

RECLAMATION

Managing Water in the West

2012 Southwestern Willow Flycatcher Survey Results

Orilla Verde Recreation Area and La Cienega Sites,
New Mexico



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

September 2012

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.

2012 Southwestern Willow Flycatcher Survey Results

Orilla Verde Recreation Area and La Cienega Sites,
New Mexico

prepared for

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U.S. Department of the Interior
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Executive Summary

During the summer of 2012, the Bureau of Reclamation conducted presence/absence surveys for the Federally endangered Southwestern Willow Flycatcher along approximately 9.2 kilometers of riparian corridor within the Rio Grande and Santa Fe River basins in northern New Mexico. Surveys were conducted under contract with the Bureau of Land Management to meet Endangered Species Act compliance commitments for the Bureau of Land Management's exotic vegetation removal/restoration projects within the Orilla Verde Recreation Area (Rio Grande) and La Cienega (Santa Fe River) sites. Five surveys were conducted within each site. Four migrant Willow Flycatchers were documented at the La Cienega site and none were found within the Orilla Verde Recreation site. No endangered Southwestern Willow Flycatchers were observed at either site.

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. 2010, USFWS 2002).

Studies indicate that SWFL populations have declined across their range (USFWS 2002). The primary causes of declining populations are habitat loss or modification and brood parasitism by the Brown-headed Cowbird (*Molothrus ater*; BHCO) (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. 2010, 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 was also prepared by the Recovery Team. These papers address current issues and recommend management alternatives in regard to BHCO 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 Rio Grande between the Colorado/New Mexico state line and Elephant Butte Reservoir (USFWS 2005). This designation included the Orilla Verde Recreation Area (OVRA or Orilla Verde) within the Rio Grande-North Segment of the Upper Rio Grande Management Unit but not the La Cienega site. The 2011 proposed Critical Habitat designation also includes the OVRA reach (USFWS 2011)

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 OVRA has been surveyed wholly or in part by various entities since 1993, and the La Cienega site has been surveyed annually since 2005. In 2012 presence/absence surveys for WIFLs were conducted within floodplain riparian habitat at both sites (See Attachment for maps of areas surveyed). Surveys were conducted between May 24 and July 20, 2012.

Goals and Objectives

Primary goals of the field studies performed in 2012 were:

1. Contribute to current baseline data regarding the population status and distribution of SWFLs in the Rio Grande Basin, and;
2. Meet Endangered Species Act (ESA) compliance commitments for ongoing projects.



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

Methods

Study Area

The two sites surveyed in 2012 – Orilla Verde and La Cienega – vary markedly in terms of habitat and hydrology. The Orilla Verde site lies along the Rio Grande immediately upstream of Pilar, NM (Figure 2). An ongoing riparian restoration project within this site aimed at removing exotic vegetation and promoting native development has been conducted since 2006. In order to ensure thorough coverage and repeatability, the entire 7.6 km Rio Grande riparian corridor within the OVRA was surveyed and named Orilla Verde. Various portions of this site had been surveyed during the past 20 years and named either Orilla Verde or Taos Junction Bridge. The site consists of riparian habitat adjacent to the Rio Grande bounded by bluffs and/or upland habitat to the west and Highway 570 to the east. To ensure project compliance, this site was surveyed five times during 2012. Habitat within this site is highly variable. Due to the nature of the narrow canyon it occupies, habitat within this site is highly linear. Small patches of coyote willow (*Salix exigua*), saltcedar (*Tamarix* sp.), boxelder (*Acer negundo*), New Mexico desert-olive (*Forestiera pubescens*), and scattered Rio Grande cottonwoods (*Populus deltoids*) occur on riverbanks and islands throughout the site (Figure 3). These species compose the bulk of the woody vegetation within this site and most are too sparse, narrow, and/or young to provide suitable SWFL breeding habitat. Several river bars, islands and terraces contain small patches of habitat that could be considered marginally suitable and, given time and sufficient hydrology, could mature into higher quality SWFL habitat. Overbank flows during spring run-off and/or a high water table provide sufficient hydrology for native species to flourish along lower banks and terraces.

The La Cienega site occupies 1.6 km of riparian habitat along the Santa Fe River approximately 3 km west of the Santa Fe Municipal Airport (Figure 2). The site is bisected by the Paseo Real bridge. Upstream of the bridge, marginal SWFL habitat is limited to small patches and stringers of coyote and Goodding's willow (*Salix gooddingii*) with an occasional Rio Grande cottonwood and Russian olive (*Eleagnus angustifolia*). Woody, riparian vegetation is restricted to channel margins and the majority of this upstream portion of the site is unsuitable for breeding SWFLs. Downstream of the Paseo Real bridge, habitat is much more expansive due to water being backed up by a series of beaver dams. Dense coyote willow, Goodding's willow, cottonwoods and Russian olive are interspersed by large patches of cattails (*Typha* sp.) and other emergents across a floodplain that averages approximately 175 meters in width (Figure 4). Although the Santa Fe River regularly dries upstream of the La Cienega site, the site itself contains almost perennial water due to its location immediately downstream of the City of Santa Fe Wastewater Treatment Plant.

Presence/Absence Surveys

All sites were surveyed using the repeated call-playback method in accordance with the protocols established in Sogge et al. (2010). Surveys were conducted a minimum of 5 days apart, generally between 0530 and 1030 MDT (depending on weather conditions), by trained and permitted personnel. All riparian areas within the site were surveyed and survey forms were completed daily.

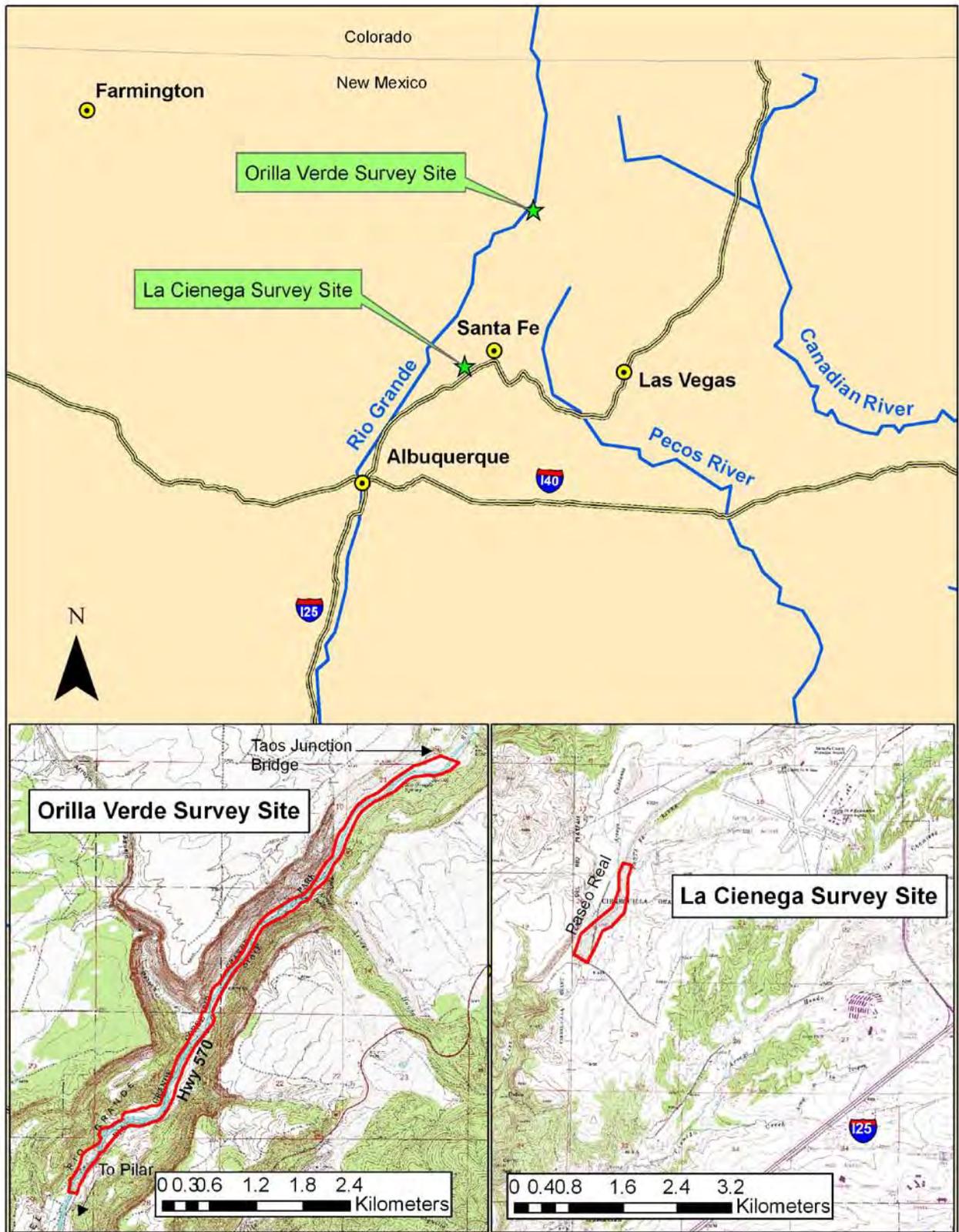


Figure 2. Study area of 2012 Willow Flycatcher surveys.



Figure 3. Typical habitat within the Orilla Verde Recreation Area survey site.



Figure 4. Typical habitat, showing a mix of native and exotic species, at the La Cienega survey site.

Results

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. In accordance with the newly updated survey protocol (Sogge et al. 2010), the second and third surveys were conducted during June and the fourth and fifth surveys, conducted to derive a greater degree of confidence regarding the breeding status, habitat association, or presence/absence of SWFLs at the selected sites, were conducted from late June to mid-July. WIFLs documented on or after June 10 are typically considered resident birds (i.e., SWFLs) for reporting purposes, however individuals may be considered “late migrants” based on their behavior and not included as residents. Each site was thoroughly surveyed.

Results

Presence/Absence Surveys

During the 2012 presence/absence surveys at OVRA, Willow Flycatchers were not detected on any of the five surveys (Attachment). Surveys within the La Cienega site documented four WIFLs during the first survey on May 25th. None of the Willow Flycatchers found during the first survey were documented on subsequent surveys – indicating that all four were migrants. The four migrant WIFLs were located both up and downstream of the Paseo Real bridge in suitable habitat composed of a mixture of coyote and Goodding’s willow, cottonwood and Russian olive (Attachment).

Discussion

Presence/Absence Surveys

WIFL surveys have been conducted within the Orilla Verde reach of the Rio Grande every year since 1993, although survey effort varied among years. Often, surveys consisted of surveying both sides of the river from the east (road) side, which is likely insufficient particularly during higher river flows (when river noise may drown out singing birds) and later in the survey season when birds sing less frequently. Additionally, surveys often focused on certain habitat patches and did not survey the entire reach as a whole. The number of SWFL territories documented during surveys between 1993 and 2012 ranged from zero (during many years) to a high of three in 1993 and 1996 (Table 1). A total of 15 SWFL territories have been documented with the Orilla Verde reach since surveys began. No SWFL territories have been recorded since 2009.

The SWFL population within the OVRA has not expanded during the past 20 years. There are several probable explanations for this fact. Habitat in this site is very limited. Even considering the lower-stature vegetation preferred by SWFLs at higher elevations (USFWS 2002), much of the habitat within this site is sparse (i.e. lacks density) and/or does not present the vertical structure needed for breeding SWFLs. There are several habitat patches that, given time and hydrology and a lack of disturbance, could potentially mature into suitable breeding habitat. However, the constraints

placed upon the floodplain due to the physical nature of the canyon and the relatively high gradient flows of the Rio Grande limit the width of available habitat, thus reducing its suitability for breeding SWFLs. Secondly, a lack of nesting success is limiting recruitment. Of the seven SWFL nests found since 1993; two had unknown outcomes and five failed. Nest failures were a result of brood parasitism from Brown-headed Cowbirds, and/or nest depredation – both of which are more common within narrow confined corridors of riparian habitat. Lastly, lack of a nearby “source” population likely prevents colonization of the site by immigrating SWFLs. Approximately 70 percent of adult SWFLs returning from migration return to the same site (M. Sogge, pers. comm.). The nearest known sizeable “source” population occurs on the Ohkay Owinge (40 to 50 km away), which has supported a small, stable population during the past several years. It is unlikely that immigration from this site is very frequent. All of the above factors likely contribute to the lack of SWFL territories within the OVRA.

Surveys at the La Cienega site documented four migrant WIFLs in 2012. Migrant WIFLs were also detected in 2010 and 2011; nine and four respectively. Although habitat at this site appears suitable for breeding SWFLs, no SWFL territories have ever been documented. The absence of a nearby source population may also be a limiting factor for the establishment of SWFL territories at the La Cienega site. The nearest known SWFL population is within the Ohkay Owinge approximately 50 km away.

Table 1. Historical SWFL territory and nest numbers within the OVRA and La Cienega survey sites.

| | OVRA SWFL Territories | OVRA SWFL Nests (% success) | La Cienega SWFL Territories |
|-------------|----------------------------------|--|--|
| 1993 | 3 | n/a | n/s |
| 1994 | 1 | 1 (unk) | n/s |
| 1995 | 1 | n/a | n/s |
| 1996 | 3 | 1 (0%) | n/s |
| 1997 | 1 | n/a | n/s |
| 1998 | 0 | n/a | n/s |
| 1999 | 0 | n/a | n/s |
| 2000 | 0 | n/a | n/s |
| 2001 | 0 | n/a | n/s |
| 2002 | 0 | n/a | n/s |
| 2003 | 1 | n/a | n/s |
| 2004 | 0 | n/a | n/s |
| 2005 | 2 | n/a | 0 |
| 2006 | 0 | n/a | 0 |
| 2007 | 0 | n/a | 0 |
| 2008 | 2 | 4 (0%) | 0 |
| 2009 | 1 | 1 (unk) | 0 |
| 2010 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 |
| 2012 | 0 | 0 | 0 |

n/a = nesting data unavailable

n/s = not surveyed

Conclusions

Formal presence/absence WIFL surveys conducted at both the Orilla Verde and La Cienega sites did not document any SWFL territories during the 2012 breeding season. Although somewhat limited in extent, the La Cienega site appears to support several patches of suitable SWFL habitat. Current hydrologic conditions appear favorable for the continued development and expansion of suitable habitat within this site.

While WIFL surveys within the OVRA have documented a total of 15 SWFL territories over the past twenty years (Table 1), it appears that this “population” is not likely to expand – although the establishment of an occasional SWFL territory is possible. Habitat within this reach has not changed significantly over the past several years, although an active riparian restoration program has recently been implemented and preliminary results appear favorable.

Future surveys at both the OVRA and La Cienga sites will document any colonization by breeding SWFLs, in addition to maintaining environmental compliance for ongoing projects and adding to the rangewide SWFL database.

Recommendations

- Presence/absence surveys should continue in both the Orilla Verde and La Cienega sites. These surveys will provide data regarding population trends and colonization of new habitat patches.
- Nest monitoring should be conducted if pairing activity is documented. These data will provide insight into factors limiting recruitment and population growth such as parasitism and predation rates.

Literature Cited

- Browning, M.R. 1993. Comments on the taxonomy of *Empidonax traillii* (Willow Flycatcher). *Western Birds* 24:241-257.
- Sogge, M. K., D. Ahlers, and S. J. Sferra. 2010. A natural history summary and survey protocol for the Southwestern Willow Flycatcher: U.S. Geological Survey Techniques and Methods 2A-10, 38 p.
- Texas Parks and Wildlife Department (TPWD). "Endangered and Threatened Birds in Texas." 1/23/05, <http://www.tpwd.state.tx.us/nature/endang/animals/birds/>, 2/12/05.
- U.S. Fish and Wildlife Service (USFWS). 1995. Final rule determining endangered status for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*). *Federal Register* 60:10694 (February 27, 1995).
- _____. 2002. Southwestern Willow Flycatcher Recovery Plan. Albuquerque, New Mexico. i-ix + 210 pp., Appendices A-O.
- _____. 2005. Designation of critical habitat for Southwestern Willow Flycatcher (*Empidonax traillii extimus*); Final Rule. *Federal Register* 70:60886-61009.
- _____. 2011. Revised Critical Habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*); Proposed Rule: *Federal Register* 76 FR 50542, August 15, 2011.
- Unitt, P. 1987. *Empidonax traillii extimus*: an endangered subspecies. *Western Birds* 18(3):137-162.

Attachment – Willow Flycatcher Survey Forms

Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: La Cienega State: NM County: Santa Fe

USGS Quad Name: Tetilla Peak, Turquoise Hill Elevation: 1,870 (meters)

Creek, River, or Lake Name: Santa Fe River

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

Survey Coordinates: Start: E 398,900 N 3,941,174 UTM Datum: NAD 83 (See instructions)
 Stop: E 398,200 N 3,939,754 UTM Zone: 13S

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

****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 If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, <i>Diorhabda</i> spp.]). If <i>Diorhabda</i> found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | | |
|---|-----------------------------|-----------------------------|---------------------------------|---------------------------------------|--|---|--|-----|-------|---------|-----------|
| | | | | | | | # Birds | Sex | UTM E | UTM N | |
| Survey # 1 Observer(s): D. Ahlers | Date: | 4 | 0 | 0 | N | Two WIFLs found upstream of bridge within patches dominated by coyote willow. Two additional WIFLs detected downstream of the bridge within the wetland complex. All are likely migrant birds. | # Birds | Sex | UTM E | UTM N | |
| | Observer(s): | | | | | | 5/25/2012 | 1 | M | 398,733 | 3,940,825 |
| | Start: | | | | | | 5:30 | 1 | M | 398,572 | 3,940,616 |
| | Stop: | | | | | | 7:30 | 1 | M | 398,278 | 3,940,381 |
| | Total hrs: | | | | | | 2.0 | 1 | M | 398,286 | 3,940,203 |
| Survey # 2 Observer(s): D. Ahlers | Date: | 0 | N/A | N/A | N/A | No WIFLs detected at 1st survey locations. | # Birds | Sex | UTM E | UTM N | |
| | Observer(s): | | | | | | 6/5/2012 | | | | |
| | Start: | | | | | | 5:15 | | | | |
| | Stop: | | | | | | 7:45 | | | | |
| | Total hrs: | | | | | | 2.3 | | | | |
| Survey # 3 Observer(s): D. Ahlers | Date: | 0 | N/A | N/A | N/A | Only a small trickle of water was flowing through the La Cienga site. | # Birds | Sex | UTM E | UTM N | |
| | Observer(s): | | | | | | 6/26/2012 | | | | |
| | Start: | | | | | | 5:30 | | | | |
| | Stop: | | | | | | 7:30 | | | | |
| | Total hrs: | | | | | | 2.0 | | | | |
| Survey # 4 Observer(s): D. Moore | Date: | 0 | N/A | N/A | N/A | Slightly more than a trickle of water was flowing through the site. | # Birds | Sex | UTM E | UTM N | |
| | Observer(s): | | | | | | 7/3/2012 | | | | |
| | Start: | | | | | | 6:00 | | | | |
| | Stop: | | | | | | 8:00 | | | | |
| | Total hrs: | | | | | | 2.0 | | | | |
| Survey # 5 Observer(s): D. Moore | Date: | 0 | N/A | N/A | N/A | Small amount of flow in creek. Rest of site dry. | # Birds | Sex | UTM E | UTM N | |
| | Observer(s): | | | | | | 7/12/2012 | | | | |
| | Start: | | | | | | 5:30 | | | | |
| | Stop: | | | | | | 7:30 | | | | |
| | Total hrs: | | | | | | 2.0 | | | | |
| Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total survey hrs: <u>10.3</u> | | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any WIFLs color-banded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | | | | |
| | | 0 | 0 | 0 | 0 | If yes, report color combination(s) in the comments section on back of form and report to USFWS. | | | | | |

Reporting Individual: Darrell Ahlers Date Report Completed: 9/10/2012
 US Fish & Wildlife Service Permit #: TE819475-2 State Wildlife Agency Permit #: N/A

Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.

Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.

Reporting Individual Darrell Ahlers Phone # 303-445-2233
 Affiliation Bureau of Reclamation E-mail dahlers@usbr.gov
 Site Name La Cienega Date report Completed 9/10/2012
 Was this site surveyed in a previous year? Yes X No Unknown
 Did you verify that this site name is consistent with that used in previous yrs? Yes X No Not Applicable
 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 X No If no, summarize below.
 Did you survey the same general area during each visit to this site this year? Yes X No If no, summarize below.
 Management Authority for Survey Area: Federal X Municipal/County State Tribal Private
 Name of Management Entity or Owner (e.g., Tonto National Forest) Bureau of Land Management
 Length of area surveyed: 1.6 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

- Native broadleaf plants (entirely or almost entirely, > 90% native)
 X Mixed native and exotic plants (mostly native, 50 - 90% native)
 Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)
 Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.

Salix exigua, Salix gooddingii, Eleagnus angustifolia, Populus deltoides

Average height of canopy (Do not include a range): 5 (meters)

- Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
 2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
 3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

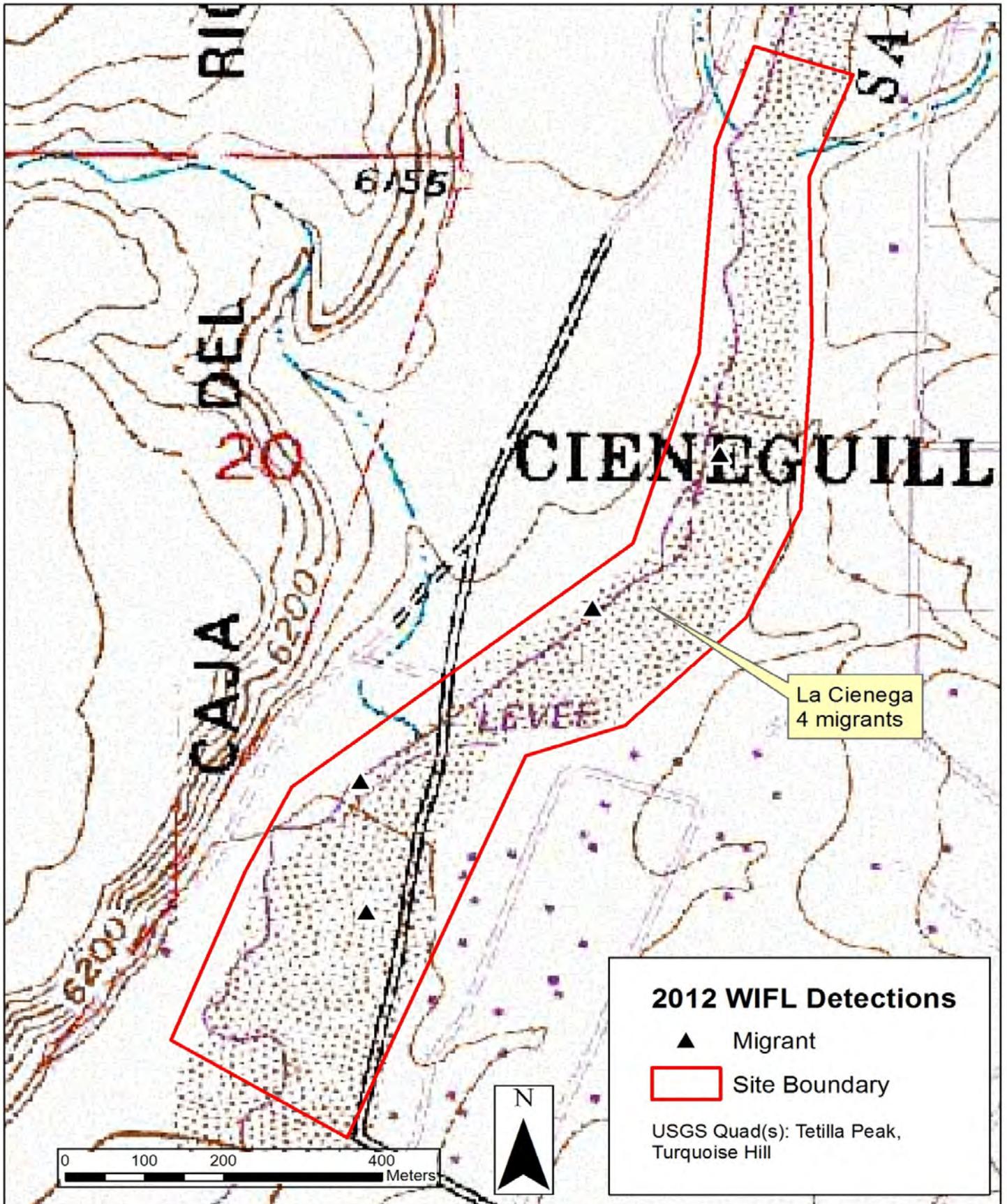
Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features.
Attach additional sheets if necessary.

Portions of this site are moderately suitable SWFL habitat - particularly below the Paseo Real Bridge where the wetland complex typically supports a higher water table and patches of more structurally suitable habitat.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|------------------|--------------------|-------|-------|---------------------------|-----------------------|--|
| | | | | | | |
| | | | | | | |
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| | | | | | | |

Attach additional sheets if necessary



Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: Orilla Verde State: NM County: Taos
 USGS Quad Name: Taos SW, Carson Elevation: 1,828 (meters)
 Creek, River, or Lake Name: Rio Grande

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

Survey Coordinates: Start: E 434,171 N 4,021,469 UTM Datum: NAD 83 (See instructions)
 Stop: E 429,343 N 4,015,903 UTM Zone: 13S

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

****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 If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, <i>Diorhabda</i> spp.]). If <i>Diorhabda</i> found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|-----------------------------|-----------------------------|---------------------------------|---------------------------------------|--|--|--|-----|-------|-------|
| | | | | | | | # Birds | Sex | UTM E | UTM N |
| Survey # 1 Observer(s): D. Ahlers D. Moore | Date: <u>5/24/2012</u> | 0 | N/A | N/A | N/A | Calm, cool - good day for surveys. | # Birds | Sex | UTM E | UTM N |
| | Start: <u>6:00</u> | | | | | | | | | |
| | Stop: <u>10:00</u> | | | | | | | | | |
| | Total hrs: <u>8.0</u> | | | | | | | | | |
| | | | | | | | | | | |
| Survey # 2 Observer(s): D. Moore D. Ahlers | Date: <u>6/7/2012</u> | 0 | N/A | N/A | N/A | Posted flows of 360 cfs | # Birds | Sex | UTM E | UTM N |
| | Start: <u>5:15</u> | | | | | | | | | |
| | Stop: <u>8:45</u> | | | | | | | | | |
| | Total hrs: <u>7.0</u> | | | | | | | | | |
| | | | | | | | | | | |
| Survey # 3 Observer(s): D. Moore D. Ahlers | Date: <u>6/28/2012</u> | 0 | N/A | N/A | N/A | Posted flows of 230 cfs. Saltcedar controlled sites beginning to show positive signs of native regeneration. | # Birds | Sex | UTM E | UTM N |
| | Start: <u>5:30</u> | | | | | | | | | |
| | Stop: <u>9:30</u> | | | | | | | | | |
| | Total hrs: <u>8.0</u> | | | | | | | | | |
| | | | | | | | | | | |
| Survey # 4 Observer(s): D. Moore G. Reed | Date: <u>7/11/2012</u> | 0 | N/A | N/A | N/A | No Comments | # Birds | Sex | UTM E | UTM N |
| | Start: <u>5:30</u> | | | | | | | | | |
| | Stop: <u>9:30</u> | | | | | | | | | |
| | Total hrs: <u>8.0</u> | | | | | | | | | |
| | | | | | | | | | | |
| Survey # 5 Observer(s): D. Moore G. Reed | Date: <u>7/20/2012</u> | 0 | N/A | N/A | N/A | No Comments | # Birds | Sex | UTM E | UTM N |
| | Start: <u>5:45</u> | | | | | | | | | |
| | Stop: <u>9:45</u> | | | | | | | | | |
| | Total hrs: <u>8.0</u> | | | | | | | | | |
| | | | | | | | | | | |
| Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total survey hrs: <u>39.0</u> | | Total Adult Residents | Total Pairs | Total Territories | Total 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 and report to USFWS. | | | | |
| | | 0 | 0 | 0 | 0 | | | | | |

Reporting Individual: Darrell Ahlers Date Report Completed: 9/10/2012
 US Fish & Wildlife Service Permit #: TE819475-2 State Wildlife Agency Permit #: N/A

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Fill in the following information completely. **Submit form by September 1st**. Retain a copy for your records.

Reporting Individual Darrell Ahlers Phone # 303-445-2233
 Affiliation Bureau of Reclamation E-mail dahlers@usbr.gov
 Site Name Orilla Verde Date report Completed 9/10/2012
 Was this site surveyed in a previous year? Yes X No Unknown
 Did you verify that this site name is consistent with that used in previous yrs? Yes X No Not Applicable
 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 X No If no, summarize below.
 Did you survey the same general area during each visit to this site this year? Yes X No If no, summarize below.
 Management Authority for Survey Area: Federal X Municipal/County State Tribal Private
 Name of Management Entity or Owner (e.g., Tonto National Forest) Bureau of Land Management

Length of area surveyed: 7.6 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

- Native broadleaf plants (entirely or almost entirely, > 90% native)
 X Mixed native and exotic plants (mostly native, 50 - 90% native)
 Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)
 Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.

Salix exigua, Tamarix ramosissima, Forestiera pubescens

Average height of canopy (Do not include a range): 5 (meters)

- Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
 2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
 3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features).
Attach additional sheets if necessary.

River relatively low all summer - flows during the second seurvey were 360 cfs and those on the third were 230 cfs.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
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Attach additional sheets if necessary

