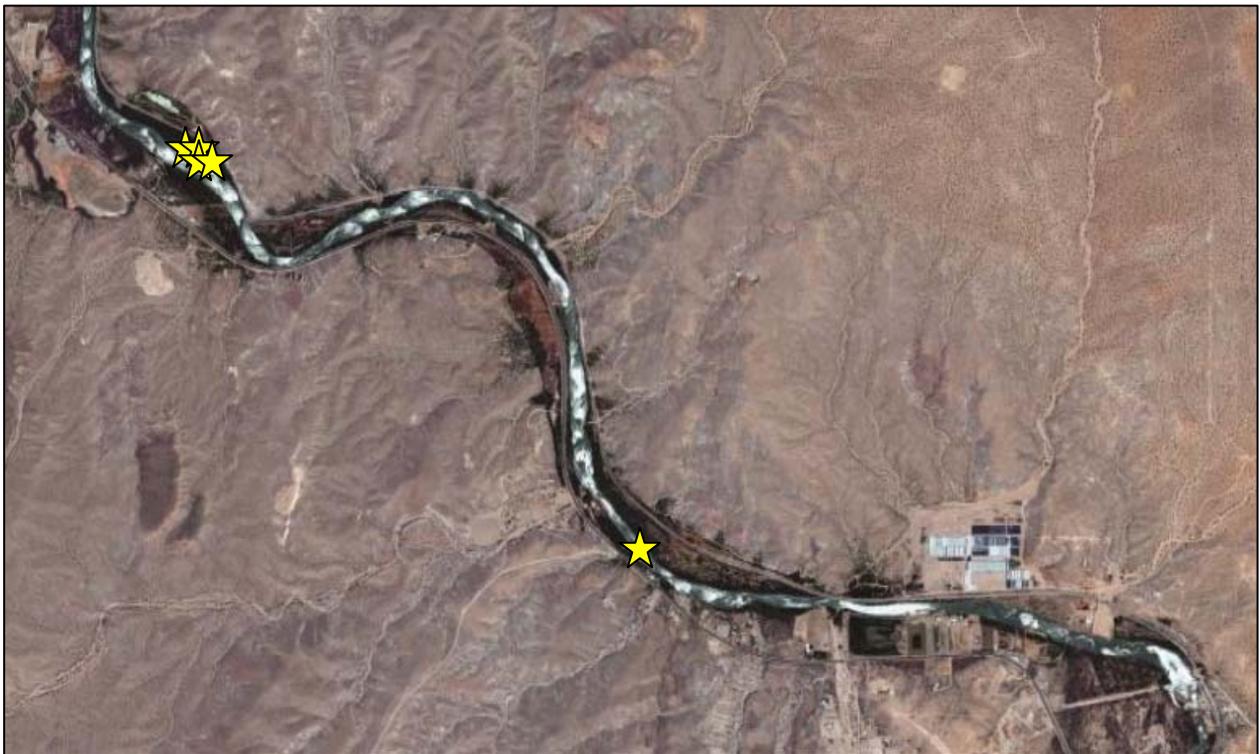


# RECLAMATION

*Managing Water in the West*

## 2008 Southwestern Willow Flycatcher Survey Results

Selden Canyon/Radium Springs, New Mexico



U.S. Department of the Interior  
Bureau of Reclamation  
Fisheries and Wildlife Resources  
Denver, Colorado

April 2009

## **Mission Statements**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

# 2008 Southwestern Willow Flycatcher Survey Results

Selden Canyon/Radium Springs, New Mexico

*prepared for*

**Albuquerque Area Office**  
555 Broadway NE, Suite 100  
Albuquerque, NM 87102

*by*

**Technical Service Center**  
**Fisheries and Wildlife Resources Group**  
Darrell Ahlers, Wildlife Biologist  
Dave Moore, Wildlife Biologist



U.S. Department of the Interior  
Bureau of Reclamation  
Fisheries and Wildlife Resources  
Denver, Colorado

April 2009



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# Executive Summary

During the summer of 2008, the Bureau of Reclamation (Reclamation) conducted surveys and nest monitoring of the federally endangered Southwestern Willow Flycatcher along approximately 8 kilometers of the Rio Grande immediately upstream of Leasburg Dam, Dona Ana County, NM. Three large patches of habitat were surveyed totaling approximately 2.25 km of riparian corridor. Surveys were conducted in cooperation with the World Wildlife Fund in order to supplement existing data for this site in the rangewide database and also to collect baseline data in advance of a proposed Reclamation habitat restoration project. Nine WIFLs were documented including three resident SWFL breeding pairs, two unpaired males and one migrant. The three pairs produced three nests; one was depredated and the fates of two were unknown.

# Introduction

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*; SWFL) is a State-listed and Federally-endangered subspecies of the Willow Flycatcher (*Empidonax traillii*; WIFL). It is an insectivorous, Neotropical migrant that nests in dense riparian or wetland vegetation in the Southwestern United States (Figure 1). SWFLs generally arrive at their breeding grounds between early May and early June; by late July or August, they depart for wintering areas in Mexico, Central America, and northern South America (Sogge et al. 1997, USFWS 2002).

Recent studies indicate that SWFL populations have declined across their range (USFWS 2002). The primary causes of declining populations are habitat loss and modification (USFWS 2002). The U.S. Fish and Wildlife Service (USFWS) officially listed the SWFL as endangered in February 1995 (USFWS 1995). The SWFL is also listed as endangered or a species of concern by the States of Arizona, California, Colorado, New Mexico, Texas, and Utah (Sogge et. al. 1997, TPWD 2005). A recovery plan for the SWFL was finalized in August 2002. To accompany the recovery plan, a series of issue papers associated with the recovery of the endangered SWFL has also been prepared by the Recovery Team. These papers address current issues and recommend management alternatives in regard to Brown-headed Cowbird (*Molothrus ater*) parasitism, livestock grazing, water management, exotic vegetation, habitat restoration, fire management, and recreational impacts (USFWS 2002). In October 2005, USFWS designated Critical Habitat for the SWFL along the Middle Rio Grande between the Isleta Pueblo and Elephant Butte Reservoir (USFWS 2005).

Presence/absence surveys are conducted to determine the distribution and abundance of the endangered SWFL during the relatively brief breeding season when they become a seasonal resident of the Southwestern United States. Bureau of Reclamation (Reclamation) personnel have conducted presence/absence surveys and nest monitoring during the May to July survey season within the Rio Grande Basin since 1995. The 2008 presence/absence surveys for WIFLs were conducted within selected patches of floodplain riparian habitat owned by private parties and New Mexico State University between Selden Canyon and Leasburg Dam (See Appendix A for map of area surveyed). Surveys were conducted between May 23 and July 7, 2008. Due to the distance of these sites from other WIFL studies in the Middle Rio Grande, nest searching and monitoring was only conducted on the three survey dates by permitted biologists.



Figure 1. Breeding range of the SWFL (adapted from Unitt 1987 and Browning 1993).

## Goals and Objectives

The goal of the presence/absence surveys and nest monitoring conducted in 2008 was to contribute to current baseline data regarding the population status and distribution of SWFLs in the southern Rio Grande Basin of New Mexico.

## Methods

### Study Area

Surveys and nest monitoring were conducted along the Rio Grande within an 8 km reach upstream of Leasburg Dam (adjacent to the town of Radium Springs). This reach was divided into two different survey sites; Selden Canyon (upstream) and Radium Springs (downstream). See Appendix A for maps of survey sites. Due to a large patchwork of private land ownership, state ownership (New Mexico State University) and limited available habitat, only three patches were actually surveyed. These include approximately 1.25 km of riparian habitat on the east side of the river and two patches encompassing approximately 1 km of riparian habitat on the west side of the river. Habitat within these patches consists of a mixture of saltcedar (*Tamarix* sp.) and coyote willow (*Salix exigua*), with saltcedar being dominant in most areas. Very little overbank flooding occurs in these sites and the vegetation is relatively decadent.

### Presence/Absence Surveys

All sites were surveyed using the repeated call-playback method in accordance with the protocols established in Sogge et al. (1997) and the USFWS revised protocol (USFWS 2000). Surveys were conducted a minimum of 5 days apart, generally between 0530 and 1030 or 1100 MDT (depending on weather conditions), by trained and permitted personnel. Areas inaccessible by road were accessed by canoe. Survey forms were completed daily.

The first survey conducted in late May increases the likelihood of detection, since territorial males are more vocal when establishing territories than after nesting has begun. It was anticipated that migrant WIFLs (Willow Flycatchers that are not the *extimus* subspecies) would also be detected. The second and third surveys were conducted between early June and mid-July to (1) confirm the establishment of territories and/or nesting, (2) detect late settling males, and (3) determine which sites remained occupied throughout the breeding season. WIFLs documented on or after June 10 are generally considered resident birds (i.e., SWFLs). Each site was surveyed as thoroughly as conditions would allow.

### Nest Searches/Monitoring

Nest searches by a permitted biologist were conducted upon discovery of a breeding or suspected breeding SWFL pair. Due to the travel required to arrive at these sites, nest searching and/or monitoring were only conducted during the three survey days. Thus, consistent monitoring of nesting efforts was not conducted which prevented insight into nesting chronology and nest fates for nests in these sites. Aside from the frequency of nest visits, nest searches and monitoring were conducted using methods outlined in Martin and Geupel (1993) and the Southwestern Willow Flycatcher Nest Monitoring Protocol (Rourke et al. 1999). The nest area was located by observing diagnostic SWFL breeding behavior and listening for calls within the habitat patch. Once located,

## Results

the potential nest site was approached cautiously with minimum disturbance to vegetation. Typically, adult SWFLs did not immediately reveal nest locations. All suitable midstory trees and shrubs in the suspected area were carefully inspected until the characteristic small, cup-shaped nest (as described in Tibbitts et al. [1994]) was found. Nests were usually located within a few minutes of nest search initiation.

At all nest sites, physical data required by the Willow Flycatcher Nest Site Data Form were collected and recorded on appropriate forms. Nest contents were not monitored during the nest building/egg laying stages—the period when disturbance is most likely to cause adults to abandon the nest—or as the suspected fledging date approached when nestlings are likely to be force-fledged as a result of disturbance. Nests with eggs/young were examined quickly using a mirror mounted on a telescopic pole. Nesting chronology was then estimated following the initial search and examination.

In 2002, the practice of adding or removing BHCO eggs from parasitized nests was initiated when necessary and possible. This activity was continued in 2008. SWFL eggs were never disturbed and time spent at the nest was minimized.

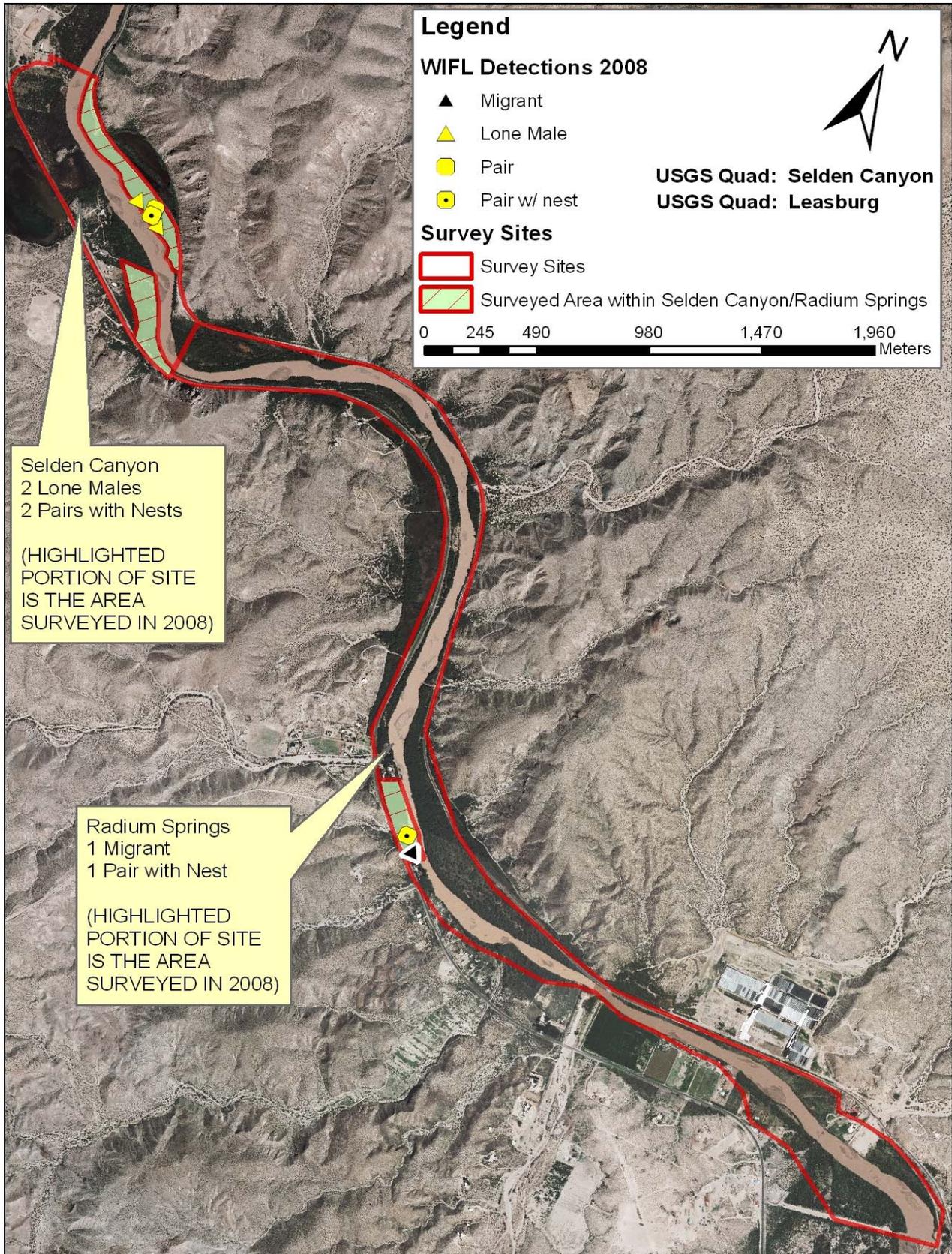
# Results

## Presence/Absence Surveys

During presence/absence surveys conducted from May 23 through July 7, nine WIFLs were detected (six males and three females – Figure 2). One migrant WIFL was detected only on May 23 in the Radium Springs site. The other eight WIFLs consisted of three breeding pairs and two unpaired male territories. Two pairs and the two unpaired male territories were located on the east side of the river in the Selden Canyon site and one pair was located on the west side of the river in the Radium Springs site. All were located in dense, mature saltcedar interspersed with large (up to 6 cm diameter) coyote willows. See Appendix A for survey forms.

## Nest Searches/Monitoring

The three SWFL pairs produced three nests. See Appendix B for detailed nest site and nest monitoring data forms. With only one or two visits apiece, it is difficult to determine fates. Based on nesting chronology and best biological opinion, it appears that one was predated after containing one SWFL egg. Fates of the other two are unknown.



**Figure 2.** Locations of 2008 WIFL detections within Selden Canyon and Radium Springs survey sites.

## Discussion

### Presence/Absence Surveys

Sporadic WIFL surveys have been conducted within this reach between 1996 and 2004. However, it is difficult to determine which portions of the sites were surveyed during which years and during some years no surveys were conducted. Between 1999 and 2004, during years when these sites (or portions thereof) were surveyed, an average of six territories were documented, with a high of eight in 2002. It is unclear if all of these territories were located in the same patches where the six SWFL territories were located during 2008. Either way, these territory numbers seem to indicate a small but somewhat stable population is present within this reach of the Rio Grande.

Conversely, occupied habitat in this reach may be declining in quality. Much of the native vegetative component is dead or dying and the lack of overbank flooding and/or an elevated groundwater table prevents recolonization by native vegetation. The remaining saltcedar stands will retain suitability longer than native vegetation but even saltcedar habitat can not retain suitability forever. Thus, in the absence of a major overbank event or targeted restoration, the SWFL population in this reach may be in danger of vanishing.

### Nest Searches/Monitoring

The lack of periodic nest visits in this reach makes it difficult to determine limiting factors to this population. Similar smaller populations within the Rio Grande basin have experienced significant depredation and BHCO brood parasitism which have not allowed these populations to expand. Typically, saltcedar dominated habitats have experienced higher BHCO parasitism rates (Moore and Ahlers 2008). However, several years of consistent surveys and nest monitoring in this reach are necessary to determine population trends and if population growth is being limited by nest variables such as parasitism, predation or productivity.

## Conclusions

While WIFL surveys in the Selden Canyon/Radium Springs sites in 2008 did document the presence of six SWFL territories, due to the inconsistent survey effort of the past several years, it is unclear if this population is expanding, contracting or stable. Habitat appears currently suitable for additional territories. However, the lack of dynamics and river fluctuation in this reach of the Rio Grande has severely limited the potential for regeneration of new SWFL habitat and the preservation of existing habitat patches. Future surveys in this reach will determine the persistence of this population.

## Recommendations

- Presence/absence surveys should continue in the Selden Canyon and Radium Springs sites to monitor the status of the SWFL population. These surveys will provide data regarding population trends and colonization of new habitat patches.
- Nest monitoring should continue, to the degree possible, in areas where pairing activity is documented. These data will provide insight into factors limiting recruitment and population growth, such as parasitism and predation rates.
- Addling/removal of BHCO eggs from parasitized SWFL nests should continue, provided it can be done with minimal disturbance to the nest and the adult SWFLs.

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# **Appendix A – Willow Flycatcher Survey Forms**

Appendix A – Willow Flycatcher Survey Forms

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

Site Name: Selden Canyon County: Dona Ana State: New Mexico  
 USGS Quad Name: Selden Canyon Elevation: 1219m

*Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?* **YES**

Site Coordinates: Start: N 3,600,422 E 313,830 UTM Zone: 13  
 Stop: N 3,599,359 E 314,703 Datum: NAD83

**\*\*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 Found	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Recent livestock use? Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs/breeding, nest found, habitat description)	Coordinates			
									Bird(s)#	Sex	UTM N	UTM E
<b>Survey # 1</b> Observer(s): R. Doster D. Ahlers	Date:	3	0	3	N	Y	N					
	5/23/2008								1	M	3,599,990	314,247
	Start:								1	M	3,599,977	314,327
	7:30								1	M	3,599,920	314,373
	Stop:											
	10:45											
Total hrs:												
6:50												
<b>Survey # 2</b> Observer(s): D. Ahlers E. Best	Date:	6	2	4	Y	Y	N	Found 1 nest.				
	6/14/2008								2	M/F	3,599,977	314,327
	Start:								2	M/F	3,599,944	314,325
	7:30								1	M	3,599,990	314,247
	Stop:								1	M	3,599,920	314,373
	11:00											
Total hrs:												
7:00												
<b>Survey # 3</b> Observer(s): E. Best	Date:	4	1	3	Y	Y	N	Nest found for 2nd pair. Pair with nest from last survey period absent.				
	7/7/2008								2	M/F	3,599,944	314,325
	Start:								1	M	3,599,990	314,247
	7:00								1	M	3,599,920	314,373
	Stop:											
	11:30											
Total hrs:												
4:50												
<b>Survey # 4</b> Observer(s):	Date:											
	Observer(s):											
	Start:											
	Stop:											
	Total hrs:											
<b>Survey # 5</b> Observer(s):	Date:											
	Observer(s):											
	Start:											
	Stop:											
	Total hrs:											
Overall Site Summary (Total resident WIFLs only)	Adults	6	Pairs	2	Territories	4	Nests	2	Were any WIFLs color-banded? No If yes, report color combination(s) in the comments section on back of form			
	Total survey hrs:	18.00										

Reporting Individual Darrell Ahlers Date Report Completed October 31, 2008  
 US Fish and Wildlife Service Permit # TE819475-0 AZ Game & Fish Department (or other state) Permit # N/A

***Submit original form by August 1st. 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 Darrell Ahlers Phone # (303) 445-2233  
 Affiliation Bureau of Reclamation E-mail dahlers@do.usbr.gov  
 Site Name Selden Canyon Date report Completed 10/31/2008

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) Private Landowners and NMSU

Length of area surveyed: 1.25km (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: Coyote willow, saltcedar

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: 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.

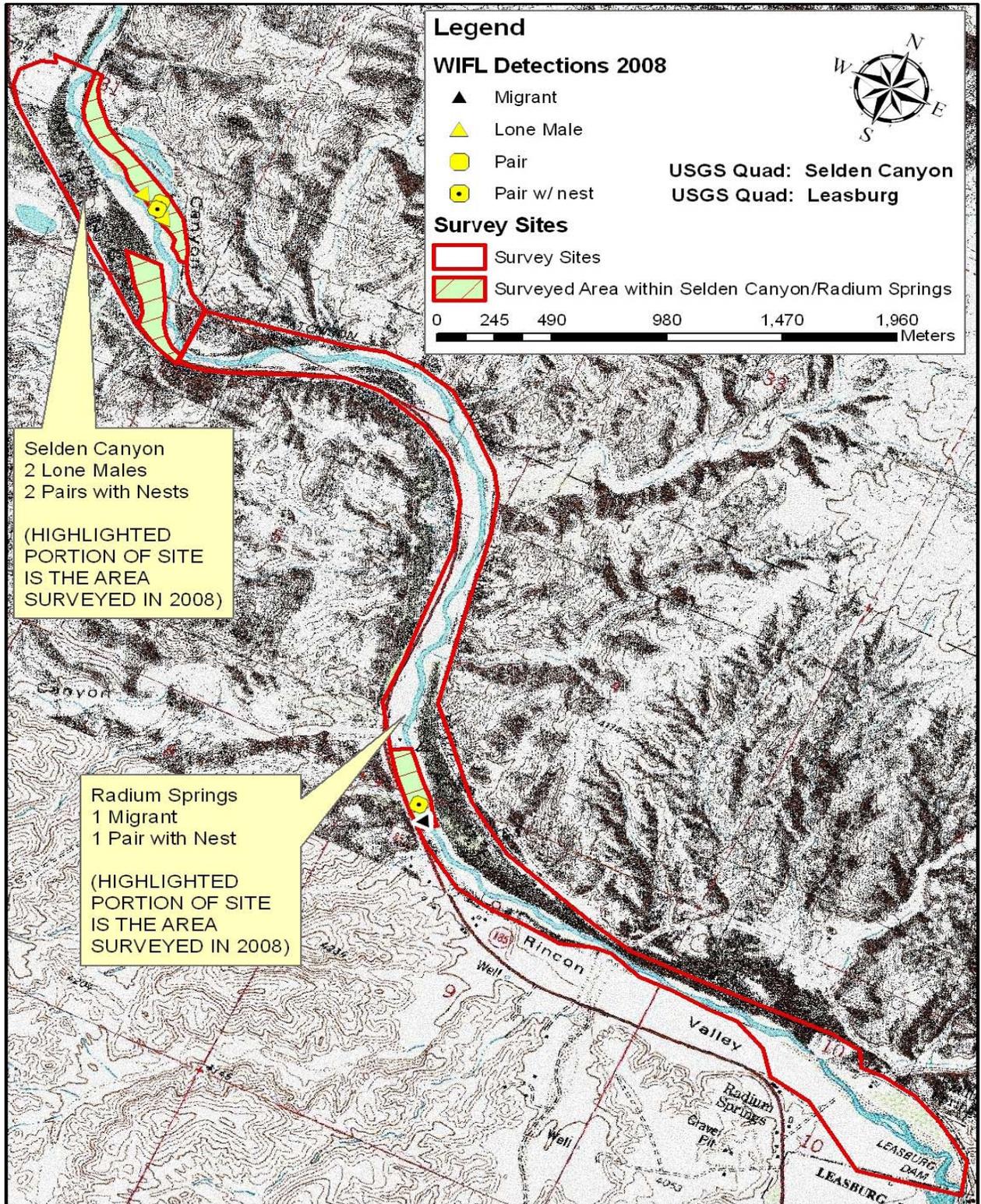
Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow 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)

Survey area includes both sides of Rio Grande. Portion on west side of Rio Grande from 314442 E, 3599714 N to 313830 E, 3600422 N was not surveyed due to access (approx. 1km). Site's very dry with no evidence of overbank flooding.

Additional WIFL Detection Locations:

Birds(s) #	Sex	Date Detected	UTM N	UTM E	Birds(s) #	Sex	Date Detected	UTM N	UTM E



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

Site Name: Radium Springs County: Dona Ana State: New Mexico  
 USGS Quad Name: Selden Canyon, Leasburg Elevation: 1219m

*Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?* YES

Site Coordinates: Start: N 3,597,172 E 319,289 UTM Zone: 13  
 Stop: N 3,599,359 E 314,703 Datum: NAD83

**\*\*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 Found	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Recent livestock use? Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs/breeding, nest found, habitat description)	Coordinates			
									Bird(s)#	Sex	UTM N	UTM E
Survey # 1 Observer(s): D. Ahlers R. Doster	Date: 5/23/2008 Start: 5:30 Stop: 6:15 Total hrs: 1.50	1	0	1	N	N	N	Dense mature saltcedar with some coyote willow.	1	M	3,597,816	316,574
Survey # 2 Observer(s): D. Ahlers E. Best	Date: 6/14/2008 Start: 5:30 Stop: 6:15 Total hrs: 1.50	1	0	1	N	N	N	Could possibly be the same WIFL as detected in survey one, however this WIFL found was about 100 meters north of the previous detection.	1	M	3,597,875	316,517
Survey # 3 Observer(s): E. Best	Date: 7/7/2008 Start: 5:00 Stop: 6:00 Total hrs: 1.00	2	1	1	Y	Y	N	Nest found for this pair.	2	M/F	3,597,875	316,517
Survey # 4 Observer(s):	Date: Start: Stop: Total hrs:											
Survey # 5 Observer(s):	Date: Start: Stop: Total hrs:											
Overall Site Summary (Total resident WIFLs only)		Adults 2	Pairs 1	Territories 1	Nests 1	Were any WIFLs color-banded? No If yes, report color combination(s) in the comments section on back of form						
Total survey hrs:	4.00											

Reporting Individual Darrell Ahlers Date Report Completed October 31, 2008  
 US Fish and Wildlife Service Permit # TE819475-0 AZ Game & Fish Department (or other state) Permit # N/A

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

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Reporting Individual Darrell Ahlers Phone # (303) 445-2233  
 Affiliation Bureau of Reclamation E-mail dahlers@do.usbr.gov  
 Site Name Radium Springs Date report Completed 10/31/2008

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) Private and NMSU

Length of area surveyed: 1km (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: Coyote willow, saltcedar

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: 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.

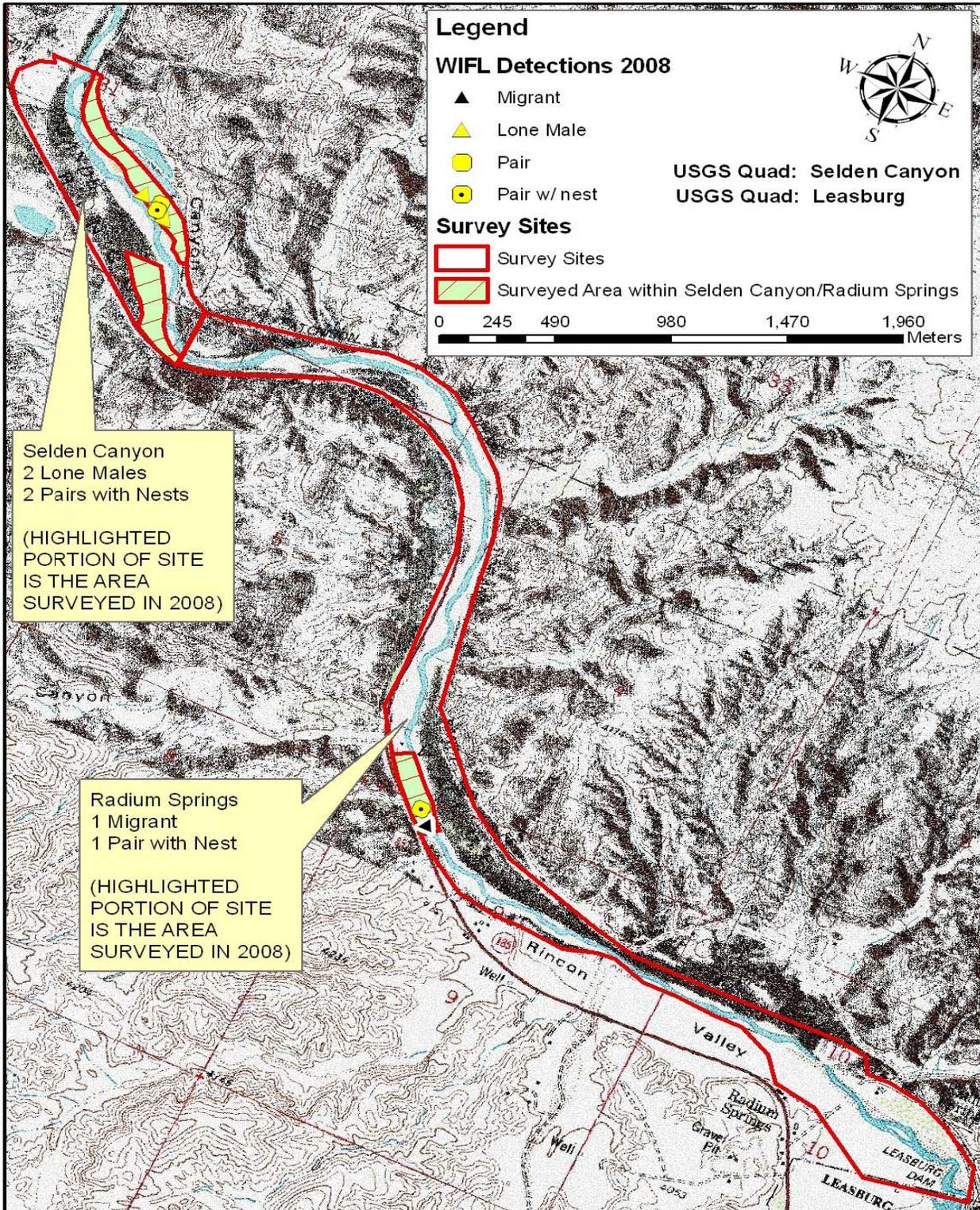
Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow 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)

Radium Springs site covers a 5km reach of the Rio Grande. We surveyed approximately 1km on the west bank from 316380 E, 3598079 N to 316596 E, 3597792 N.  
Site is dry with no evidence of overbank flooding.

Additional WIFL Detection Locations:

Birds(s) #	Sex	Date Detected	UTM N	UTM E	Birds(s) #	Sex	Date Detected	UTM N	UTM E



## **Appendix B – Willow Flycatcher Nest Monitoring Forms**

**Willow Flycatcher Nest Record Form (2008)**

Return form to the AGFD-Nongame Branch (2221 W. Greenway Rd., Phoenix, AZ 85023) and keep a copy for your files.

AGFD site no.: \_\_\_\_\_ Site name: SC (See maps in report for nest locations) Nest no.: P2N1

**IMS Nest no.:**

1) How was nest located: PB (Location codes: **PB**= parent behavior, **F**= flush, **NBC**= non-behavior cue, **SS**= systematic search, **L**= luck, **PY**= from previous yrs nest, **YB**= young behavior, **O**= other)

2) Nest Height: 5.0 m 3) Nest Substrate: TASP (eg. TASP=tamarisk, SAGO=Gooding willow, POFR=cottonwood, SAEX=Coyote willow)

Bird 1: Color band combination: N/A Band Number: N/A Female  
 Bird 2: Color band combination: N/A Band Number: N/A Male

**Willow Flycatcher**

Trans dates	B D	(T/F)
6/14/08		Found
≤6/14/08		First egg
N/A		Clutch completion
N/A		Hatching
~7/7/08		Fledged or <b>Failed</b>

**Willow Flycatcher**

No.	Complete? (T/F)
1	Eggs
0	Nestlings
0	Fledglings (Presumed)
0	Fledglings (Confirmed)

**Cowbird**

Trans dates	B D	(T/F)
N/A		First egg
N/A		Hatching
N/A		Fledged

**Cowbird**

No.	Complete? (T/F)
0	Eggs
0	Nestlings
0	Fledglings

**Outcome** (Record code & describe): PE: Predated

**Outcome codes:** UN= unknown; FY= fledged young, with at least one young seen leaving or in the vicinity of nest; FP= fledged young, as determined by parents behaving as if dependent fledgling(s) nearby; FU= suspected fledging of at least one young; FC= fledged at least one host young with cowbird parasitism; FD= Nest depredated, the confirmed fledging of at least one young; PO= predation observed; PE= probable predation, nest empty and intact. Fledging of young unlikely; PD= predation, damage to nest structure; PC= probable predation by cowbird; AB= nest abandoned prior to egg(s) being laid; DE= deserted with egg(s) or young; AC= nest abandoned due to cowbird, cowbird egg(s) found in nest that was absent on previous nest check; CO= failure due to cowbird, host attempted to raise cowbird young. No host young were fledged from the nest; WE= failure due to weather; HA= failure due to human activities; IN= failure, entire clutch infertile; OT= other.

**Mayfield Success**

(WIFL) Period	# Exposure days	Success
Egg Laying	N/A	N/A
Incubation	N/A	N/A
Nestling	N/A	N/A

**Mayfield success codes:** S= successful; D= depredated; U= status unknown/nest occupied- fate unknown; M= mortality other than predation; A= abandoned with host egg(s) or young; Z= abandoned, no (zero) eggs laid.

**WIFL Nest Monitoring Log**

Date	Time	Obs	Mon Type	Stage	Adult pres.	# WF Egg	# CB Egg	# WF Nstl	# CB Nstl	#WF Fldg	Age Yng	Comments
6/14		DA	O	I	Y	1	-	-	-	-	-	
7/7		EB	O	-	N	-	-	-	-	-	-	

**WILLOW FLYCATCHER NEST SITE DATA FORM**

**(Do not approach an active nest or nest tree without obtaining appropriate state and federal permits)**

AGFD site number: \_\_\_\_\_ Site name: SC Nest #: P2N1

Biologist(s) name: Vicky Johanson Phone: 303-445-2292

Nest substrate spp: TASP

Tree Health: L (Codes: **L**= live, **PD-NL**= partly dead, nest in live portion, **PD-ND**= partly dead, nest in dead portion, **D**= dead)

Substrate Ht (m): 6.0

Nest Ht (m): 5.0

Canopy Ht (m): 7.0

Distance to foliage edge (m): 0.5

Distance to water when the nest was first found: 40 m, when the nest was last active: 40 m

Water type: Rio Grande

DBH: 6 cm

Number support branches: 5

UTM coordinates or file name (if available): Nad83 UTM Zone 13 N 3599977 N 314327 E

Comments: Soil dry under nest when active.

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**Return form to the AGFD - Nongame Branch, Willow Flycatcher Project,  
2221 W. Greenway Rd., Phoenix, AZ 85023 and keep a copy for your files.**

**Willow Flycatcher Nest Record Form (2008)**

Return form to the AGFD-Nongame Branch (2221 W. Greenway Rd., Phoenix, AZ 85023) and keep a copy for your files.

AGFD site no.: \_\_\_\_\_ Site name: SC (See maps in report for nest locations) Nest no.: P3N1

**IMS Nest no.:**

1) How was nest located: PB (Location codes: **PB**= parent behavior, **F**= flush, **NBC**= non-behavior cue, **SS**= systematic search, **L**= luck, **PY**= from previous yrs nest, **YB**= young behavior, **O**= other)

2) Nest Height: 5.0 m 3) Nest Substrate: TASP (eg. TASP=tamarisk, SAGO=Gooding willow, POFR=cottonwood, SAEX=Coyote willow)

Bird 1: Color band combination: N/A Band Number: N/A Female  
 Bird 2: Color band combination: N/A Band Number: N/A Male

Willow Flycatcher			Willow Flycatcher			Cowbird			Cowbird		
Trans dates	B D	(T/F)	No.	Complete? (T/F)		Trans dates	B D	(T/F)	No.	Complete? (T/F)	
7/7/08		Found	N/A		Eggs	N/A		First egg	0		Eggs
N/A		First egg	N/A		Nestlings	N/A		Hatching	0		Nestlings
N/A		Clutch completion	N/A		Fledglings (Presumed)	N/A		Fledged	0		Fledglings
N/A		Hatching	N/A		Fledglings (Confirmed)						
N/A		Fledged or Failed									

**Outcome** (Record code & describe): UN: Outcome unknown.

<p><b>Outcome codes:</b> UN= unknown; <b>FY</b>= fledged young, with at least one young seen leaving or in the vicinity of nest; <b>FP</b>= fledged young, as determined by parents behaving as if dependent fledgling(s) nearby; <b>FU</b>= suspected fledging of at least one young; <b>FC</b>= fledged at least one host young with cowbird parasitism; <b>FD</b>= Nest depredated, the confirmed fledging of at least one young; <b>PO</b>= predation observed; <b>PE</b>= probable predation, nest empty and intact. Fledging of young unlikely; <b>PD</b>= predation, damage to nest structure; <b>PC</b>= probable predation by cowbird; <b>AB</b>= nest abandoned prior to egg(s) being laid; <b>DE</b>= deserted with egg(s) or young; <b>AC</b>= nest abandoned due to cowbird, cowbird egg(s) found in nest that was absent on previous nest check; <b>CO</b>= failure due to cowbird, host attempted to raise cowbird young. No host young were fledged from the nest; <b>WE</b>= failure due to weather; <b>HA</b>= failure due to human activities; <b>IN</b>= failure, entire clutch infertile; <b>OT</b>= other.</p>	Mayfield Success		
	(WIFL) Period	# Exposure days	Success
	Egg Laying	N/A	N/A
	Incubation	N/A	N/A
	Nestling	N/A	N/A
<p><b>Mayfield success codes:</b> S= successful; D= depredated; U= status unknown/nest occupied- fate unknown; M= mortality other than predation; A= abandoned with host egg(s) or young; Z= abandoned, no (zero) eggs laid.</p>			

**WIFL Nest Monitoring Log**

Date	Time	Obs	Mon Type	Stage	Adult pres.	# WF Egg	# CB Egg	# WF Nstl	# CB Nstl	#WF Fldg	Age Yng	Comments
7/7		EB	O	I	Y	-	-	-	-	-	-	Not mirrored.

**WILLOW FLYCATCHER NEST SITE DATA FORM**

**(Do not approach an active nest or nest tree without obtaining appropriate state and federal permits)**

AGFD site number: \_\_\_\_\_ Site name: SC Nest #: P3N1

Biologist(s) name: Vicky Johanson Phone: 303-445-2292

Nest substrate spp: TASP

Tree Health: L (Codes: **L**= live, **PD-NL**= partly dead, nest in live portion, **PD-ND**= partly dead, nest in dead portion, **D**= dead)

Substrate Ht (m): 8.0

Nest Ht (m): 5.0

Canopy Ht (m): 8.0

Distance to foliage edge (m): 2

Distance to water when the nest was first found: 0 m, when the nest was last active: 0 m

Water type: Rio Grande

DBH: N/A

Number support branches: 6

UTM coordinates or file name (if available): Nad83 UTM Zone 13 N 3599944 N 314325 E

Comments: Flooded under nest when active.

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**Willow Flycatcher Nest Record Form (2008)**

Return form to the AGFD-Nongame Branch (2221 W. Greenway Rd., Phoenix, AZ 85023) and keep a copy for your files.

AGFD site no.: \_\_\_\_\_ Site name: RS (See maps in report for nest locations) Nest no.: P1N1

**IMS Nest no.:**

1) How was nest located: PB (Location codes: **PB**= parent behavior, **F**= flush, **NBC**= non-behavior cue, **SS**= systematic search, **L**= luck, **PY**= from previous yrs nest, **YB**= young behavior, **O**= other)

2) Nest Height: 3.0 m 3) Nest Substrate: SAEX (eg. TASP=tamarisk, SAGO=Gooding willow, POFR=cottonwood, SAEX=Coyote willow)

Bird 1: Color band combination: N/A Band Number: N/A Female  
 Bird 2: Color band combination: N/A Band Number: N/A Male

Willow Flycatcher			Willow Flycatcher			Cowbird			Cowbird		
Trans dates	B D	(T/F)	No.	Complete? (T/F)		Trans dates	B D	(T/F)	No.	Complete? (T/F)	
7/7/08		Found	0		Eggs	N/A		First egg	0		Eggs
N/A		First egg	0		Nestlings	N/A		Hatching	0		Nestlings
N/A		Clutch completion	0		Fledglings (Presumed)	N/A		Fledged	0		Fledglings
N/A		Hatching	0		Fledglings (Confirmed)						
N/A		Fledged or Failed									

**Outcome** (Record code & describe): CO: Parasitized

<p><b>Outcome codes:</b> UN= unknown; <b>FY</b>= fledged young, with at least one young seen leaving or in the vicinity of nest; <b>FP</b>= fledged young, as determined by parents behaving as if dependent fledgling(s) nearby; <b>FU</b>= suspected fledging of at least one young; <b>FC</b>= fledged at least one host young with cowbird parasitism; <b>FD</b>= Nest depredated, the confirmed fledging of at least one young; <b>PO</b>= predation observed; <b>PE</b>= probable predation, nest empty and intact. Fledging of young unlikely; <b>PD</b>= predation, damage to nest structure; <b>PC</b>= probable predation by cowbird; <b>AB</b>= nest abandoned prior to egg(s) being laid; <b>DE</b>= deserted with egg(s) or young; <b>AC</b>= nest abandoned due to cowbird, cowbird egg(s) found in nest that was absent on previous nest check; <b>CO</b>= failure due to cowbird, host attempted to raise cowbird young. No host young were fledged from the nest; <b>WE</b>= failure due to weather; <b>HA</b>= failure due to human activities; <b>IN</b>= failure, entire clutch infertile; <b>OT</b>= other.</p>	Mayfield Success		
	(WIFL) Period	# Exposure days	Success
	Egg Laying	N/A	N/A
	Incubation	N/A	N/A
	Nestling	N/A	N/A
<p><b>Mayfield success codes:</b> S= successful; D= depredated; U= status unknown/nest occupied- fate unknown; M= mortality other than predation; A= abandoned with host egg(s) or young; Z= abandoned, no (zero) eggs laid.</p>			

**WIFL Nest Monitoring Log**

Date	Time	Obs	Mon Type	Stage	Adult pres.	# WF Egg	# CB Egg	# WF Nstl	# CB Nstl	#WF Fldg	Age Yng	Comments
7/7		EB	O	-	Y	-	1	-	-	-	-	CB egg removed.

**WILLOW FLYCATCHER NEST SITE DATA FORM**

**(Do not approach an active nest or nest tree without obtaining appropriate state and federal permits)**

AGFD site number: \_\_\_\_\_ Site name: RS Nest #: \_\_\_\_\_ PIN1

Biologist(s) name: Vicky Johanson Phone: 303-445-2292

Nest substrate spp: SAEX

Tree Health: L (Codes: L= live, PD-NL= partly dead, nest in live portion, PD-ND= partly dead, nest in dead portion, D= dead)

Substrate Ht (m): 5.0

Nest Ht (m): 3.0

Canopy Ht (m): 5.0

Distance to foliage edge (m): 3

Distance to water when the nest was first found: 4 m, when the nest was last active: 4 m

Water type: Rio Grande

DBH: N/A

Number support branches: N/A

UTM coordinates or file name (if available): Nad83 UTM Zone 13 N 3597875 N 316517 E

Comments: Soil dry under nest when active.

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\_\_\_\_\_  
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