RECLAMATION

Managing Water in the West

2016 Southwestern Willow Flycatcher Survey Results

Orilla Verde and La Cienega Sites, New Mexico

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

September 2016

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.

2016 Southwestern Willow Flycatcher Survey Results

Orilla Verde 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 2016, the Bureau of Reclamation conducted protocol-based presence/absence surveys for the federally listed 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 exotic vegetation removal/restoration projects within the Orilla Verde (Rio Grande) and La Cienega (Santa Fe River) sites. Five surveys were conducted within each site. During the first round of surveys, eight Willow Flycatchers were recorded at the Orilla Verde site and three were documented at the La Cienega site. All were determined to be migrants based on date of detection and lack of territorial behavior.

Introduction

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*; hereafter called SWFL) is a State-listed and Federally-endangered subspecies of the Willow Flycatcher (*Empidonax traillii*; hereafter called 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 grounds in Mexico, Central America, and northern South America (Sogge, Ahlers and Sferra 2010, USFWS 2002).

Studies indicate that SWFL populations have declined across their range (USFWS 2002). The primary cause of declining populations is habitat degradation, modification or loss (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, Nevada, New Mexico, Texas, and Utah (NDCNR 2016, 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 were also prepared by the Recovery Team. These papers addressed current issues and recommended management alternatives in regard to cowbird 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 site within the Upper Rio Grande Management Unit of the Rio Grande Recovery Unit; the designation did not include the La Cienega site. A proposed amended Critical Habitat designation in 2011 also included the Orilla Verde site (USFWS 2011). The Final Rule published in January 2013 designated a 46.8 km reach extending downstream from Taos Junction Bridge to the northern boundary of the Ohkay Owingeh Pueblo as critical habitat (USFWS 2013) – which again includes the Orilla Verde site. The reach of the Santa Fe River which includes the La Cienega site is not designated as critical habitat.

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 been conducting presence/absence surveys and nest monitoring during the May to July survey seasons within the Rio Grande Basin since 1995. The Orilla Verde site has been surveyed wholly or in part by various entities since 1993, and the La Cienega site has been surveyed annually since 2005. Reclamation has been conducting WIFL surveys within Orilla Verde since 2008 (except for 2009); and within the La Cienega site since 2010. In 2016, 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 21st and July 13th, 2016.

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

Goals and Objectives

Primary goals of the field studies performed in 2016 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.

Methods

Study Area

The Orilla Verde and La Cienega sites vary in terms of habitat and hydrology. The Orilla Verde site lies along the Rio Grande immediately upstream of Pilar, NM (Figure 2) in what was formerly called the Orilla Verde Recreation Area and is currently encompassed by the Rio Grande del Norte National Monument. An ongoing riparian restoration project within this site aimed at removing exotic vegetation and promoting native growth began in 2006. In order to ensure thorough coverage and repeatability, the entire 7.6 km Rio Grande riparian corridor within the Orilla Verde Recreation Area 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 2016. 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 deltoides*) 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. Overbank flows during spring run-off and/or a high water table typically provide sufficient hydrology for native species to flourish along lower banks and terraces. Within most sites where non-native vegetation has been removed, native willows are flourishing but most lack the height to be considered suitable SWFL breeding habitat. However, several river bars, islands and terraces that support small patches of habitat could be considered marginally suitable for breeding SWFLs.

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 (*Elaeagnus angustifolia*). These patches have expanded in recent years due to changes in water flow patterns and currently present marginally suitable flycatcher habitat. However, the majority of this upstream portion of the site is generally unsuitable for breeding SWFLs. Downstream of the Paseo Real bridge, habitat is 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). During recent years, altered flow patterns downstream of the Paseo Real bridge have dried out a large portion of the willow habitat in the

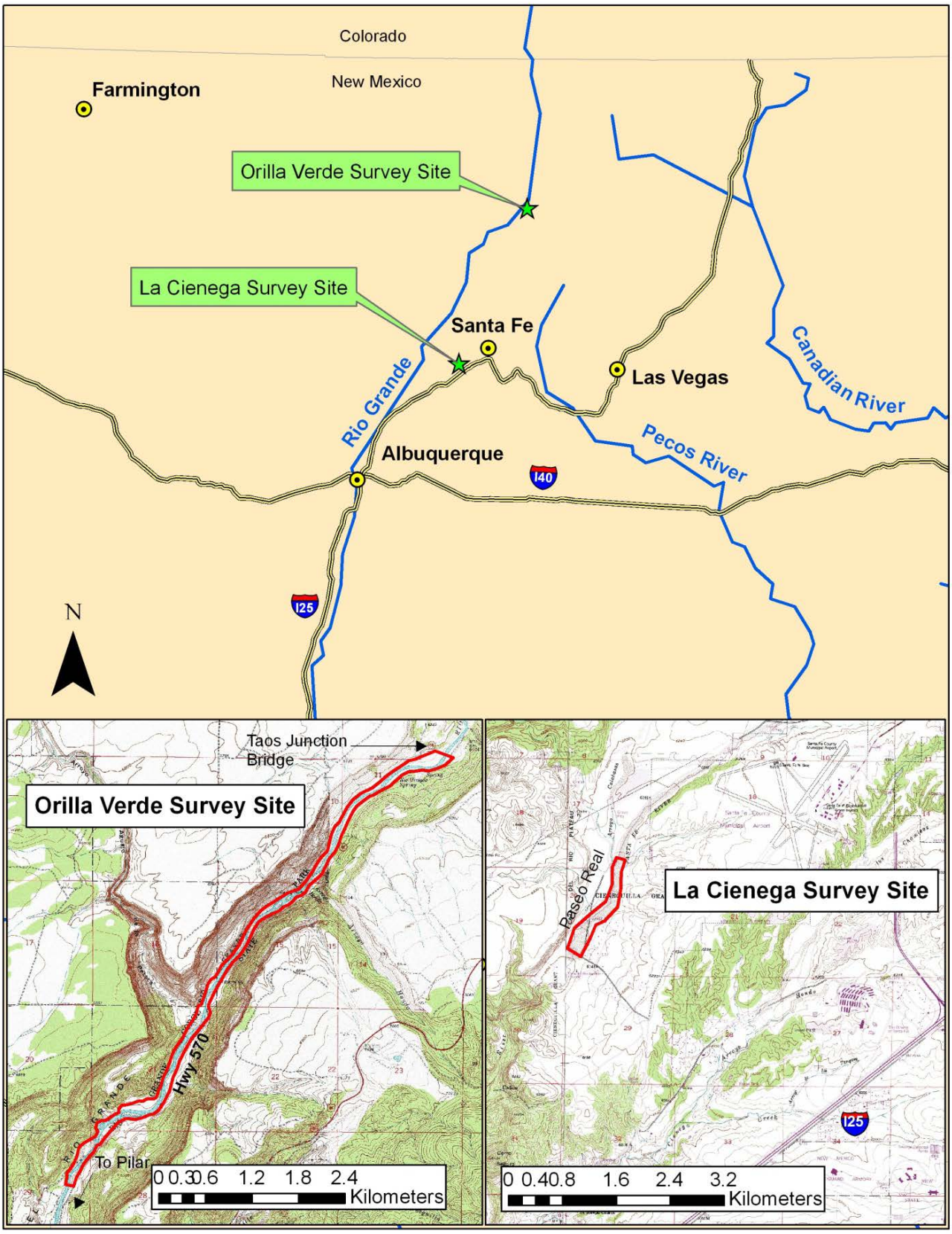


Figure 2. Study area of 2016 Willow Flycatcher surveys.

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

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

northern half of the site, leading to its demise. Although the Santa Fe River regularly runs dry 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 0530am and 1030am MDT (depending on weather conditions), by trained and permitted personnel. All riparian areas in the sites were surveyed and 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 prior to nesting. In accordance with the most recent survey protocol (Sogge et al. 2010), the second and third surveys are conducted during June, and the fourth and fifth surveys are conducted between late June and mid-July. The June and July surveys are conducted to derive a greater degree of confidence regarding the breeding status, habitat association, or presence/absence of SWFLs at the selected sites. It was anticipated that migrant WIFLs (Willow Flycatchers that are not the *extimus* subspecies) would also be detected during the first and second survey periods. WIFLs documented on or after June 10 are typically considered resident birds (i.e., SWFLs) for reporting purposes, however determination of residency status is also based on individual birds' behavior and results of subsequent surveys. Each site was thoroughly surveyed.

Results

Presence/Absence Surveys

Willow flycatchers were documented during first surveys at both the Orilla Verde and La Cienega sites during the 2016 survey season. Eight individuals were documented on May 22nd within the Orilla Verde site and three WIFLs were located on May 21st within the La Cienega site. These individuals were not documented on subsequent surveys and thus were considered migratory Willow Flycatchers. No resident SWFLs were located within either site during 2016 surveys.

Discussion

Presence/Absence Surveys

WIFL surveys have been conducted within the Orilla Verde site every year since 1993, although survey efforts varied among years. Reclamation has been conducting thorough and consistent WIFL surveys within Orilla Verde since 2008 (except for 2009, during which it was surveyed by a private entity). The number of SWFL territories documented annually during surveys between 1993 and 2016 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 site since surveys began. No SWFL territories have been recorded since 2009. The La Cienega site has been sporadically surveyed since 2003 (Table 1). Reclamation has conducted thorough and consistent surveys within the La Cienega site since 2010 and no SWFL territories have been documented.

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

	Orilla Verde SWFL Territories	Orilla Verde SWFL Nests (% success)	La Cienega SWFL Territories
1993	3	1 (unknown)	n/s
1994	1	n/a	n/s
1995	1	1 (0%)	n/s
1996	3	n/a	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	0
2004	0	n/a	n/s
2005	2	n/a	n/s
2006	0	n/a	n/s
2007	0	n/a	0
2008	2	4 (0%)	0
2009	1	1 (unknown)	n/s
2010	0	n/a	0
2011	0	n/a	0
2012	0	n/a	0
2013	0	n/a	0
2014	0	n/a	0
2015	0	n/a	0
2016	0	n/a	0

n/a = nesting data unavailable n/s = not surveyed

The SWFL population within the Orilla Verde has not increased during the past 24 years, likely due to limited habitat availability. Even considering the lower-stature vegetation preferred by SWFLs at higher elevations (USFWS 2002), much of the habitat within this site does not present the vertical structure needed for breeding SWFLs and/or is too sparse (i.e. lacks density). There are several habitat patches that, given time and favorable hydrology and a lack of disturbance, could potentially mature into suitable breeding habitat. However, the physical constraints 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 has also limited 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 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 reduces the likelihood of colonization by immigrating SWFLs. Approximately 70 percent of adult SWFLs returning from migration return to the same site (Luff et al. 2000, Kenwood and Paxton 2001). The nearest known sizeable "source" population occurs on the Ohkay Owingeh (40 to 50 km downstream), 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 Orilla Verde site.

Surveys at the La Cienega site have documented numerous migrant WIFLs during the past 7 years. Although habitat at this site appears moderately suitable for breeding SWFLs, no SWFL territories have ever been documented (Table 1). The absence of a nearby source population and the site's location off of the Rio Grande migratory corridor likely reduce the potential for the establishment of SWFL territories at the La Cienega site. The nearest known SWFL population is within the Ohkay Owingeh approximately 50 km away.

Also currently of particular interest, the tamarisk leaf beetle (*Diorhabda elongata*) has been documented approximately 25 km downstream of the Orilla Verde site and there is a high probability it will arrive at the Orilla Verde site within the next year or two. Additionally, the splendid tamarisk weevil (*Coniatus splendidulus*) is observed regularly within Orilla Verde. These species can negatively impact habitat quality where tamarisk comprises a significant proportion of the woody vegetation by defoliating habitat during the summer avian breeding season. However, the Bureau of Land Management's exotic vegetation removal project has eliminated much of the tamarisk within Orilla Verde, so it is unclear what impact the arrival of *Diorhabda* will have. Habitat within the La Cienega site contains a much smaller proportion of tamarisk so impacts from *Diorhabda* should not be significant.

Conclusions

No SWFL territories were documented at the Orilla Verde or La Cienega sites during 2016. Habitat within both sites benefitted from favorable hydrologic conditions during the breeding season. The Orilla Verde site experienced river flows above 2,000 cfs for the first time in several years, which provided shallower groundwater levels and overbank flooding in lower lying portions of the site. Within the La Cienega site, beaver activity and favorable hydrology has promoted the development of several patches of suitable SWFL habitat. If these conditions persist, it is likely this habitat will continue to develop and become more attractive to breeding SWFLs.

While WIFL surveys within the Orilla Verde have documented a total of 15 SWFL territories over the past twenty-four years, it appears that this "population" is not likely to expand – although the establishment of an occasional SWFL territory is possible. No SWFLs have established territories within this site since 2009, when a single territory was discovered. Habitat within this site has not changed significantly over the past several years, although habitat restoration and exotic species removal have promoted the expansion of native willow patches in certain areas.

Future surveys at both the Orilla Verde and La Cienega sites will document any colonization by breeding SWFLs, in addition to maintaining environmental compliance for ongoing projects and adding to the range-wide 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. This data will provide insight into factors limiting recruitment and population growth such as parasitism and depredation rates.

Literature Cited

Browning, M.R. 1993. Comments on the taxonomy of *Empidonax traillii* (Willow Flycatcher). Western Birds 24:241-257.

Kenwood, K. E. and E. H. Paxton. 2001. Survivorship and movements of southwestern willow flycatchers at Roosevelt Lake, Arizona – 2001. U.S. Geological Survey report to the U.S. Bureau of Reclamation, Phoenix. 46 pp.

Luff, J.A, E.H. Paxton, K.E. Kenwood, and M.K. Sogge. 2000. Survivorship and Movements of Southwestern Willow Flycatchers in Arizona – 2000. U.S. Geological Survey report to the U.S. Bureau of Reclamation, Phoenix. 46 pp.

Nevada Department of Conservation and Natural Resources (NDCNR). "Empidonax traillii extimus." 9/5/16, http://heritage.nv.gov/taxon_detail/19856.

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. Designation of revised critical habitat for Southwestern Willow Flycatcher; Proposed rule. Federal Register 76:50542-50629.

_____. 2013. Final Rule: Designation of Critical Habitat for the Southwestern Willow Flycatcher. (Empidonax traillii extimus); Federal Register Volume 78: No. 2/ January 3, 2013.

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: 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*** **X** ***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, *Diorhabda* spp.]). If *Diorhabda* 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.			
Survey # 1	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	5/22/2016						1	M	430,120	4,016,777
	Start:						1	M	432,522	4,019,962
K. Dillon	6:00	8	0	0	N/A	All birds were likely migrants - none acting territorial. See comments (pg 2) for additional detection.	1	M	432,857	4,020,669
D. Moore	Stop:						1	M	433,407	4,021,091
	9:30						1	M	433,505	4,021,191
	Total hrs:						1	M	433,700	4,021,280
	7.0						1	M	434,143	4,021,389
Survey # 2	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	6/5/2016									
	Start:									
D. Ahlers	5:45	0	0	0	N/A	High flows in river (nearly 2,000 cfs). No WIFLs detected. All from 1st survey appear to have been migrants.				
	Stop:									
	11:15									
	Total hrs:									
	5.5									
Survey # 3	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	6/18/2016									
	Start:									
D. Ahlers	5:45	0	0	0	N/A					
	Stop:									
	11:00									
	Total hrs:									
	5.3									
Survey # 4	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	6/25/2016									
	Start:									
D. Moore	5:45	0	0	0	N/A					
	Stop:									
	10:45									
	Total hrs:									
	5.0									
Survey # 5	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	7/6/2016									
	Start:									
D. Ahlers	5:30	0	0	0	N/A	Limiting factor for SWFL suitability seems to be willow height, not density. Habitat may improve if vegetation continues to develop.				
	Stop:									
	10:45									
	Total hrs:									
	5.3									

Overall Site Summary	Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any WIFLs color-banded? Yes ____ No **X**
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.	0	0	0	N/A	If yes, report color combination(s) in the comments section on back of form and report to USFWS.
Total survey hrs: 28.1					

Reporting Individual: Darrell Ahlers Date Report Completed: 9/1/2016

US Fish & Wildlife Service Permit #: TE819475-5 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: Orilla Verde Date report Completed: 9/1/2016
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)

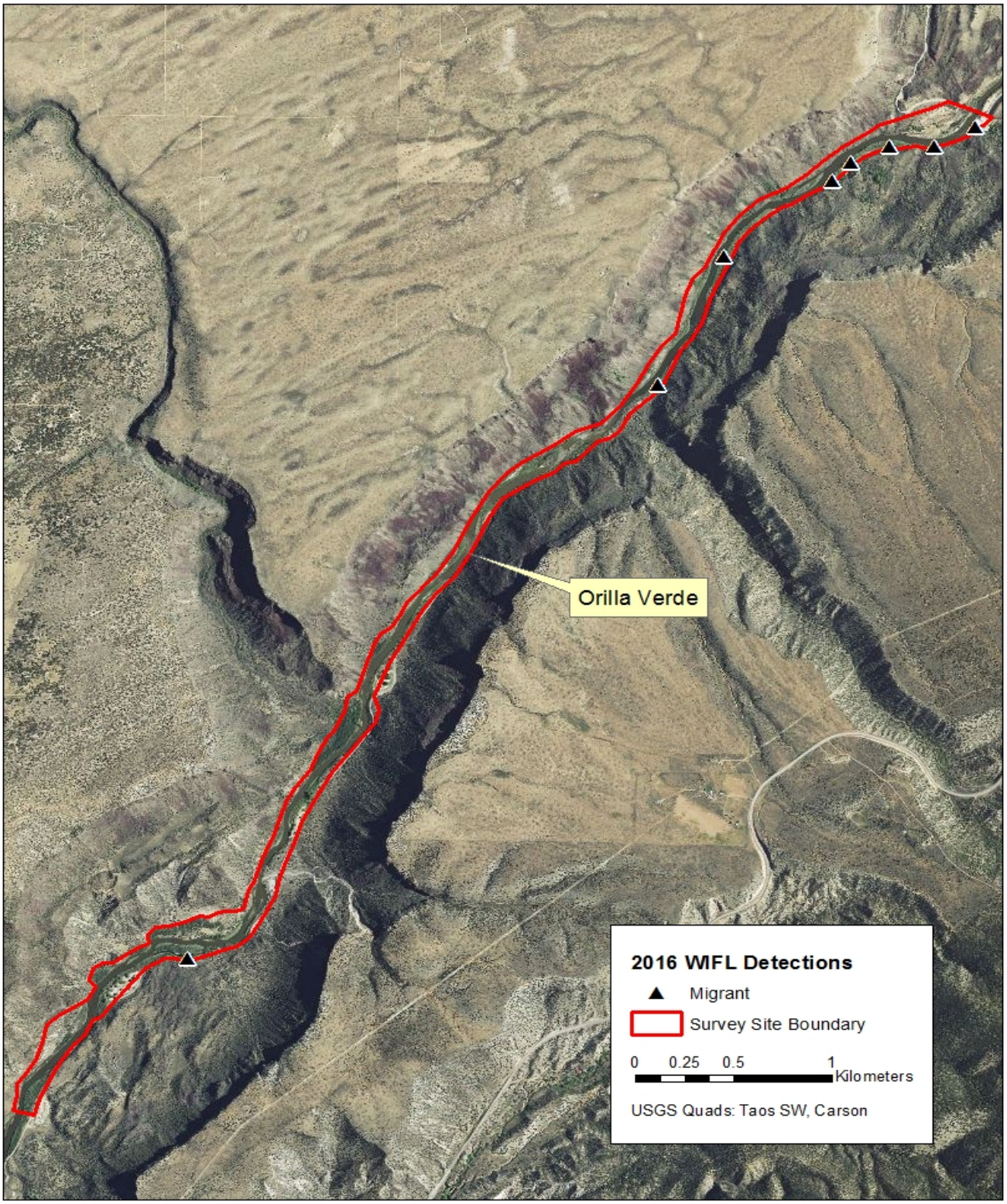
Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, 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.
Survey 1 detection - M - 433931 E 4021281 N.

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)

Attach additional sheets if necessary


Orilla Verde
2016 WIFL Detections
Migrant
Survey Site Boundary
0 0.25 0.5 1
Kilometers
USGS Quads: Taos SW, Carson

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*** **X** ***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, *Diorhabda* spp.]). If *Diorhabda* 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.			
Survey # 1	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	5/21/2016						1	M	398,681	3,940,663
	Start:						1	M	398,142	3,940,153
D. Ahlers	6:30	3	0	0	N/A	No birds exhibiting territorial behavior. All likely migrants. No flows under bridge, all flow passing through culverts to the south. Not all willows are leafed out.	1	M	398,298	3,940,155
	Stop:									
	9:15									
	Total hrs:									
	2.8									
Survey # 2	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	6/6/2016									
	Start:									
D. Ahlers	6:00	0	0	0	N/A	Several patches of willows upstream of bridge improving as a result of changes in surface flows.				
	Stop:									
	8:15									
	Total hrs:									
	2.3									
Survey # 3	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	6/19/2016									
	Start:									
D. Ahlers	5:15	0	0	0	N/A					
	Stop:									
	7:30									
	Total hrs:									
	2.3									
Survey # 4	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	7/6/2016									
	Start:									
D. Moore	6:00	0	0	0	N/A	River flowing well through site. Beaver ponds full. Willows in north half of site west of road are dead or severely water stressed.				
	Stop:									
	8:15									
	Total hrs:									
	2.3									
Survey # 5	Date:						# Birds	Sex	UTM E	UTM N
Observer(s):	7/13/2016									
	Start:									
D. Ahlers	5:30	0	0	0	N/A	Overall suitability and abundance of SWFL habitat is greater upstream of bridge, a reversal from years past. Likely due to changes in surface flows.				
	Stop:									
	7:45									
	Total hrs:									
	2.3									
Overall Site Summary		Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any WIFLs color-banded? Yes ____ No **X**				
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.		0	0	0	0	If yes, report color combination(s) in the comments section on back of form and report to USFWS.				
Total survey hrs:	11.9									

Reporting Individual: Darrell Ahlers Date Report Completed: 9/1/2016

US Fish & Wildlife Service Permit #: TE819475-5 State Wildlife Agency Permit #: N/A

<u>Submit</u> 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: 9/1/2016
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. Habitat upstream of the bridge has expanded and increased in density and complexity due to more regular river flows.

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)

Attach additional sheets if necessary


La Cienega
2016 WIFL Detections
Migrant
Survey Site Boundary
USGS Quads: Tetilla Peak, Turquoise Hill
0 50 100 200 300
Meters

PEER REVIEW DOCUMENTATION

PROJECT AND DOCUMENT INFORMATION

Project Name: Southwestern Willow Flycatcher Surveys WOID: OA735

Document: 2016 Southwestern Willow Flycatcher Study Results: Orilla Verde and La Cienega Sites, New Mexico

Document Date: September 2016

Team Leader: David Moore, 86-68290, Wildlife Biologist

Document Author(s)/Preparer(s): D. Moore and D. Ahlers

Peer Reviewer: Meghan White, 86-68290, Fisheries Biologist

Peer Reviewer: _____

REVIEW REQUIREMENT

Part A: Document Does Not Require Peer Review

Explain _____

Part B: Document Requires Peer Review: SCOPE OF PEER REVIEW

Peer Review restricted to the following Items/Section(s): Reviewer:

Complete Document Subject to Review Meghan White

REVIEW CERTIFICATION

Peer Reviewer - I have reviewed the assigned Items/Section(s) noted for the above document and believe them to be in accordance with the project requirements, standards of the profession, and Reclamation policy.

Reviewer: Meghan White Review Date: September 2016 Signature: _____

Reviewer: _____ Review Date: _____ Signature: _____

I have discussed the above document and review requirements with the Peer Reviewer and believe that this review is completed, and that the document will meet the requirements of the project.

Team Leader: David Moore Date: September 30, 2016 Signature: _____