

2007 WILLOW FLYCATCHER SURVEYS AT  
BLUEWATER CANYON, LOST VALLEY, AND SAN YSIDRO, NEW MEXICO



Submitted To:

**Bureau of Land Management**  
Albuquerque Field Office  
435 Montano Rd NE  
Albuquerque, New Mexico 87107

Prepared By:

**Hawks Aloft, Inc.**  
P.O. Box 10028  
Albuquerque, New Mexico 87184  
(505) 828-9455  
Website: [www.hawksaloft.org](http://www.hawksaloft.org)  
E-mail Contact: [mstake@hawksaloft.org](mailto:mstake@hawksaloft.org)



1 November 2007

---

TABLE OF CONTENTS

EXECUTIVE SUMMARY .....1

INTRODUCTION .....2

STUDY AREA .....3

METHODS .....6

RESULTS .....7

DISCUSSION .....9

ACKNOWLEDGMENTS .....12

LITERATURE CITED .....13

---

TABLES

---

1. Number of Willow Flycatchers detected at Bluewater Canyon, Lost Valley, and San Ysidro, New Mexico during survey periods 1, 2, and 3 from 1998-2007.....8

2. Universal Transverse Mercator coordinates for Willow Flycatchers detected at Lost Valley, New Mexico in 2007 .....9

---

FIGURES

---

1. Location of Bluewater Canyon, Lost Valley, and San Ysidro, New Mexico, where Hawks Aloft conducted Willow Flycatcher surveys from 1998-2007.....14

2. Willow Flycatcher survey route in Bluewater Canyon, Cibola County, New Mexico .....15

3. Willow Flycatcher survey area and 2007 Willow Flycatcher observations in Lost Valley, Sandoval County, New Mexico .....16

4. Willow Flycatcher survey area in San Ysidro, Sandoval County, New Mexico .....17

---

APPENDICES

---

1. List of 57 bird species observed during Willow Flycatcher surveys at Bluewater Canyon, Lost Valley, and San Ysidro, New Mexico in 2007 .....18
2. Data forms from 2007 Willow Flycatcher surveys in Bluewater Canyon, Lost Valley, and San Ysidro, New Mexico .....20

## EXECUTIVE SUMMARY

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is a federally endangered migrant songbird breeding locally in riparian areas of New Mexico. The Bureau of Land Management (BLM), Albuquerque Field Office, manages several sites containing potential Southwestern Willow Flycatcher habitat. Since 1998, we have conducted annual surveys at three of their central New Mexico sites: Bluewater Canyon, Lost Valley, and San Ysidro. In 2007, we recorded six Willow Flycatchers, all of them at Lost Valley during our first survey on 23 May. These observations were our first at Lost Valley since 2003, improving our perception of this site's potential. We have observed Willow Flycatchers at one or more sites (most frequently at San Ysidro) during each of the last 10 years. However, because none of the observations have occurred during the third survey period, we can not confirm the presence of territorial Southwestern Willow Flycatchers. Nevertheless, each site could offer important stopover habitat and resources for migrating Willow Flycatchers, including the endangered Southwestern subspecies. Because migrant Willow Flycatchers have been observed at each site, and territorial Southwestern Willow Flycatchers could occur in future years, BLM should continue to maintain and improve conditions at Bluewater Canyon, Lost Valley, and San Ysidro. We recommend continued annual surveys at each site to document presence of Willow Flycatchers and temporal changes in habitat, conditions, or patterns of occupancy.

## INTRODUCTION

Riparian corridors provide important habitat for breeding birds in arid regions of the western United States (Knopf and Samson 1994). Although western riparian areas occupy less than one percent of the landscape, many support more breeding bird species than surrounding upland habitats (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 or improve them to the best possible condition. It is especially important to maintain those that host rare or endangered species.

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is a federally endangered migrant songbird breeding locally in riparian areas of New Mexico (U.S. Fish and Wildlife Service 1995, Bureau of Reclamation 2006). Southwestern Willow Flycatchers inhabit dense riparian vegetation, including both native (e.g., cottonwood, *Populus* spp., and willow, *Salix*, spp.) and exotic (e.g., salt cedar, *Tamarix* spp.) woody plants (Sogge et al. 2003). Habitat for Southwestern Willow Flycatcher is usually in close proximity to water or saturated soils (Sedgwick 2000).

Because of morphological and vocal similarities, it is difficult to distinguish between Southwestern Willow Flycatchers and other subspecies of Willow Flycatcher. Despite this difficulty, the seasonal timing of an observation can help identify the endangered Southwestern subspecies. Multiple subspecies of Willow Flycatcher can be observed in New Mexico during the migration period, but only Southwestern Willow Flycatcher regularly remains in the state to breed (Sogge et al. 1997). Therefore, surveys documenting Willow Flycatchers throughout the breeding season can provide an indication of local Southwestern Willow Flycatcher presence.

The Bureau of Land Management (BLM), Albuquerque Field Office, manages several riparian sites in central New Mexico with potential Southwestern Willow Flycatcher habitat. BLM contracted Hawks Aloft, Inc. to conduct annual Willow Flycatcher surveys at three of these sites beginning in 1998: Bluewater Canyon, Lost Valley, and San Ysidro. We have documented small numbers of Willow Flycatchers using one or more of the sites each year, but our consistent lack of observations late in the season indicates that these birds were probably migrant Willow Flycatchers (subspecies unknown) and not territorial Southwestern Willow Flycatchers. Our most recent Willow Flycatcher observations have been at San Ysidro; we have not observed Willow Flycatchers at Bluewater Canyon or Lost Valley since 2002 and 2003, respectively. Continued surveys are important to document Southwestern Willow Flycatcher territories, if they occur, and further evaluate patterns of use by migrants. In this report, we provide locations for all Willow Flycatcher observations at Bluewater Canyon, Lost Valley, and San Ysidro in 2007. We indicate potential Southwestern Willow Flycatcher presence based on the seasonal timing of observations.

## STUDY AREA

### Bluewater Canyon

The Bluewater Canyon survey area included approximately 4 km of Bluewater Creek in Cibola County, New Mexico (Fig. 1, 2). Bluewater Creek flows through a steep-walled canyon with linear patches of mostly native vegetation. Dominant vegetation included coyote willow (*Salix exigua*), narrowleaf cottonwood (*Populus angustifolia*), cliffrose (*Cowania mexicana*), candelabra cholla (*Opuntia imbricata*), rubber rabbitbrush

(*Chrysothamnus nauseosus*), and juniper (*Juniperus* spp.). Beavers (*Castor canadensis*) have reduced the number of cottonwoods, thereby reducing the canopy. Water flow in Bluewater Canyon is controlled by a dam located upstream from the site. Water is present in most years, and high enough during some years to restrict access to narrow portions of the canyon. We encountered a moderate water level in the canyon throughout the 2007 monitoring season.



Bluewater Canyon contained mostly native vegetation in a narrow riparian canyon.

### Lost Valley

The Lost Valley survey area included two sections totaling approximately 2.5 km along the Rio Puerco near Cabezon Peak and San Luis, in Sandoval County, New Mexico (Fig. 1, 3). Habitat consisted of mostly exotic vegetation, including salt cedar and

Russian olive, as well as native Fremont cottonwood (*P. fremonti*) and willow. Water levels in the Rio Puerco varied dramatically. In most years, there is at least some water flow in the Rio Puerco early in the survey season, followed by a considerable reduction in flow late in the survey season. This pattern occurred in 2007, as Lost Valley contained considerable flow early in the season and virtually no water during the second half of the monitoring season.



Lost Valley water flow during the first survey (left) and the final survey (right) in 2007.

### San Ysidro

San Ysidro included 1 km of the Rio Salado adjacent to the Perea Nature Trail near San Ysidro, in Sandoval County, New Mexico (Fig. 1, 4). This site contained shrubby riparian habitat and a marsh. Dominant vegetation included Russian olive, salt cedar, and bulrush (*Scirpus* spp.). Beaver activity has altered water flow into the marsh by creating dams in at least three locations in the upstream portions of the creek. This has greatly reduced water levels in the marsh and created new, shallow ponds to the north of the marsh in grazed pastures. Cattle grazing has limited vegetation growth in this part of the creek. Water flow in the Rio Salado varies annually and usually decreases as the survey season progresses. After a wet year in 2005, subsequent seasons have been



relatively dry. In 2007, San Ysidro was extremely dry and contained only moist soil during the first survey, a time when there is usually at least some water flow.

## METHODS

Southwestern Willow Flycatcher surveys followed the standardized protocol developed by Sogge et al. (1997). All lead observers were trained to follow this protocol and certified to conduct Willow Flycatcher surveys under Hawks Aloft's Federal Fish and Wildlife permit (TE835139-1). One observer conducted all surveys at San Ysidro in 2007; this observer has conducted all surveys here since 2000. Because of difficult terrain and unpredictable water levels at Bluewater Canyon and Lost Valley, observers at these sites were accompanied by one or more qualified assistants.

We conducted surveys during three survey periods: 15-31 May, 1-21 June, and 22 June – 10 July. From 1998-2004, we conducted one survey per site in each of the three survey periods. Based on protocol revision by the U.S. Fish and Wildlife Service (2000), prescribing at least five visits for project-related surveys, BLM requested an additional two surveys per site during the third survey period. Therefore, we conducted a total of five surveys per year at each site from 2005-2007 (one in each of the first two survey periods and three in the third survey period). We conducted consecutive surveys at a site at least five days apart, beginning each survey within 30 min of sunrise and concluding within four hours.

During surveys, observers walked slowly through the site, stopping every 20-30 meters, or as necessary to adequately cover habitat patches. At each stop, surveyors listened for flycatcher vocalizations. If none were heard, taped vocalizations of a

Southwestern Willow Flycatcher were played for 15-30 seconds, followed by one or two minutes of observation. We recorded Universal Transverse Mercator (UTM) coordinates (North American Datum 27) for each Willow Flycatcher observed. Because several species appear similar to Willow Flycatchers (e.g., Dusky Flycatcher, *E. oberholseri*), positive identification of a Willow Flycatcher required that the observer hear the distinctive “*fitz-bew*” song (Sogge et al. 1997). To distinguish Southwestern Willow Flycatchers from other subspecies that issue a similar song, we concluded that Willow Flycatchers observed in the third survey period were Southwestern Willow Flycatchers, because other migrant subspecies were not expected during this time (Sogge et al. 1997). Flycatchers observed only during the first two survey periods might also be Southwestern Willow Flycatchers, but the possible presence of the migrating *E. t. adastus* subspecies makes identification uncertain during this time. We report the number and locations of Willow Flycatchers observed at each site and indicate probable Southwestern Willow Flycatchers, based on the seasonal timing of observations. We also present a list of other avian species seen or heard while conducting surveys (Appendix 1) and copies of original data forms (Appendix 2).

## RESULTS

We recorded six Willow Flycatchers in 2007; all observations occurred at Lost Valley (Table 1, next page). Because these observations occurred during the first survey period, we could not confirm the presence of territorial Southwestern Willow Flycatchers at any of the sites, as in all previous years. The birds we observed at Lost Valley were likely migrant Willow Flycatchers, subspecies unknown.

Table 1. Number of Willow Flycatchers detected at Bluewater Canyon (BC), Lost Valley (LV), and San Ysidro (SY), New Mexico during survey periods 1 (15-31 May), 2 (1-21 June) and 3 (22 June–10 July) from 1998-2007. We conducted three surveys per site during the third survey period from 2005-2007; we conducted one survey per site during the third survey period in all other years.

		Number of Willow Flycatchers detected									
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
BC	Period 1	0	0	0	0	1	0	0	0	0	0
	Period 2	0	0	1	0	0	0	0	0	0	0
	Period 3	0	0	0	0	0	0	0	0	0	0
LV	Period 1	0	0	0	0	0	1	0	0	0	6
	Period 2	0	3	1	0	0	2	0	0	0	0
	Period 3	0	0	0	0	0	0	0	0	0	0
SY	Period 1	1	0	0	0	5	0	3	3	3	0
	Period 2	1	0	0	2	0	0	0	0	0	0
	Period 3	0	0	0	0	0	0	0	0	0	0

For the fifth consecutive year, we observed no Willow Flycatchers at Bluewater Canyon (Table 1). We completed five surveys in a cumulative 15:49 (hr:min) of survey time. The only two Willow Flycatcher observations we have had in the last ten years of surveys since 1998 occurred on 9 June 2000 and 29 May 2002.

The six Willow Flycatchers we recorded at Lost Valley in 2007 were our first Willow Flycatcher observations at that site since 2003 (Table 1). We completed five surveys during 2007 in a cumulative 16:16 (hr:min) of survey time. All six observations occurred during the first survey on 23 May (Table 2, next page). The observers noted that none of the Willow Flycatchers were actively singing until they responded to tape playback. No birds were observed during the next visit on 13 June.

We recorded no Willow Flycatchers at San Ysidro in a cumulative 6:03 (hr:min) of survey time in 2007. This was the first year since 2003, and only the fourth in the last ten, that we did not observe Willow Flycatchers.

Table 1. Universal Transverse Mercator coordinates for Willow Flycatchers detected at Lost Valley, New Mexico in 2007. Each row represents one Willow Flycatcher. We observed no Willow Flycatchers at Bluewater Canyon or San Ysidro in 2007.

Site	Date	Datum	Zone	Easting	Northing
Lost Valley	23 May 2007	NAD 27	13	313497	3948226
Lost Valley	23 May 2007	NAD 27	13	313558	3948400
Lost Valley	23 May 2007	NAD 27	13	313715	3948782
Lost Valley	23 May 2007	NAD 27	13	313491	3948713
Lost Valley	23 May 2007	NAD 27	13	310900	3946301
Lost Valley	23 May 2007	NAD 27	13	311077	3946297



A Willow Flycatcher was observed here at Lost Valley on 23 May 2007.

## DISCUSSION

Our surveys offer no evidence that Southwestern Willow Flycatchers breed at Bluewater Canyon, Lost Valley, or San Ysidro. At central New Mexico riparian sites like

these, the presence of singing Willow Flycatchers during the third survey period (i.e., 22 June through 10 July) is strongly indicative of Southwestern Willow Flycatchers (Sogge et al. 1997). Although we have recorded 33 Willow Flycatchers at the three sites from 1998-2007 (Table 1), none of the observations have occurred during a total of 48 third-period surveys. Therefore, Bluewater Canyon, Lost Valley, and San Ysidro are probably more valuable as migration stopover sites than breeding sites.

Willow Flycatcher migration stopover habitat in New Mexico can be valuable because migrants might include the endangered Southwestern subspecies. The migration routes used by Southwestern Willow Flycatchers are not well known (U.S. Fish and Wildlife Service 2002), but Yong and Finch (1997) suggested that the Middle Rio Grande bosque provides important stopover habitat for Southwestern Willow Flycatchers to replenish energy stores. The proximity of our sites to the Middle Rio Grande, especially San Ysidro, makes them candidates for hosting migrant Southwestern Willow Flycatchers in some years. The U.S. Fish and Wildlife Service (2002) advised that even riparian patches unsuitable for breeding (e.g., too small or sparse) might be important resources affecting flycatcher survival. Although we have not documented breeding Southwestern Willow Flycatchers, our observations of Willow Flycatchers during some years support the possibility that Bluewater Canyon, Lost Valley, and San Ysidro might be included among important stopover sites.

Before 2007, we considered that San Ysidro offered the greatest potential for hosting migrating or breeding Southwestern Willow Flycatchers, based on flycatcher observations during most (six of nine) years at San Ysidro, and the large percentage of observations for the three sites (18 of 27, 67%) occurring at San Ysidro. This might still

be true, but our six observations of Willow Flycatchers at Lost Valley in 2007 improved our perception of this site. During our first survey in 2007, we noted an unusual reduction in water at San Ysidro, yet copious water flow at Lost Valley, about 25 km to the northwest. Migrating Willow Flycatchers might have stopped at Lost Valley rather than San Ysidro because conditions were temporarily more suitable at Lost Valley. It is also possible that the peak period of Willow Flycatcher migration coincided with our Lost Valley survey (23 May) more than with our San Ysidro survey (17 May). It is clear now that both Lost Valley and San Ysidro have potential for hosting Willow Flycatchers. Both contain extensive patches of dense riparian vegetation, even if much of the vegetation is exotic. More consistent water flow at Lost Valley and San Ysidro could improve the likelihood that Willow Flycatchers will stop and remain to breed. Water flow is generally consistent at Bluewater Canyon, but riparian habitat is relatively narrow. Suitability for Willow Flycatchers at Bluewater Canyon might improve with further maturation of willow patches, although the narrow width of the canyon might limit the spatial extent of habitat patches.

Even if features and conditions at our sites become suitable, a Southwestern Willow Flycatcher population might be slow to establish. Birds must disperse from a source population. Slightly greater than 400 Southwestern Willow Flycatcher territories have recently been identified in New Mexico (D. Hill, U.S. Fish and Wildlife Service, pers. comm.), most of which occur in the Gila River floodplain and the Rio Grande south of Socorro. Although recent data indicate that populations might be expanding (Bureau of Reclamation 2006), our sites are a considerable distance from most populations, perhaps limiting the probability of dispersal.

Because apparent migrant flycatchers have been observed in some years, and territorial Southwestern Willow Flycatchers could occur in future years, BLM should continue to maintain and improve conditions at Bluewater Canyon, Lost Valley, and San Ysidro. San Ysidro should receive a high priority for management and restoration efforts, because we consistently find a small number of Willow Flycatchers early in the season. Our recent observations at Lost Valley should also warrant renewed interest in habitat management and restoration at that site. We recommend continued surveys at Bluewater Canyon, Lost Valley, and San Ysidro to document presence of Willow Flycatchers and temporal changes in habitat, conditions, or patterns of occupancy.

#### ACKNOWLEDGMENTS

The Bureau of Land Management, Albuquerque Field Office, funded this project. Gail Garber conducted surveys at San Ysidro in 2007. Allison Schacht, Sandy Skeba, and Jenny Lisignoli conducted surveys at Bluewater Canyon and Lost Valley in 2007. Photos by Jenny Lisignoli, Sandy Skeba, and Mike Stake. Report written by Mike Stake and reviewed by Gail Garber, executive director of Hawks Aloft.

## LITERATURE CITED

- Bureau of Reclamation. 2006. 2006 Southwestern Willow Flycatcher study results: selected sites along the Rio Grande from Velarde to Elephant Butte Reservoir, New Mexico. U.S. Department of the Interior, Bureau of Reclamation, Albuquerque Area Office, Albuquerque, New Mexico.
- Gates, J. E., and N. R. Giffen. 1991. Neotropical migrant birds and edge effects at a forest-stream ecotone. *Wilson Bulletin* 103:204-217.
- Knopf, F. L., and F. B. Samson. 1994. Scale perspective on avian diversity in western riparian ecosystems. *Conservation Biology* 8:669-676.
- Knopf, F. L., R. R. Johnson, T. Rich, F. B. Samson, and R. C. Szaro. 1988. Conservation of riparian ecosystems in the United States. *Wilson Bulletin* 100:272-284.
- Powell, B. F., and R. J. Steidl. 2000. Nesting habitat and reproductive success of southwestern riparian birds. *Condor* 102:823-831.
- Sedgwick, J. A. 2000. Willow Flycatcher (*Empidonax traillii*). In *The Birds of North America*, No. 533 (A. Poole and F. Gill, Eds.). The Academy of Natural Sciences, Philadelphia, Pennsylvania, and The American Ornithologists' Union, Washington, D.C.
- Sogge, M., R. M. Marshall, S. J. Sferra, and T. J. Tibbitts. 1997. A Southwestern Willow Flycatcher natural history summary and survey protocol. National Park Service Technical Report NPS/NAUCPRS/NRTR-97/12.
- Sogge, M. K., S. J. Sferra, T. McCarthey, S. O. Williams, and B. E. Kus. 2003. Distribution and characteristics of Southwestern Willow Flycatcher breeding sites and territories. *Studies in Avian Biology* 26:5-11.
- U.S. Fish and Wildlife Service. 1995. Final rule determining endangered status for the Southwestern Willow Flycatcher. *Federal Register* 60:10694-10715 (February 27, 1995).
- U.S. Fish and Wildlife Service. 2000. Southwestern Willow Flycatcher protocol revision 2000. U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- U.S. Fish and Wildlife Service. 2002. Southwestern Willow Flycatcher Recovery Plan. Albuquerque, New Mexico. i -ix + 210 pp. Appendices A - O.
- Yong, W., and D. M. Finch. 1997. Migration of the Willow Flycatcher along the Middle Rio Grande. *Wilson Bulletin* 109:253-268.





Figure 1. Location of Bluewater Canyon, Lost Valley, and San Ysidro, New Mexico, where Hawks Aloft conducted Willow Flycatcher surveys from 1998-2007.

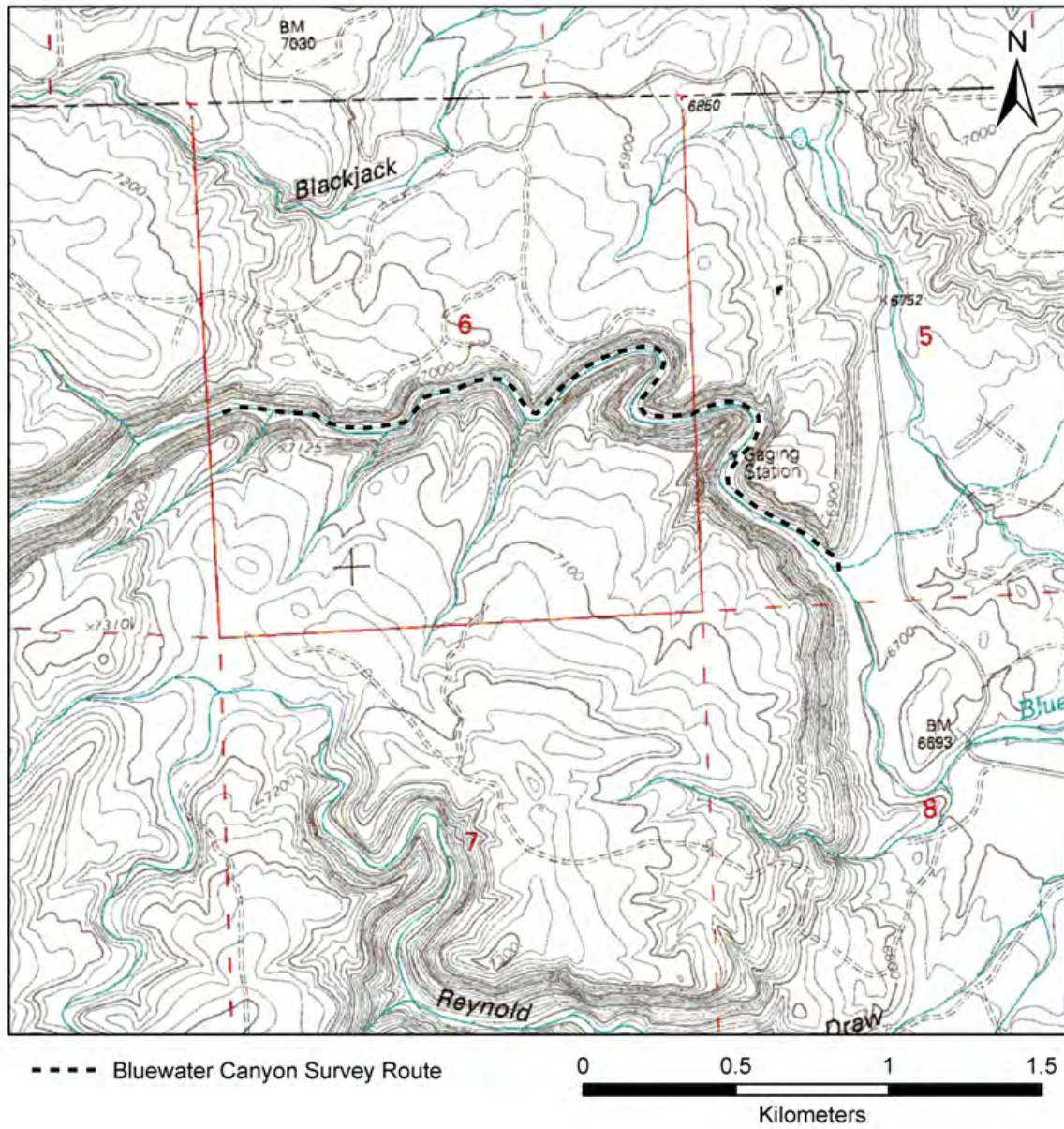


Figure 2. Willow Flycatcher survey route in Bluewater Canyon, Cibola County, New Mexico. Survey route shown is an enlarged section of the Prewitt, New Mexico USGS Quad Map.

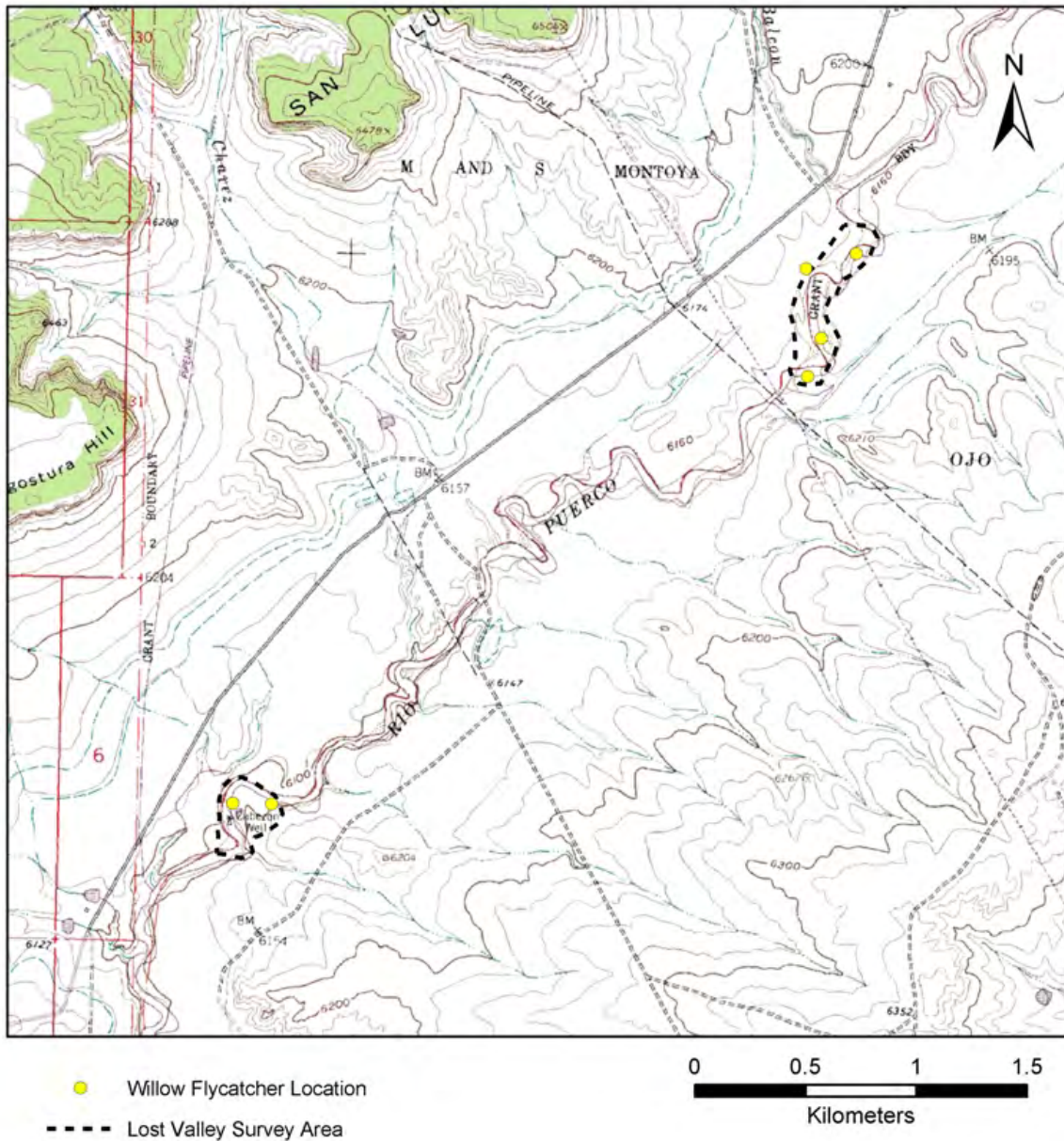


Figure 3. Willow Flycatcher survey area and 2007 Willow Flycatcher observations in Lost Valley, Sandoval County, New Mexico. Survey area shown is an enlarged section of the San Luis, New Mexico USGS Quad Map.

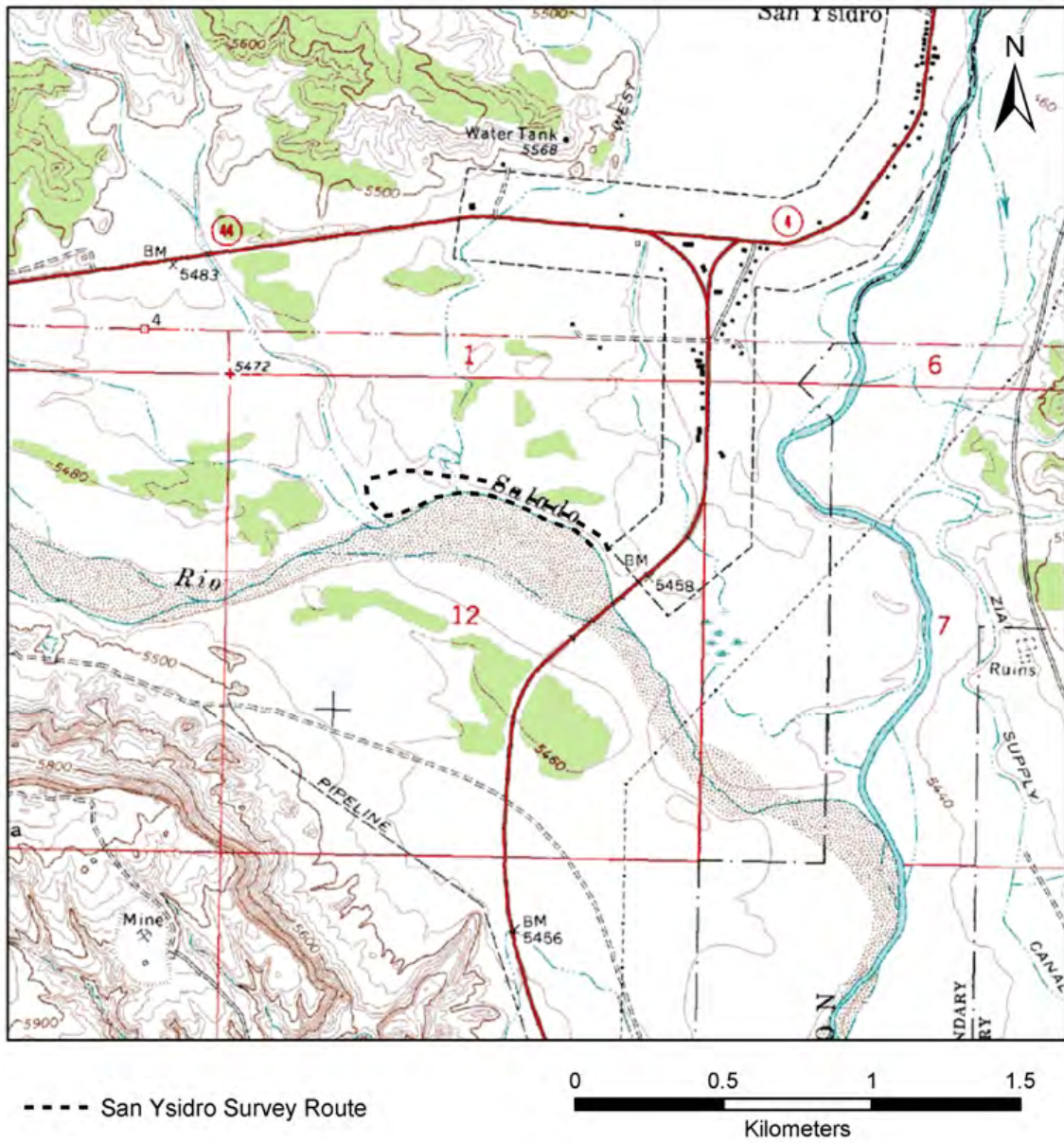


Figure 4. Willow Flycatcher survey area in San Ysidro, Sandoval County, New Mexico. Survey area shown is an enlarged section of the San Ysidro, New Mexico USGS Quad Map.

Appendix 1. List of 57 bird species observed during Willow Flycatcher surveys at Bluewater Canyon (BC), Lost Valley (LV), and San Ysidro (SY), New Mexico in 2007. Species are listed in taxonomic order, based on the American Birding Association, Checklist 6.7.

Species	Scientific Name	BC	LV	SY
Mallard	<i>Anas platyrhynchos</i>	X	-	-
Great Blue Heron	<i>Ardea herodias</i>	X	-	-
Turkey Vulture	<i>Cathartes aura</i>	X	-	-
Cooper's Hawk	<i>Accipiter cooperii</i>	X	X	X
Swainson's Hawk	<i>Buteo swainsoni</i>	X	-	-
Red-tailed Hawk	<i>Buteo jamaicensis</i>	X	-	-
American Kestrel	<i>Falco sparverius</i>	-	X	X
Mourning Dove	<i>Zenaida macroura</i>	X	X	X
Great Horned Owl	<i>Bubo virginianus</i>	X	-	-
White-throated Swift	<i>Aeronautes saxatalis</i>	X	-	-
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	X	-	X
Hairy Woodpecker	<i>Picoides villosus</i>	X	-	-
Northern Flicker	<i>Colaptes auratus</i>	X	-	-
Western Wood-Pewee	<i>Contopus sordidulus</i>	X	-	-
Willow Flycatcher	<i>Empidonax traillii</i>	-	X	-
Gray Flycatcher	<i>Empidonax wrightii</i>	X	-	-
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>	X	-	-
Black Phoebe	<i>Sayornis nigricans</i>	X	X	-
Say's Phoebe	<i>Sayornis saya</i>	X	X	-
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	X	X	X
Cassin's Kingbird	<i>Tyrannus vociferans</i>	X	X	-
Western Kingbird	<i>Tyrannus verticalis</i>	X	X	X
Plumbeous Vireo	<i>Vireo plumbeus</i>	X	-	-
Warbling Vireo	<i>Vireo gilvus</i>	X	-	-
Western Scrub-Jay	<i>Aphelocoma californica</i>	X	X	X
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	X	-	-
Common Raven	<i>Corvus corax</i>	X	X	X
Tree Swallow	<i>Tachycineta bicolor</i>	X	-	-
Violet-green Swallow	<i>Tachycineta thalassina</i>	X	X	-
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	X	X	-
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	X	-	X
Bushtit	<i>Psaltriparus minimus</i>	X	X	X

Species	Scientific Name	BC	LV	SY
Rock Wren	<i>Salpinctes obsoletus</i>	X	X	-
Canyon Wren	<i>Catherpes mexicanus</i>	X	-	-
Bewick's Wren	<i>Thryomanes bewickii</i>	-	X	-
Ruby-crowned Kinglet	<i>Regulus calendula</i>	X	-	-
Gray Catbird	<i>Dumetella carolinensis</i>	-	-	X
Northern Mockingbird	<i>Mimus polyglottos</i>	X	X	-
Sage Thrasher	<i>Oreoscoptes montanus</i>	-	X	-
Virginia's Warbler	<i>Vermivora virginiae</i>	-	X	-
Yellow Warbler	<i>Dendroica petechia</i>	-	X	X
Yellow-rumped Warbler	<i>Dendroica coronata</i>	X	-	-
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	X
Yellow-breasted Chat	<i>Icteria virens</i>	X	X	X
Spotted Towhee	<i>Pipilo maculatus</i>	X	X	-
Canyon Towhee	<i>Pipilo fuscus</i>	X	-	-
Chipping Sparrow	<i>Spizella passerina</i>	X	X	-
Lark Sparrow	<i>Chondestes grammacus</i>	-	X	-
Black-throated Sparrow	<i>Amphispiza bilineata</i>	-	X	-
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	-	X	-
Blue Grosbeak	<i>Guiraca caerulea</i>	X	X	X
Lazuli Bunting	<i>Passerina amoena</i>	X	X	X
Western Meadowlark	<i>Sturnella neglecta</i>	X	X	X
Brown-headed Cowbird	<i>Molothrus ater</i>	X	X	X
Scott's Oriole	<i>Icterus parisorum</i>	X	-	-
House Finch	<i>Carpodacus mexicanus</i>	X	X	X
Lesser Goldfinch	<i>Carduelis psaltria</i>	X	-	X

Appendix 2. Data forms from 2007 Willow Flycatcher surveys in Bluewater Canyon, Lost Valley, and San Ysidro, New Mexico.

Willow Flycatcher Survey and Detection Form (revised April, 2004)

Site Name Bluewater State NM County Cibola  
 USGS Quad Name Prewitt Elevation 2110 feet  meters (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?  Yes  No

Site Coordinates: Start: N 3909199 E 770479 UTM Datum NAD 27 (NAD27 preferred)  
 Stop: N 3909707 E 768610 UTM Zone 12

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

Survey #	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)
1 <u>Sandra Skeba Allison Schact Jennifer Redman</u>	Date <u>5/18/07</u> Start <u>0558</u> Stop <u>0842</u> Total hrs <u>2:44</u>	0	0	0	N	N	N	
2 <u>Sandra Skeba Allison Schact</u>	Date <u>6/7/07</u> Start <u>0550</u> Stop <u>0930</u> Total hrs <u>3:40</u>	0	0	0	N	N	N	
3 <u>Sandra Skeba Allison Schact Sarah Keller</u>	Date <u>6/22/07</u> Start <u>0535</u> Stop <u>0900</u> Total hrs <u>3:25</u>	0	0	0	N	Y	N	
4 <u>Sandra Skeba Allison Schact Keith Mellon</u>	Date <u>7/2/07</u> Start <u>0600</u> Stop <u>0830</u> Total hrs <u>2:30</u>	0	0	0	N	N	N	
5 <u>Sandra Skeba Allison Schact Christina Kreuz</u>	Date <u>7/9/07</u> Start <u>0606</u> Stop <u>0936</u> Total hrs <u>3:30</u>	0	0	0	N	Y	N	
Overall Site Summary (Total resident WIFLs only)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes <input checked="" type="checkbox"/> No		
Total survey hrs <u>15:49</u>		0	0	0	0	If yes, report color combination(s) in the comments section on back of form		

Reporting Individual Gail Garber Date Report Completed 7/18/07  
 US Fish and Wildlife Service Permit # TE 035139-1 AZ Game and Fish Department (or other state) Permit # \_\_\_\_\_

**Submit original form by August 1<sup>st</sup>. Retain a copy for your records.**

Fill in the following information completely. Submit original form by August 1<sup>st</sup>. Retain a copy for your records.

Reporting Individual Gail Garber Phone # (505) 822-9455  
 Affiliation Hawks Aloft, Inc. E-mail gail@hawksaloft.org  
 Site Name Bluewater Date Report Completed 7/18/07

Did you verify that this site name is consistent with that used in previous years? Yes/ No (circle one)  
 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.  
 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): Federal Municipal/County State Tribal Private  
 Name of Management Entity or Owner (e.g., Tonto National Forest) Bureau of Land Management

Length of area surveyed: 2.5 km (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 2-3 predominant tree/shrub species: Willow, Cottonwood, Juniper

Average height of canopy (Do not put a range): 7 m (specify units)

Was surface water or saturated soil present at or adjacent to site? Yes/ No (circle one)

Distance from the site to surface water or saturated soil: 0 m (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes / No (circle one)

If yes, describe in comments section below.

Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features.

Comments (attach additional sheets if necessary)

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

WIFL Detection Locations: 0

Date Detected	N UTM	E UTM	Date Detected	N UTM	E UTM



Willow Flycatcher Survey and Detection Form (revised April, 2004)

Site Name Lost Valley State NM County Sandoval  
 USGS Quad Name San Luis Elevation 1878 feet / meters (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?  Yes  No

Site Coordinates: Start: N 3948911 E 313663 UTM Datum NAD 21 (NAD27 preferred)  
 Stop: N 3946074 E 310832 UTM Zone 13

**\*\* 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)
1 <u>Sandra Skeba</u> <u>Jennifer Lisignoli</u>	Date <u>5/23/07</u> Start <u>0550</u> Stop <u>0935</u> Total hrs <u>3:45</u>	<u>6</u>	<u>0-6</u>	<u>0-6</u>	<u>N</u>	<u>N</u>	<u>Y - cattle grazing above section 2 also fresh hoofprints</u>	<u>No WIFLs actively singing until callback tape played. Last 2 observations may be same bird.</u>
2 <u>Sandra Skeba</u> <u>Jennifer Lisignoli</u>	Date <u>6/13/07</u> Start <u>0530</u> Stop <u>0900</u> Total hrs <u>3:30</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>N</u>	<u>Y - cattle present above the arroyo.</u>	
3 <u>Sandra Skeba</u> <u>Jennifer Lisignoli</u>	Date <u>6/25/07</u> Start <u>0548</u> Stop <u>0834</u> Total hrs <u>2:46</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>Y</u>	<u>Y - cattle above arroyo, prints inside streambed</u>	
4 <u>Sandra Skeba</u> <u>Allison Schact</u> <u>Maria Lavender</u>	Date <u>7/3/07</u> Start <u>0555</u> Stop <u>0855</u> Total hrs <u>3:00</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>Y</u>	<u>N</u>	
5 <u>Sandra Skeba</u> <u>Allison Schact</u> <u>Christina Kreuz</u>	Date <u>7/10/07</u> Start <u>0545</u> Stop <u>0900</u> Total hrs <u>3:15</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>Y</u>	<u>N</u>	
Overall Site Summary (Total resident WIFLs only)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, report color combination(s) in the comments section on back of form		
Total survey hrs <u>16:16</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>			

Reporting Individual Gail Garber Date Report Completed 7/18/07  
 US Fish and Wildlife Service Permit # TE835139-1 AZ Game and Fish Department (or other state) Permit # \_\_\_\_\_

*Submit original form by August 1<sup>st</sup>. Retain a copy for your records.*

Fill in the following information completely. Submit original form by August 1<sup>st</sup>. Retain a copy for your records.

Reporting Individual Gail Garber Phone # (505) 828-9455  
 Affiliation Hawks Aloft, Inc. E-mail gail@hawksaloft.org  
 Site Name Lost Valley Date Report Completed 7/18/07

Did you verify that this site name is consistent with that used in previous years? (Yes) No (circle one)  
 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.  
 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): (Federal) Municipal/County State Tribal Private  
 Name of Management Entity or Owner (e.g., Tonto National Forest) Bureau of Land Management

Length of area surveyed: 2 km (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 2-3 predominant tree/shrub species: Russian Olive, Salt Cedar, Cottonwood

Average height of canopy (Do not put a range): 8 m (specify units)

Was surface water or saturated soil present at or adjacent to site? (Yes) No (circle one)  
 Distance from the site to surface water or saturated soil: 0 m (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (No) (circle one)  
 If yes, describe in comments section below.

Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features.

Comments (attach additional sheets if necessary)  
This is a bottomland arroyo. Because of patch width, the length of habitat surveyed does not fully represent the area of habitat surveyed.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

WIFL Detection Locations: 6

Date Detected	N UTM	E UTM	Date Detected	N UTM	E UTM
5/23/07	3948226	313497	5/23/07	3946301	310900
5/23/07	3948400	313558	5/23/07	3946297	311077
5/23/07	3948782	313715			
5/23/07	3948713	313491			

Willow Flycatcher Survey and Detection Form (revised April, 2004)

Site Name San Ysidro State NM County Sandoval  
 USGS Quad Name San Ysidro Elevation 1626 feet / (meters) (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?  Yes  No

Site Coordinates: Start: N 3934934 E 338507 UTM Datum NAD27 (NAD27 preferred)  
 Stop: N 3935182 E 337714 UTM Zone 13

**\*\* 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)
1 <u>Gail Garber</u>	Date <u>5/17/07</u> Start <u>0611</u> Stop <u>0750</u> Total hrs <u>1:39</u>	○	○	○	N	Y	Y	No water present only moist soil
2 <u>Gail Garber</u>	Date <u>6/8/07</u> Start <u>0555</u> Stop <u>0709</u> Total hrs <u>1:14</u>	○	○	○	N	Y	Y	
3 <u>Gail Garber</u>	Date <u>6/22/07</u> Start <u>0557</u> Stop <u>0658</u> Total hrs <u>1:01</u>	○	○	○	N	Y	Y	
4 <u>Gail Garber</u>	Date <u>6/29/07</u> Start <u>0558</u> Stop <u>0710</u> Total hrs <u>1:12</u>	○	○	○	N	Y	Y	
5 <u>Gail Garber</u>	Date <u>7/11/07</u> Start <u>0600</u> Stop <u>0700</u> Total hrs <u>1:00</u>	○	○	○	N	Y	Y	
Overall Site Summary (Total resident WIFLs only)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, report color combination(s) in the comments section on back of form		
Total survey hrs <u>6:03</u>		○	○	○	○			

Reporting Individual Gail Garber Date Report Completed 7/18/07  
 US Fish and Wildlife Service Permit # TE835139-1 AZ Game and Fish Department (or other state) Permit # \_\_\_\_\_

*Submit original form by August 1<sup>st</sup>. Retain a copy for your records.*

Fill in the following information completely. Submit original form by August 1<sup>st</sup>. Retain a copy for your records.

Reporting Individual Gail Garber Phone # (505) 828-9455  
 Affiliation Hawks Aloft, Inc. E-mail gail@hawksaloft.org  
 Site Name San Ysidro Date Report Completed 7/18/07

Did you verify that this site name is consistent with that used in previous years? (Yes) No (circle one)  
 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.  
 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): (Federal) Municipal/County State Tribal Private  
 Name of Management Entity or Owner (e.g., Tonto National Forest) Bureau of Land Management

Length of area surveyed: 0.75 km (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 2-3 predominant tree/shrub species: Russian Olive, Salt Cedar, Cottonwood

Average height of canopy (Do not put a range): 6 m (specify units)

Was surface water or saturated soil present at or adjacent to site? Yes (No) (circle one)  
 Distance from the site to surface water or saturated soil: \_\_\_\_\_ (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (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 site and describe any unique habitat features.

Comments (attach additional sheets if necessary)

Survey area not completely linear, therefore the length of habitat does not fully represent the amount of area covered. Although this site has supported WIFLs in past years (probable migrants), no water was present in the marsh area during any of the 2007 surveys.

WIFL Detection Locations: 0

Date Detected	N UTM	E UTM	Date Detected	N UTM	E UTM