:30 Total hrs 3:20	0	0		2	Y	Y	Willows leafed out. Patches of dead willow throughout transect.
	Date Start - Stop Total hrs							
5	Date Start Stop Total hrs							
Overall Site Sun	nmary	Adults	Pairs	Territories	Nests	Were any WIF	Ls color-banded?	Yes No
Total resident WIF		0.	0	0	0	If yes, report cof form	olor combination(s)	in the comments section on back
eporting Individ	ual Mike life Service Perr	Stake	135139-2	AZ Game	and Fish	Date Rep Department	port Completed (or other state)	7/26/04 Permit#

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Reporting Individ	ual Mike Stal	ce		Phone # (505) 8	28-9455
	wks Aloft, Ir				hawksaloft, orc
Site Name Lil				_Date Report Complete	ed 7/26/04
If name is different If site was surveyed	at, what name(s) was used last year, did you su	sistent with that used in sed in the past? rvey the same general ring each visit to this s	area this year? Yes	No If no, summarize	e in comments below.
Management Auth Name of Managen	ority for Survey Area nent Entity or Owner (Federal Municipal orest) Alamoso	County State Tri	bal Private
Length of area sur	veyed: 3.3 miles (specify units, e.g., mil	es = mi, kilometers =	km, meters = m)	No.
Vegetation Charac	teristics: Overall, are t	he species in tree/shru	b layer at this site cor	nprised predominantly	of (check one):
Native broa	adleaf plants (entirely	or almost entirely, incl	udes high-elevation v	villow)	
Mixed nativ	ve and exotic plants (n	nostly native)	**		
Mixed nativ	ve and exotic plants (n	nostly exotic)			
Exotic/intro	duced plants (entirely	or almost entirely)			4.
Identify the 2-3 pre	dominant tree/shrub s	pecies: Willow,	Cottonwood	d	
Average height of o	canopy (Do not put a r	ange): 4 mete	ers	(specify units)	
16					
Was surface water of Distance from the s	or saturated soil preser ite to surface water or	nt at or adjacent to site saturated soil:	? Yes No (circle	e one)	
	onditions change signif comments section below		did the site flood or d	ry out)? Yes No (circle one)
of WIFL detections. catch, and location of NOT substitute for the cand describe and describe an	Also include a sketch of any willow flycatche the required USGS quay y unique habitat featur	or aerial photograph si rs or willow flycatcher d map. Please include es.	nowing details of site nests detected. Such	arvey area, outlining the location, patch shape, su sketches or photographs of the patch, exterior o	rvey route in relation to s are welcomed, but DO
	dditional sheets if nece				
	4145646-04			760-0427314	
1 June 04	4145153-04		10 09 4.143	160-042/314	
1 June 04	4144978 - 04				
June 04	4144978 - 04:				
June 04	4144569 - 04	26067			
	4144334-04	27123			
VIFL Detection Loc	cations:				
ate Detected	NUTM	EUTM	Date Detected	NUTM	EUTM
4 May 04	4146098	0425404	1 June 04	4146656	0425261
24 May 04	4145147	0425867	1 June 04	4146173	0425205
24 May 04	4145147	0425867	1 June 04	4146122	0425343
24 May 04	4144681	0426064	June 04	4146171	0425723
WIFL UTM:		in Comments	(above)		
WITE OINT	s continue	iii comments	- cacove)		

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Site Name Alamos	sa North		· · · S	tate CO County	Alamosa .
USGS Quad Name A		0	Elevation	2286	feet / meters (circle one)
Is copy of USGS	S map marked with surv	ey area a	nd WIFL sightin	gs attached (as req	nuired)? 🗵 Yes 🗌 No
Site Coordinates: Start:	N 4141342	E	043 0996	UTM	Datum NAD 27 (NAD27 preferred
Stop:	N 4143884	EC	1427415	UTM	Zone 13S

** Fill in additional site information on back of this page **

					- 29		-	
Survey# Observer(s) (Full Name)	Date (m/d/y) Suryey 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 of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Mike Stake	Date 5/25/04 Start 06:03 Stop 09:31 Total hrs 3:30	2	0.	0.	7	Y	2	Willows not leafed out yet A third WIFL perhaps but did not sing-at 4143455-0428772
2_Aaron Gallagher	Date 6/2/04 Start 06:10 Stop 10:30 Total hrs 4:20	6	0	0	2	Υ.	N	Willows leafing in choppy patches Much of route still dry twigs.
3 Aaron Gallagher	Date 6/28/04 Start 06:00 Stop 09:30 Total hrs 3:30	3	3	3	2	Y	2	SWFL counter- singing. Habitat Very dry where birds were singing
4	Date Start - Stop Total hrs							
5	Date Start Stop Total hrs							
Overall Site Summary		Adults	Pairs	Territories	Nests	Were any WIF	Ls color-banded?	Yes No
(Total resident WIFLs only) Total survey hrs 11:20		3.	3	3	0	If yes, report color combination(s) in the comments section on back of form		

Reporting Individual Mike Stake Date Report Completed 7/26/04

US Fish and Wildlife Service Permit # TE835 139-2AZ Game and Fish Department (or other state) Permit # _____

Submit original form by August Ist. Retain a copy for your records.

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Affiliation Hawks Aloft, Inc. Site Name Alamosa North Did you verify that this site name is consistent with that used in previous years? If name is different, what name(s) was used in the past? See Comment If site was surveyed last year, did you survey the same general area this year? Ye Did you survey the same general area during each visit to this site this year? Ye	Date Report Complet Yes) No (circle one)	@hawksaloft.org ted 7/26/04
Did you verify that this site name is consistent with that used in previous years? If name is different, what name(s) was used in the past? See Comment If site was surveyed last year, did you survey the same general area this year? Y	Yes) No (circle one)	ted 7/26/04
If name is different, what name(s) was used in the past? See Comment If site was surveyed last year, did you survey the same general area this year? Y	Yes No (circle one)	iii (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	es / No If no, summariz	e in comments below. No
Management Authority for Survey Area (circle one): Warea (circle one): Wederal Munic Name of Management Entity or Owner (e.g., Tonto National Forest) A la management Authority for Survey Area (circle one): Output Description:		ribal Private Wildlife Refuge
Length of area surveyed: 3.8 miles (specify units, e.g., miles = mi, kilometer	rs = km, meters = m)	5.5
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		
Mixed native and exotic plants (mostly native)		
Mixed native and exotic plants (mostly exotic)		
Exotic/introduced plants (entirely or almost entirely)		for a
Identify the 2-3 predominant tree/shrub species: Cottonwood, W	illow	
Average height of canopy (Do not put a range): 5 meters	(specify units)	
Was surface water or saturated soil present at or adjacent to site? Yes No (ci Distance from the site to surface water or saturated soil: O meters (specify		
Did hydrological conditions change significantly among visits (did the site flood of the first flood of the site flood of the site flood of the first flood of the fi	or dry out)? Yes No	(circle one)
Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the for WIFL detections. Also include a sketch or aerial photograph showing details of seatch, and location of any willow flycatchers or willow flycatcher nests detected. So NOT substitute for the required USGS quad map. Please include photos of the intestite and describe any unique habitat features. Comments (attach additional sheets if necessary) Alamosa North surveyed in 2002 with different extended route to south at canal. This extended route to south at canal. This extended route to south depth decreased do	ite location, patch shape, so ach sketches or photograph rior of the patch, exterior of the patch, exterior of the patch, exterior of the patch, exterior of the patch, exterior of	nurvey route in relation to as are welcomed, but DO of the patch, and overall oundary. We las "Alamosa
	ing ine season	
28 June 04 4143273-0428421 28 June 04 28 June 04 4142642-0430234	4142642-043	0234
WIFL Detection Locations:		
Date Detected N UTM E UTM Date Detected	NUTM	EUTM
		0430215
25 May 04 4142326 0430482 2 June 04 25 May 04 4142658 6430220 2 June 04		0430302
		0430872
		0430872
	171172011	0100072
WIFL UTMs continue in Comments (above)	The state of the s	

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		•		irvey and D	etection .		eu Aprii, 2004	
Site Name /	Alamosa S	South South	st co	,	Elevation	State CO n 2286	County Ale	feet / meters (circle one)
Is copy		marked w	ith survey	area and W.	IFL sight	tings attache	ed (as required)	2? Yes No attum NAD 27 (NAD 27 preferred
-1	-	-				17	f this page *	
Survey# Observer(s) (Full Name)	Date (m/d/y) Suryey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories			Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Aaron Gallaghe	Date 5/25/04 Start 05:45 Stop 11:40 Total hrs 6	0	0	0	2	Y	7	
2 Aaron Gallagher	Date 6/4/04 Start 6:00 Stop 10:30 Total hrs 4:30	10	0	0	2	Υ.	(about 60)	Willows about 12-15 feet, Willow 40% leafed out
3 Aaron Gallagher	Date 7/16/04 Start 06:30 Stop 09:30 Total hrs 3	1	1		2	Y	(80)	
4	Date Start · Stop Total hrs					-		10 f.
5	Date Start Stop Total hrs	4						
Overall Site Sun Total resident WIF	Ls only)	Adults	Pairs	Territories	Nests		Ls color-banded?	Yes No) in the comments section on back

Reporting Individual Mike Stake Date Report Completed 7/26/04

US Fish and Wildlife Service Permit # TEB35/39-2 AZ Game and Fish Department (or other state) Permit #

Submit original form by August 1st. Retain a copy for your records.

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Reporting Individ	lual Mike Sta	.ke		Phone # (505) 8	28-9455
Affiliation Ho	wks Aloft;		E-mail mstake@hawksaloft, orc		
Site Name A1	amosa South			Date Report Comple	ted 7/26/04
If name is different If site was surveyed	nt, what name(s) was u	ised in the past? Survey the same general	in previous years? Yes larea this year? Yes site this year? Yes	(No) If no, summariz	ze in comments below.
Management Auti Name of Manager	nority for Survey Area nent Entity or Owner	(circle one): (e.g., Tonto National	Federal Municipal	County State Translational V	ribal Private Vildlife Refuge
Length of area sur	veyed: 8 miles	(specify units, e.g., m	iles = mi, kilometers =	km, meters = m)	50gG (2)
	F .			74	
Vegetation Charac	teristics: Overall, are	the species in tree/shr	ub layer at this site cor	nprised predominantly	of (check one):
Native bro	adleaf plants (entirely	or almost entirely, in	cludes high-elevation v	villow)	
Mixed nati	ve and exotic plants (mostly native)			*
Mixed nati	ve and exotic plants (mostly exotic)		*****	
Exotic/intr	oduced plants (entirely	or almost entirely)			
Identify the 2-3 pre	edominant tree/shrub	species: Cotton	wood, Willow	, Rabbitbrus	sh
Average height of	canopy (Do not put a	range): _ 3.5 m	eters	(specify units)	
**					
Was surface water Distance from the s	or saturated soil prese site to surface water or	nt at or adjacent to sit	te? <u>Yes D</u> No (circle meters (specify uni	one)	
	onditions change signi comments section belo		(did the site flood or d	ry out)? Yes /No	(circle one)
of WIFL detections patch, and location NOT substitute for	Also include a sketch of any willow flycatch	n or aerial photograph ers or willow flycatche ad map. Please includ	showing details of site or nests detected. Such	location, patch shape, s sketches or photograph	e survey site and location urvey route in relation to as are welcomed, but DO of the patch, and overall
Changed or	dditional sheets if neo	essary) y after 200	3 moving it	to canal, t	hereby
shortening	the route.	the remaind	er is now pa	rt of Alamos	
4 June 04	4136837 C				
4 June 04	The second section of the second section is a second section of the second section of the second section is a second section of the section of the second section of the section o				
16 July 04	4136745-	0431811			
WIFL Detection Lo	cations:			5	
Date Detected	NUTM	E UTM	Date Detected	NUTM	EUTM
4 June 04	4139716	0431057	4 June 04	4137453	0431469
4 June 04	4137539	0431153	4 June 04	4137453	0431469
4 June 04	4137539	0431153	4 June 04	4137191	0431469
4 June 04	4137539	0431153	4 June 04	4136730	0431760
WIFL UTM	s continue	in Commen	ts (above)		

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