

# Southwestern Willow Flycatcher Breeding Site and Territory Summary – 2005

*Prepared by:*

**Scott L. Durst**, U.S. Geological Survey, Southwest Biological Science Center, Colorado Plateau Research Station, Flagstaff, AZ

**Mark K. Sogge**, U.S. Geological Survey, Southwest Biological Science Center, Colorado Plateau Research Station, Flagstaff, AZ

**Heather C. English**, Arizona Game and Fish Department - Research Branch, Phoenix, AZ

**Sartor O. Williams III**, New Mexico Department of Game and Fish, Santa Fe, NM

**Barbara E. Kus**, U.S. Geological Survey, Western Ecological Research Center, San Diego Field Station, San Diego, CA

**Susan J. Sferra**, U.S. Bureau of Reclamation, Phoenix Area Office, Phoenix, AZ

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## Introduction

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is an endangered bird that breeds only in dense riparian habitats in six southwestern states (southern California, extreme southern Nevada, southern Utah, southwestern Colorado, Arizona, and New Mexico). Since 1993, hundreds of Southwestern Willow Flycatcher surveys have been conducted each year, with many new flycatcher breeding sites located. This document synthesizes information on all known Southwestern Willow Flycatcher breeding sites.

This rangewide data synthesis was designed to meet these objectives:

- 1 – identify all known Southwestern Willow Flycatcher breeding sites, and
- 2 – assemble data on the location, habitat, number of flycatchers, and other information for all breeding sites, for as many years as possible, from 1993 through 2005.

This report provides data summaries in terms of the number of flycatcher sites and the number of territories. When interpreting and using this information, the following must be kept in mind:

**A site** is a location where one or more Willow Flycatchers establish a territory. Sites with unpaired territorial males are considered breeding sites even if no nesting attempts were documented. A site is often a discrete patch of habitat; however, there is no standardized definition for site and its use varies among states. For example, five occupied habitat patches along a 10 km stretch of river might be considered five different sites in one state, but only a single site in another state. This lack of standardization makes comparisons based on “site” problematic. For this report, we deferred to statewide summary documents or to local managers and researchers when delineating a site for inclusion in the database. Due to differences in site definitions, one should not evaluate the relative importance of a geographic region (drainage, watershed, state, etc.) based simply on the number of flycatcher sites.

**A territory** is an exclusive defended area within a breeding site. Although detailed monitoring studies have identified unpaired territorial males and/or polygynous males at some flycatcher breeding sites, for the purposes of this report a territory is roughly equivalent to a pair of flycatchers. In general the concept of territory is more similar among states and different investigators than is the term “site”, thus it is a more “robust” unit to use for summaries and comparisons. However, keep in mind that the definition of a polygynous territory is not consistent among states; a male polygynously paired with two females may be considered as one territory in some states but two territories in other states.

For each breeding site, we referred to reports or spoke directly with researchers and managers to gather information such as management entity/agency, location (state, drainage, elevation), gross habitat type (native, exotic, or mixed; dominant tree species), and number of flycatcher territories.

Gathering and synthesizing the information on numerous breeding sites across a broad geographic area can be challenging because annual survey reporting requirements are not standardized rangewide. Therefore, the nature and degree of readily available information varies widely from state to state. Some states produce detailed annual summary reports based on standardized data sheets submitted by surveyors; these resources were tremendously helpful in producing this report. However, in some areas such as California, surveyors are not required to submit standardized flycatcher survey forms. This makes it difficult to determine precise survey locations, compare locations between years, standardize site names, and evaluate site-specific characteristics. It also introduces long delays in access to basic site and population information. Fortunately, California has recently instituted a state-wide database that compiles much flycatcher data, even from investigators who are otherwise not reporting. This effort has greatly aided the synthesis of data at the rangewide level. Still, overall compilation efforts would be faster and more precise if flycatcher surveyors throughout the bird's range were required to provide standardized reporting, as is being done in areas such as USFWS Region 2.

This report includes all flycatcher breeding sites reported between 1993 and 2005. The statistics included herein are based on survey data from the most recent year during which surveys were conducted, whether flycatchers were detected or not. Therefore, data from 133 sites that were not surveyed in 2005 are still included in the site and territory tallies if they had resident flycatchers during one or more years since 1993. This report does not include data from sites where only migrant Willow Flycatchers were detected.

We sincerely thank the many people who generously provided information from the sites they were surveying and monitoring (see following sections listing data sources and contacts and acknowledgements). Every effort was made to locate and include all survey information for every known Southwestern Willow Flycatcher breeding site; however, due to delays in reporting for some sites, some 2005-season survey information may not be available until after this report is produced (October 2006). Also, there may be some extant sites that have not yet been reported and are therefore not included herein. New 2005 survey information that comes to light after this report will be incorporated in future rangewide reports.

Additional Considerations in Using and Interpreting the Data in this Report: We used data from a wide variety of sources, and the amount of information and level of detail varied greatly among sites. Because survey methodology and effort varied among sites and/or between years, these summary data should be interpreted and used keeping this variation in mind. Following is a discussion of cautions to consider when using these data.

Subspecies status of each site: The Willow Flycatcher sites entered into this database all fall within the geographic range of the southwestern subspecies (*E.t. extimus*), as defined by Unitt (1987), Browning (1993), Sogge et al. (1997), and USFWS (2002). Recent studies of flycatcher genetics (e.g., Paxton 2000) and song patterns (e.g., Sedgwick 2001) support a more southern range boundary for *E.t. extimus* than was used for the 1999 summary (Sogge et al. 2000). Future research may provide more insight into subspecies range boundaries; therefore, additional sites may eventually be removed from management as *extimus*, and/or new geographic areas and sites could be added. This should be considered when producing updates in future years, and when making rangewide comparisons among years.

Population estimates: Population estimates are just that – **estimates**. Their accuracy and precision vary with the level of survey effort, the intent of the survey (e.g., determining flycatcher presence/absence vs accurate territory estimate), surveyor experience, the size of the breeding site, habitat density, flycatcher behavior, and even background noise levels. The population estimates often represent the minimum number of flycatchers present; i.e., if surveyors suspected 12 to 14 flycatchers, the lower (more conservative) number was used. Therefore, although estimates may be very accurate for some intensively surveyed sites, the overall statistics presented in this report should be recognized as approximate.

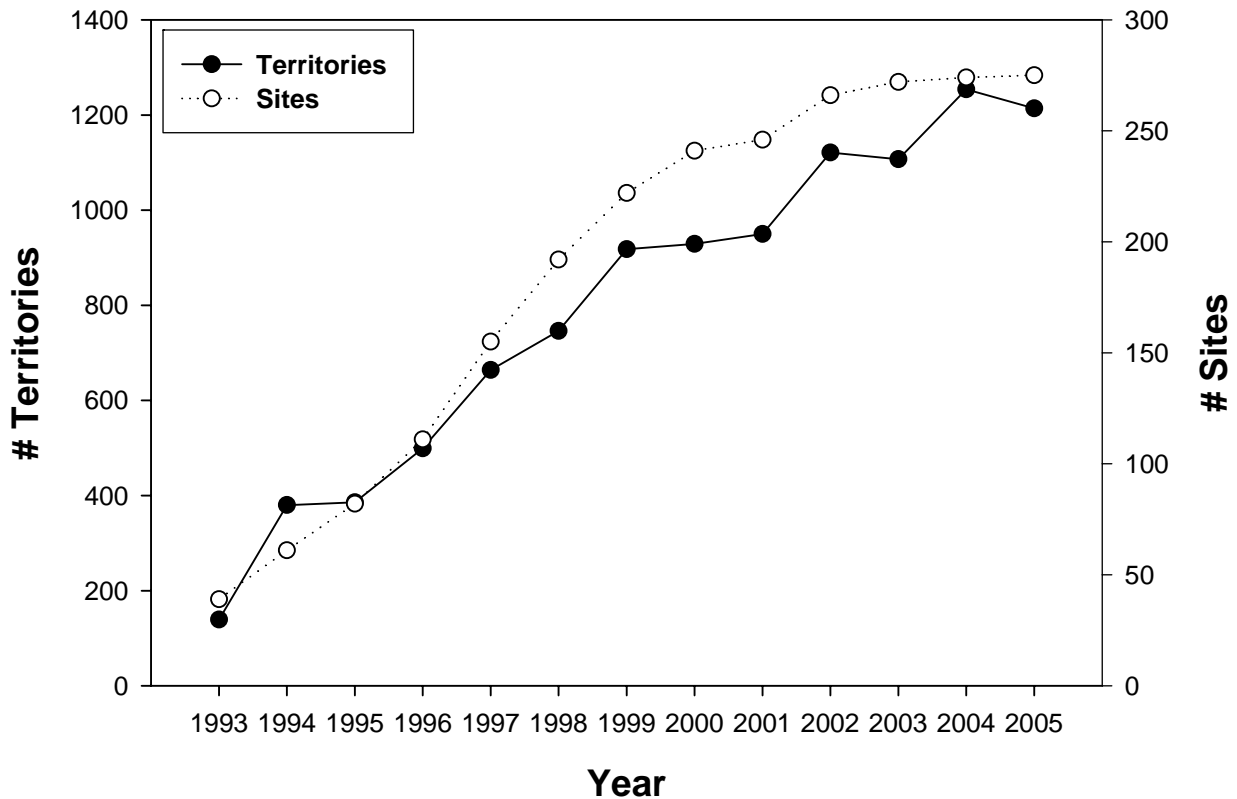
## DATA SUMMARIES

### Changes in the number of known territories over time

Since 1993, extensive survey effort in Arizona, California, Colorado, Nevada, New Mexico and Utah has greatly increased the number of known breeding sites and territories. From a 1993 estimate of roughly 40 sites and 140 territories, we now have data for 275 sites and 1214 territories (Figure 1). This increase should NOT be interpreted entirely as a Southwestern Willow Flycatcher population increase. Rather, it is to a great extent a function of increased survey effort over time (e.g., see Paradzick and Woodward 2003). Although population increases and decreases undoubtedly occur at some sites, movements of birds among sites and lack of standardized survey effort/reporting each year make it difficult to separate population trends from variances in survey effort. Determination of trends (positive or negative) can be made in only a few cases, and original data sources (e.g., reports, survey data sheets, etc.) must be consulted when trying to elucidate population trends.

**FIGURE 1.**

**Estimated number of known breeding sites and territories each year, as of 2005. The numbers of sites and territories prior to 2005 have been updated as new information has become available, and so may be different from values shown in past reports.**

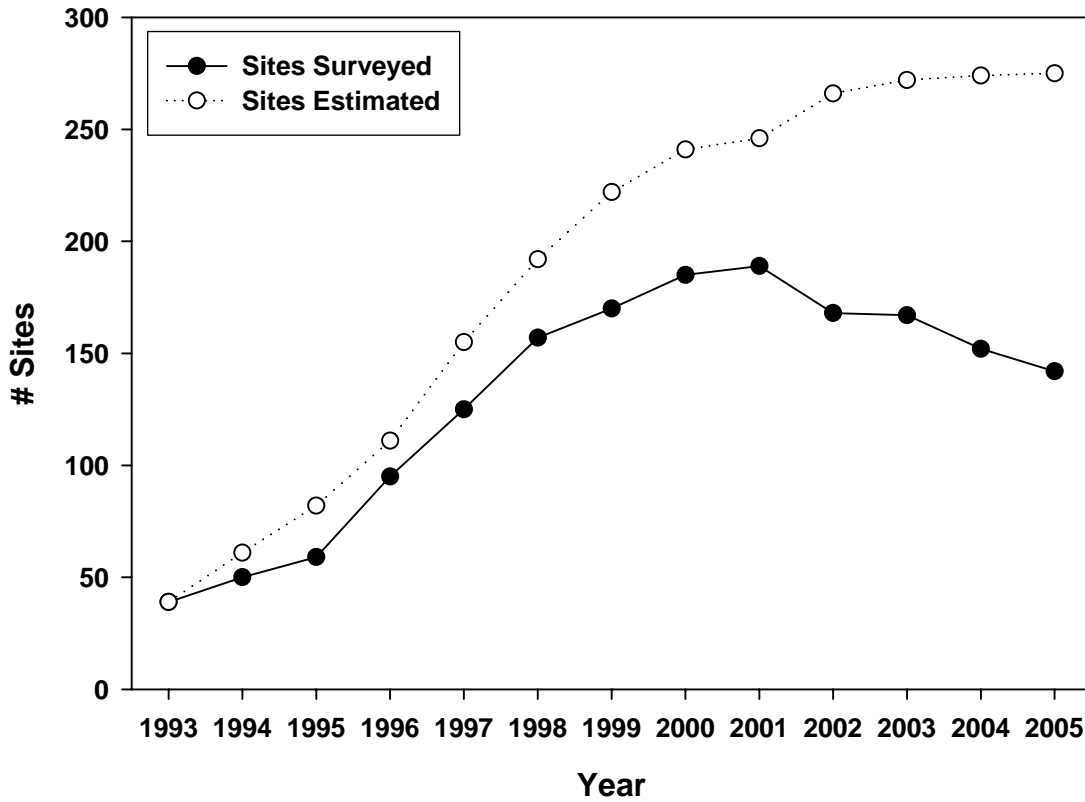


**Numbers of sites over time: surveyed vs estimated**

Not all of the 275 sites where Southwestern Willow Flycatcher territories have been discovered over the last 13 years are surveyed every year. However, our compilation includes all sites where flycatcher territories have been detected, even if only once, since 1993. This includes sites that were not surveyed in 2005. Therefore the total estimated number of sites (n=275) includes 142 that were surveyed in 2005, plus 133 that were last surveyed in 2004 or earlier. The number of sites actually surveyed each year increased from 1993 to 2001, but has been declining since then. See the section on Recency of Survey Data (below) and Appendix 3 for additional details.

**FIGURE 2.**

Number of estimated and surveyed breeding sites each year, as of 2005. The numbers of sites and territories prior to 2005 have been updated as new information has become available, and so may be different from values shown in past reports.

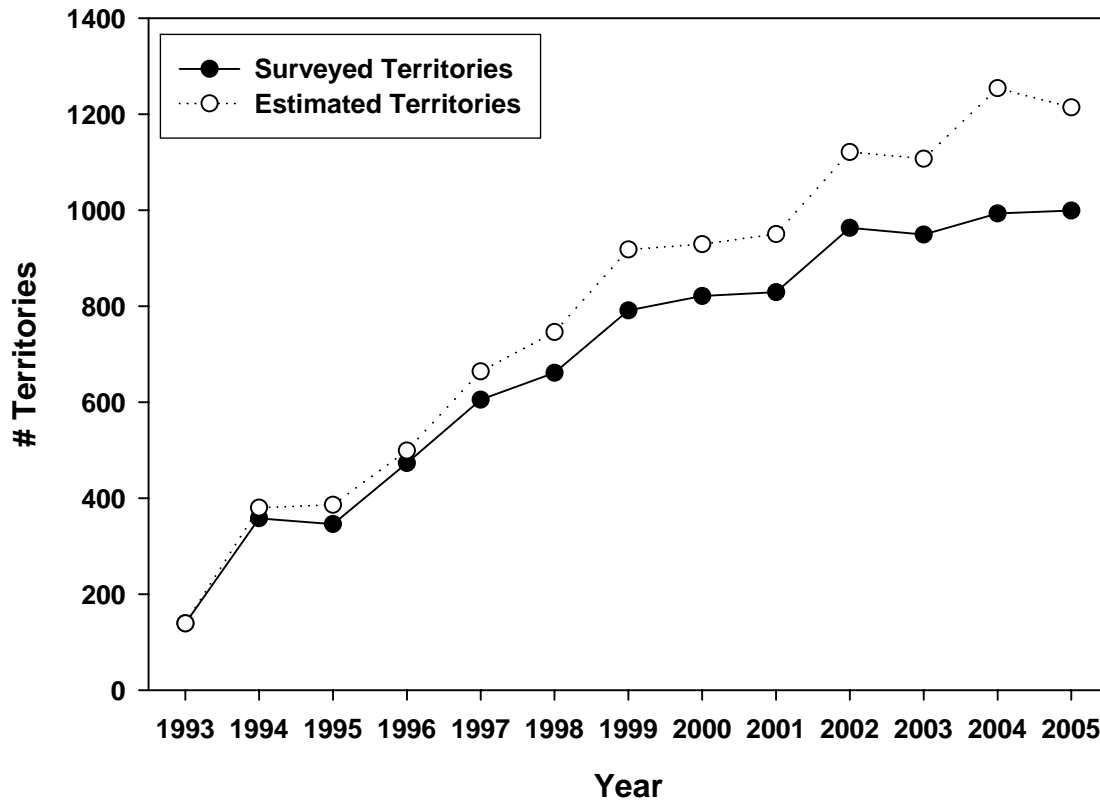


**Numbers of territories over time: surveyed vs estimated**

As previously noted, not all known Southwestern Willow Flycatcher breeding sites are surveyed every year. For sites that were not surveyed in 2005, we used the numbers reported in the most recent pre-2005 survey as an estimate of the number of territories currently at that site. Thus, for sites that were not surveyed in 2005, we continue to report the number of territories from the most recent survey year. In 2005, our estimated total number of territories (1214) includes 999 detected in 2005-season surveys, plus 215 territories from sites that were last surveyed in 2004 or before (Figure 3). See the section on Recency of Survey Data (below) and Appendix 3 for additional details.

**FIGURE 3.**

**Number of estimated and surveyed territories each year, as of 2005. The numbers of sites and territories prior to 2005 have been updated as new information has become available, and so may be different from values shown in past reports.**





**Recency of survey data**

As previously indicated, the information used in this report is based on the most recent available survey data for each site. However, not all sites are surveyed every year. Of the 275 sites where Southwestern Willow Flycatchers have occurred since 1993, only 142 sites were surveyed in 2005. Although our estimates for some sites are based on older survey data, over 78% of known sites have been surveyed since 2002, and sites surveyed since 2004 account for over 88% of the rangewide estimated number of flycatcher territories. Thus, the information used for most of the statistics reported herein is quite recent.

**Table 1. Most recent year of survey data for sites and territories included in this report, as of 2005.**

<b>Year</b>	<b># Sites</b>	<b>% Total Sites (n = 275)</b>	<b># Territories</b>	<b>% Total Territories (n = 1214)</b>
1993	1	0.4	2	0.2
1994	1	0.4	0	0.0
1995	1	0.4	1	0.1
1996	2	0.7	5	0.4
1997	4	1.5	5	0.4
1998	7	2.5	8	0.7
1999	6	2.2	6	0.5
2000	6	2.2	10	0.8
2001	31	11.3	63	5.2
2002	24	8.7	29	2.4
2003	20	7.3	13	1.1
2004	30	10.9	73	6.0
2005	142	51.6	999	82.3

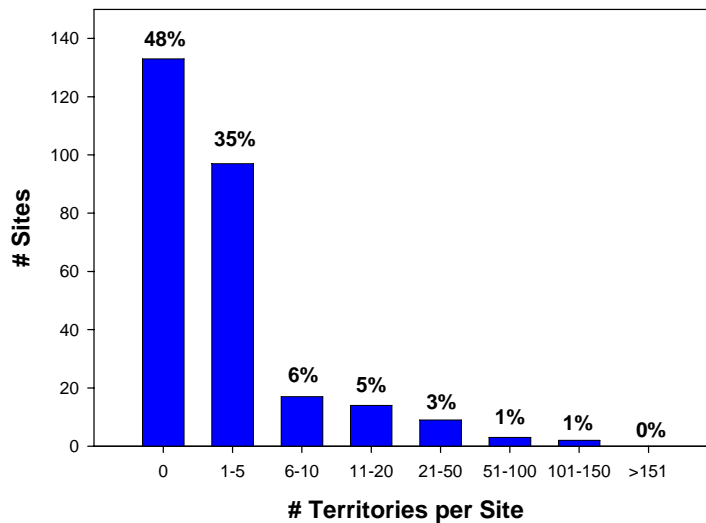
**Distribution of breeding sites by number of territories**

Most Southwestern Willow Flycatcher breeding sites are small, both in terms of the number of territories (hosting five or fewer territories: Figure 4) and habitat patch size. Willow Flycatcher territories have disappeared from 133 of the 275 sites tracked since 1993. All but two of these sites where flycatcher territories are no longer detected were composed of five or fewer territories. The two exceptions – Colorado River inflow to Lake Mead, and PZ Ranch on the San Pedro River – were larger sites where habitat was destroyed by flooding and fire, respectively.

Not all birds at the sites where flycatcher territories are no longer detected necessarily died – some of these birds moved to other sites where they attempted to establish breeding territories. We know this is the case for banded flycatchers that moved from the Verde River Tuzigoot Bridge and PZ Ranch to other sites (Paxton and Sogge 1996, Paxton et al. 1997, Netter et al. 1998). Flycatchers may eventually recolonize some sites from which they have been lost, due to a change in habitat quality, an increase in number of nearby territories, or other unknown factors. Such recolonization has occurred at 36 sites where flycatchers were detected again after at least one year of absence. Some of these sites have repeatedly cycled between occupied and unoccupied status, and some currently have territories while others do not.

If we look again at the size distribution of breeding sites and exclude the sites where territories are no longer detected, the picture remains much the same - the vast majority of sites (97 of 142; 68%) have five or fewer territories. Because most of the 133 sites where birds are no longer detected had very small populations (usually only one or two territories), their loss does not greatly affect the overall rangewide territory estimates, nor many of the territory statistics that we report herein.

**Figure 4.**  
**Number of territories at Willow Flycatcher Breeding Sites, as of 2005.**



**Distribution of territories by state**

Arizona, New Mexico, and California account for the greatest number of known Southwestern Willow Flycatcher sites and territories (Table 2). Nevada, Colorado, and Utah account for about 11% of territories, primarily because the range of *E.t. extimus* includes only the southern extremes of these states, and there are few known breeding sites within this relatively limited geographic area. Texas is absent from this table because there were no recent survey data or other records to shed light on current status and distribution within the state.

**Table 2. Number of Southwestern Willow Flycatcher breeding sites and territories by state, as of 2005. Refer to Appendix 3 for an annual summary of territories by state.**

State	# Sites	% of Total Sites	# Territories	% of Total Territories
AZ	117	42.5	495	40.8
CA	94	34.2	191	15.7
CO	10	3.6	63	5.2
NM	38	13.8	393	32.4
NV	13	4.7	68	5.6
UT	3	1.1	4	0.3
<b>TOTAL</b>	275		1214	

### **Distribution of territories by drainage**

In general we use the term “drainage” in a generic sense to describe one or more portions of a river system or watershed. Though the different drainages can vary widely in scale, this provides a convenient and useful framework within which to summarize site and territory information (per USFWS 2002).

More flycatcher territories are found along the Gila River than any other major drainage (Table 3); one of the largest known populations (in the Cliff-Gila Valley, NM) contributes many of the territories within this drainage. Elsewhere in New Mexico, and in southwest Colorado, most territories are along the Rio Grande. The primary flycatcher drainages in California are the Kern, Owen’s, San Luis Rey, Santa Ana, and Santa Margarita rivers. In Arizona, most flycatchers are found along the Gila, San Pedro, and Salt River drainages. The Virgin River drainage supports the majority of flycatchers in Utah. The Virgin River and the Pahrnagat River support most of the flycatchers in Nevada. Sites along the Colorado River are in Arizona, California, and Utah.

**Table 3. The number of Southwestern Willow Flycatcher breeding sites and territories by major river drainage (drainages with >1% of total flycatcher territories), as of the 2005 breeding season.**

<b>Drainage</b>	<b># Sites</b>	<b>% of Total Sites</b>	<b># Territories</b>	<b>% of Total Territories</b>
Big Sandy River	2	0.7	38	3.1
Bill Williams River	6	2.2	11	0.9
Canadian River	6	2.2	17	1.4
Colorado River	40	14.5	26	2.1
Gila River	45	16.4	284	23.4
Kern River	2	0.7	20	1.6
Owen's River	5	1.8	28	2.3
Pahrnagat River	4	1.5	32	2.6
Rio Grande	24	8.7	212	17.5
Salt River	6	2.2	74	6.1
San Luis Rey River	8	2.9	58	4.8
San Pedro River	19	6.9	165	13.6
Santa Ana River	30	10.9	34	2.8
Santa Margarita River	3	1.1	21	1.7
Tonto Creek	1	0.4	84	6.9
Verde River	6	2.2	23	1.9
Virgin River	8	2.9	38	3.1
All others*	60	21.8	49	4.0
<b>Total</b>	<b>275</b>		<b>1214</b>	

\*All others includes drainages that had <1% of total territories: Agua Fria River, Agua Hedionda, Amargosa River, Chama River, Hassayampa River, Las Flores Creek, Little Colorado River, Meadow Valley Wash, Mimbres River, Mojave River, San Diego Creek, San Diego River, San Dieguito River, San Felipe Creek, San Francisco River, San Gabriel River, San Juan Creek, San Juan River, San Mateo Creek, Santa Clara River, Santa Cruz River, Santa Maria River, Santa Ynez River, Sulphur Creek, Sweetwater River, and Temecula Creek

### **Distribution of territories by Recovery Unit**

We tallied the number of breeding sites and territories by Recovery Unit and Management Unit (Table 4), as defined in the Southwestern Willow Flycatcher Recovery Plan (USFWS 2002). Note that in some Management Units, the number of territories is **less than** the number of sites; this occurs where Management Units include primarily small sites, one or more of which no longer contains territorial flycatchers as of the most recent survey.

**Table 4. The currently known number of flycatcher breeding sites and territories (as of 2005 data), and the number of territories necessary for recovery (per USFWS 2002), in each Recovery Unit and Management Unit.**

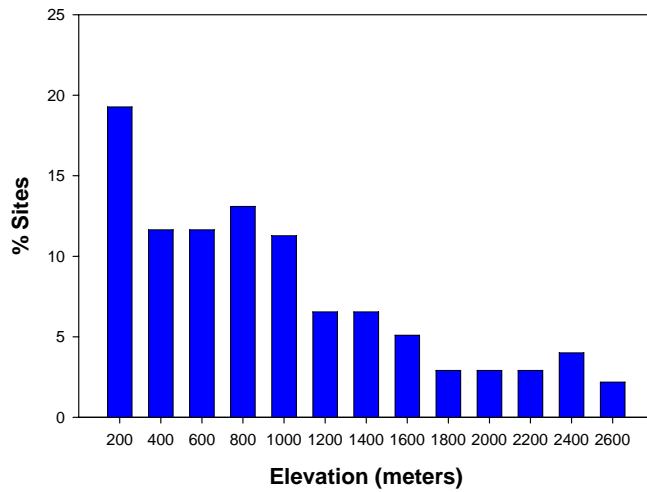
<b>Recovery Unit</b>	<b>Management Unit</b>	<b># of Sites</b>	<b># of Territories</b>	<b>Territories Needed for Recovery</b>
<b>Basin and Mojave</b>	Owens	5	28	50
	Kern	2	20	75
	Amargosa	2	1	25
	Mojave	6	3	25
	Salton	1	4	25
	<b>TOTAL</b>	<b>16</b>	<b>56</b>	<b>200</b>
<b>Coastal California</b>	Santa Ynez	4	7	75
	Santa Clara	12	8	25
	Santa Ana	33	34	50
	San Diego	23	86	125
	<b>TOTAL</b>	<b>72</b>	<b>135</b>	<b>275</b>
<b>Gila</b>	Verde	6	23	50
	Hassayampa - Agua Fria	2	0	25
	Roosevelt	7	158	50
	San Francisco	2	3	25
	Upper Gila	21	255	325
	Gila – San Pedro	42	194	150
	Santa Cruz	1	0	25
	<b>TOTAL</b>	<b>81</b>	<b>633</b>	<b>625</b>
<b>Lower Colorado</b>	Pahrnagat	6	39	50
	Virgin	7	31	100
	Little Colorado	4	5	50
	Middle Colorado	20	1	25
	Hoover - Parker	6	24	50
	Bill Williams	9	49	100
	Parker – Southern. Intl Boundary	15	1	150
	<b>TOTAL</b>	<b>68</b>	<b>151</b>	<b>525</b>
<b>Rio Grande</b>	San Luis Valley	6	55	50
	Upper Rio Grande	16	34	75
	Middle Rio Grande	8	135	100
	Lower Rio Grande	3	7	25
	<b>TOTAL</b>	<b>33</b>	<b>231</b>	<b>250</b>
<b>Upper Colorado River</b>	San Juan	5	8	25
	Powell	0	0	25
	<b>TOTAL</b>	<b>5</b>	<b>8</b>	<b>50</b>
<b>GRAND TOTAL</b>		<b>275</b>	<b>1214</b>	<b>1950</b>

**Elevation range of breeding territories**

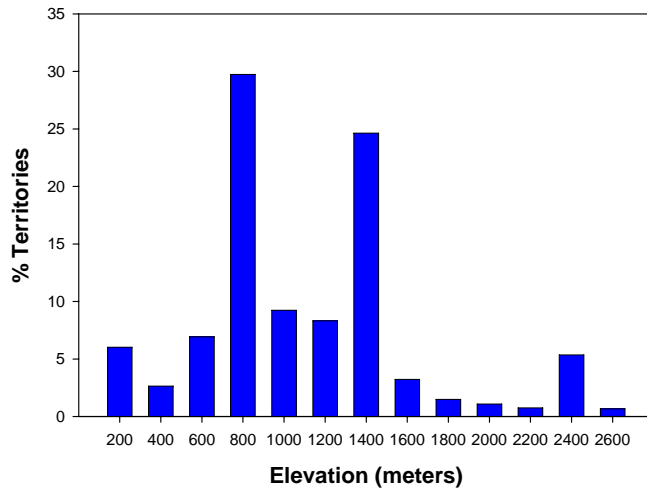
The Southwestern Willow Flycatcher is distributed over a wide elevation range. The majority of sites occur between 0 and 1000 m elevation (Figure 5a). Most territories are found between 0 and 1600 m (Figure 5b), with “spikes” at 601-800 m (the Gila/San Pedro River confluence and Roosevelt Lake in AZ) and 1401-1600 m (the Cliff-Gila Valley and San Marcial sites in NM). Although relatively few territories are known to occur above 2000 m elevation, Willow Flycatchers breed at four sites that are above 2500 m.

**Figure 5.**

**Figure 5a. The percentage of flycatcher breeding sites located at different elevations, as of 2005 (200 = 0 - 200 m, 400 = 201 - 400 m, etc.).**



**Figure 5b. The percentage of flycatcher territories occurring at differing elevations, as of 2005 (200 = 0 - 200 m, 400 = 201 - 400 m, etc.).**



**Use of native and exotic habitats**

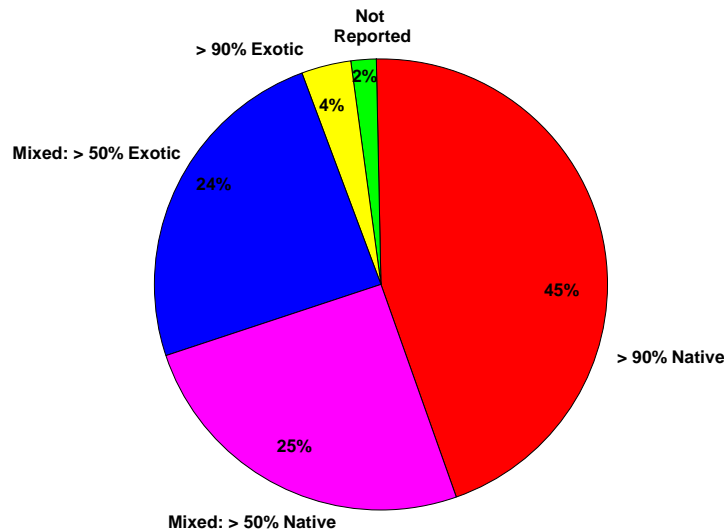
Many (perhaps most) flycatcher breeding sites are comprised of spatially complex habitat mosaics, often including both exotic and native vegetation. Within a site territories are frequently clumped and/or distributed near the patch edge. Thus, the vegetative composition of individual territories may differ from the overall composition of the patch. Furthermore, depending on the time in the breeding season and the breeding status of an individual flycatcher, flycatchers may move extensively within a patch, travel between patches, or even exploit resources outside of a breeding patch. Therefore an area much larger than a territory, and possibly much larger than a patch, may influence flycatcher breeding success and persistence at a particular site.

Detailed territory-based habitat measurements are lacking for most Southwestern Willow Flycatcher breeding sites, yet we attempted to broadly characterize the use of native and exotic habitats. To do so, we classified the habitat at each site into one of four broad categories, based on the overall species composition of the tree/shrub layer(s) of the site. The categories were:

- Native** (>90% native vegetation)
- Mixed – >50% Native** (50-90% native vegetation)
- Mixed – >50% Exotic** (50-90% exotic vegetation)
- Exotic** (>90% exotic vegetation)

Habitat patches comprised of native vegetation account for less than half (45%) of the known flycatcher territories (Figure 6). Although only 4% of territories occur at exotic sites, another 49% are located within sites where the habitat includes native/exotic mixtures. In many of these cases, exotics are contributing significantly to the habitat structure by providing the dense lower-strata vegetation that flycatchers prefer.

**Figure 6.**  
**Percentage of flycatcher territories occurring within breeding sites of differing compositions of native and exotic vegetation, as of the 2005 breeding season.**



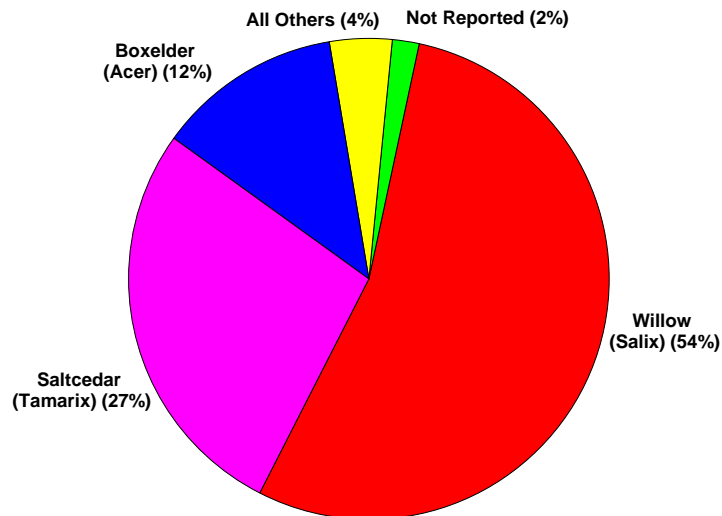
### Dominant tree species at breeding sites

Similar to classifying breeding territory habitat based on patch-level characteristics, the dominant tree species may differ between a patch and an individual territory within that patch. Generally, detailed territory-based habitat measurements are lacking for the majority of Southwestern Willow Flycatcher breeding sites. Despite this limitation, it is useful to characterize the dominant tree species within known flycatcher breeding sites.

To characterize the degree to which flycatchers breed in habitats dominated by particular tree species, we tallied the number of territories occurring in breeding sites dominated by particular tree species. Over half (54%) of territories are found at sites where willow (*Salix spp*) is the dominant tree species (Figure 7). More than 25% of territories are located at sites where saltcedar (*Tamarix spp*) predominates, and 12% are in patches where boxelder (*Acer negundo*) is the most common habitat component. Taken together, sites dominated by all other tree species account for only about 4% of territories.

The large percentage of territories located in habitats dominated by boxelder might suggest that such sites are widely used across the Southwestern Willow Flycatcher's range. However, flycatchers breed in boxelder dominated habitats only in the Cliff-Gila Valley, New Mexico (Stoleson and Finch 2003).

**Figure 7.**  
Percentage of flycatcher territories occurring within breeding sites dominated by particular tree species, as of the 2005 breeding season.





**Administration/management of sites and territories**

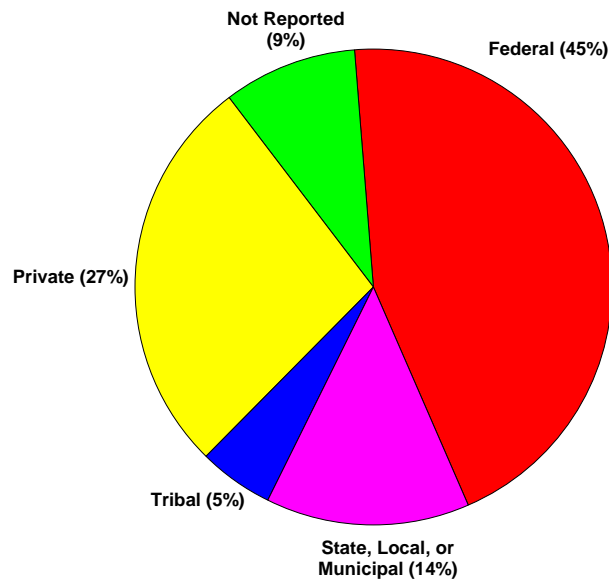
One factor important in conservation and recovery planning is the nature of ownership or “administration” of a site – e.g., whether management of the site is the responsibility of private landowners, the government, or some other entity. We examined this in two ways – first by site, then by territory.

By Site (Figure 8a): Forty-five percent of known breeding sites are under Federal government administration, 27% are on privately owned lands, state/local/municipal governments account for another 14% of sites, and 5% are administered by Native American tribes.

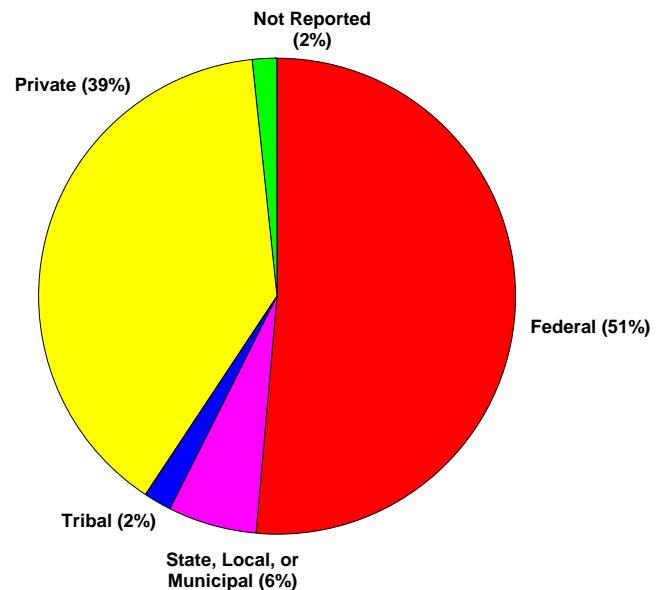
By Territory (Figure 8b): Federal lands account for 51% of flycatcher territories, and private for 39%. This underscores the importance of working with private landowners as flycatcher conservation and recovery efforts proceed. Roughly a third (32%) of the flycatcher territories found on privately owned lands are in the Cliff-Gila Valley, New Mexico.

**Figure 8**

**Figure 8a. Percentage of flycatcher breeding sites found under different land ownership, as of the 2005 breeding season.**



**Figure 8b. Percentage of flycatcher territories found under different land ownership, as of the 2005 breeding season.**



## SUMMARY: 2005

- We have learned of many new breeding sites and territories since the early 1990s as a result of extensive survey efforts throughout the Southwest. In 1993, there were only 140 known territories distributed among 40 breeding sites. The current count (as of 2005) is 1214 territories located among 275 sites (but remember the earlier caution about lack of standard definition for “site”).
- Not all of the 275 known sites are surveyed every year. The total estimated number of known territories (1214) is based on the most recent survey at all sites and does not reflect sites that were actually surveyed in a given year. In 2005 there were 142 sites that were surveyed with 999 territories detected.
- Most territories are found within small breeding sites (those sites with five or fewer territories). There are only five sites with 50 or more territories, though this comparison is confounded by lack of a standard definition of site.
- We know of 133 sites that supported territorial flycatcher in at least one year since 1993, but as of 2005 do not; almost all were small sites (five or fewer territories). Because these were primarily small sites, these territory losses account for only a small percentage of known territories; however, they underscore the possible vulnerability of small sites.
- The states of California, Arizona, and New Mexico account for 89% of known flycatcher territories. Nevada, Colorado, and Utah collectively have 11% of the known territories. We know virtually nothing about the current status of the Southwestern Willow Flycatcher in Texas.
- Southwestern Willow Flycatchers are distributed over a wide elevation range, with most from sea level to 1600 m, but a few sites (n=4) are located as high as 2500 m in elevation.
- Fewer than half (45%) of territories are in native habitat and 29% are in habitats having a 50% or greater exotic component. A large percentage of the native habitat territories occur at one site – the Cliff-Gila Valley in New Mexico. Over 90% of territories are in habitats where willow, saltcedar, or boxelder are the dominant tree species; flycatchers breed in boxelder-dominated habitats only in the Cliff-Gila Valley, New Mexico.
- Fewer than half (45%) of sites are on federally-controlled lands and 27% are on private lands; these privately owned sites account for 39% of known territories. Approximately one-third (32%) of territories on privately owned sites are found in the Cliff-Gila Valley, New Mexico.

## Acknowledgements

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Appendix 1. Most recent available survey data for each of 275 known Southwestern Willow Flycatcher breeding sites, as of the 2005 breeding season.

See footer on page 44 for “veg” and “dom tree” codes. This information may be considered as “sensitive” by some state or federal agencies, and is therefore not for general distribution. **Please do not disseminate this appendix without prior approval of the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, California Department of Fish and Game, and New Mexico Department of Game and Fish.**

Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Agua Fria River - Waddell Dam	AFWADA	AZ	Gila	Hassayampa - Agua Fria	439	Agua Fria River	Multiple	2	Sago	0	2005	English et al. 2006
Agua Hedionda - Macario Canyon	AHMACA	CA	Coastal Calif	San Diego	6	Agua Hedionda	Municipal	1	Sasp	0	2001	Kenwood 2006
Ash Meadows NWR - Carson Slough	AMAMCS	NV	Basin & Mojave	Amargosa	671	Amargosa River	Federal	2	Prsp	0	2005	Furtek and Tomlinson 2006
Ash Meadows NWR - Point of Rocks	AMAMPR	NV	Basin & Mojave	Amargosa	686	Amargosa River	Federal	2	Sasp	1	2005	Furtek and Tomlinson 2006
Amargosa River - Oasis Valley - Springdale	AMOVSP	NV	Lower Colorado	Amargosa	1207	Amargosa River	Private	1	Pofr	1	2004	Furtek and Tomlinson 2004
Big Sandy Riv., Lower	BSLOBS	AZ	Lower Colorado	Bill Williams	357	Big Sandy River	Federal	3	Tasp	5	2005	English et al. 2006
Big Sandy Riv., US 93	BSUS93	AZ	Lower Colorado	Bill Williams	555	Big Sandy River	Private	3	Tasp	33	2005	English et al. 2006
Bill Williams Alamo Lake	BWALMO	AZ	Lower Colorado	Bill Williams	427	Bill Williams River	Federal	2	Sasp	9	2005	English et al. 2006
Bill Williams Buckskin	BWBUCK	AZ	Lower Colorado	Bill Williams	244	Bill Williams River	Federal	2	Posp	0	2005	English et al. 2006
Bill Williams - Cave Wash	BWCAVE	AZ	Lower Colorado	Bill Williams	152	Bill Williams River	Federal	2	Sasp	0	2005	English et al. 2006
Bill Williams Delta Marsh Edge	BWDEMA	AZ	Lower Colorado	Bill Williams	163	Bill Williams River	Federal	3	Tasp	0	2005	English et al. 2006
Bill Williams Gemini	BWGEMI	AZ	Lower Colorado	Bill Williams	152	Bill Williams River	Federal	3	Tasp	0	2005	English et al. 2006
Bill Williams River - Monkey's Head	BWMONK	AZ	Lower Colorado	Bill Williams	143	Bill Williams River	Federal	2	Sasp	2	2005	English et al. 2006
Los Ojos Highway 95 Bridge	CHOJOS	NM	Rio Grande	Upper Rio Grande	2255	Chama River	Private	1	Sasp	1	2004	Williams email 4/05
Parkview Fish Hatch	CHPARK	NM	Rio Grande	Upper Rio Grande	2255	Chama River	State	1	Sasp	0	2001	Williams 2002

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Coyote Creek	CNCOYO	NM	Rio Grande	Upper Rio Grande	2332	Canadian River	State	1	Sasp	1	2002	Williams email 3/03
Coyote Creek - Guadalupita Bridge	CNGUBR	NM	Rio Grande	Upper Rio Grande	2275	Canadian River	Private	1	Sasp	2	2005	N. Baczek email May 2006
Coyote Creek - Guadalupita North	CNGUNO	NM	Rio Grande	Upper Rio Grande	2300	Canadian River	Private	1	Sasp	8	2000	Williams 2001 (email summary)
Canadian River - La Cueva	CNLACU	NM	Rio Grande	Upper Rio Grande	2133	Canadian River	Private	1	Sasp	1	2005	N. Baczek email May 2006
Canadian River - Mora	CNMORA	NM	Rio Grande	Upper Rio Grande	2133	Canadian River	Private	1	Sasp	1	2005	N. Baczek email May 2006
Canadian River - Ponil Creek	CNPOCR	NM	Rio Grande	Upper Rio Grande	1890	Canadian River	Private	2	Sasp	4	2003	Williams email 4/04
Colorado River - Grand Cyn RM 246 L	CO246L	AZ	Lower Colorado	Middle Colorado	372	Colorado River	Tribal	3	Tasp	0	2005	English et al. 2006
Colorado River - Grand Cyn RM 257-257 R	CO257R	AZ	Lower Colorado	Middle Colorado	350	Colorado River	Federal	4	Tasp	0	2005	English et al. 2006
Colorado River - Grand Cyn RM 259.5 L	CO259L	AZ	Lower Colorado	Middle Colorado	350	Colorado River	Tribal	4	Sasp	0	2005	English et al. 2006
Colorado River - Grand Cyn RM 259 R	CO259R	AZ	Lower Colorado	Middle Colorado	353	Colorado River	Federal	2	Sasp	0	2005	English et al. 2006
Colorado River - Grand Cyn RM 263-262 L	CO263L	AZ	Lower Colorado	Middle Colorado	350	Colorado River	Tribal	3	Tasp	0	2004	Munzer et al. 2005
Colorado River - Grand Cyn RM 265-263L	CO265L	AZ	Lower Colorado	Middle Colorado	366	Colorado River	Tribal	2	Sasp	0	2003	Smith et al. 2004
Colorado River - Grand Cyn RM 266 L	CO266L	AZ	Lower Colorado	Middle Colorado	353	Colorado River	Federal	2	Sasp	1	1999	Paradzick et al. 2000
Colorado River - Grand Cyn RM 268-265 L	CO268L	AZ	Lower Colorado	Middle Colorado	366	Colorado River	Tribal	2	Sasp	0	2003	Smith et al. 2004
Colorado River - Grand Cyn RM 268-264 R	CO268R	AZ	Lower Colorado	Middle Colorado	366	Colorado River	Federal	2	Sasp	0	2004	Munzer et al. 2005
Colorado River - Grand Cyn RM 270-268 L	CO270L	AZ	Lower Colorado	Middle Colorado	372	Colorado River	Tribal	1	Sasp	0	2003	Smith et al. 2004
Colorado River - Grand Cyn RM 272-268 R	CO272R	AZ	Lower Colorado	Middle Colorado	366	Colorado River	Federal	1	Sasp	0	2004	Munzer et al. 2005
Colorado River - Grand Cyn RM 273-270 L	CO273L	AZ	Lower Colorado	Middle Colorado	384	Colorado River	Tribal	1	Sasp	0	2002	Smith et al. 2003
Colorado River - Grand Cyn RM 277-273 L	CO277L	AZ	Lower Colorado	Middle Colorado	366	Colorado River	Tribal	2	Sasp	0	2005	English et al. 2006

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Colorado River - Grand Cyn RM 277-274 R	CO277R	AZ	Lower Colorado	Middle Colorado	350	Colorado River	Federal	1	Sasp	0	2005	English et al. 2006
Colorado River - Adobe Lake	COADOB	AZ	Lower Colorado	Parker - Mexico	61	Colorado River	Federal	3	Tasp	0	2005	English et al. 2006
Colorado River - Big Hole Slough	COBHSL	CA	Lower Colorado	Parker - Mexico	100	Colorado River				0	2005	Koronkiewicz et al. 2006
Colorado River Blankenship	COBLAN	AZ	Lower Colorado	Hoover - Parker	137	Colorado River	Federal	2	Sasp	0	2005	English et al. 2006
Colorado River - BR Lagoon	COBRLA	CA	Lower Colorado	Hoover - Parker	145	Colorado River	Federal	3	Tasp	1	1999	Paradzick et al. 2000
Colorado River - Cibola SW Landing Strip	COCIBO	AZ	Lower Colorado	Parker - Mexico	64	Colorado River	Federal	4	Tasp	0	2005	English et al. 2006
Colorado River - Clear Lake	COCLLA	AZ	Lower Colorado	Parker - Mexico	61	Colorado River	Federal	3	Tasp	0	2005	English et al. 2006
Colorado River - Draper Lake	CODRAP	CA	Lower Colorado	Parker - Mexico	67	Colorado River	Federal	2	Sasp	0	2001	Smith et al. 2002
Colorado River - Ehrenberg	COEHRE	AZ	Lower Colorado	Parker - Mexico	79	Colorado River	Federal	3	Tasp	0	2005	English et al. 2006
Colorado River - Ferguson Lake	COFERG	AZ	Lower Colorado	Parker - Mexico	61	Colorado River	Federal	3	Tasp	0	2005	Koronkiewicz et al. 2006
Colorado River - Grand Canyon RM 28-29	COGC29	AZ	Lower Colorado	Middle Colorado	886	Colorado River	Federal	4	Tasp	0	2005	English et al. 2006
Colorado River - Grand Canyon RM 50-51 L	COGC50	AZ	Lower Colorado	Middle Colorado	853	Colorado River	Federal	3	Tasp	0	2005	English et al. 2006
Colorado River - Grand Canyon RM 65.3 L	COGC65	AZ	Lower Colorado	Middle Colorado	853	Colorado River	Federal	3	Tasp	0	2004	Munzer et al. 2005
Colorado River - Grand Canyon RM 71 L	COGC71	AZ	Lower Colorado	Middle Colorado	853	Colorado River	Federal	3	Tasp	0	2005	English et al. 2006
Colorado River - Gila Confluence 1	COGILA	AZ	Lower Colorado	Parker - Mexico	40	Colorado River	Federal	2	Sasp	0	2005	English et al. 2006
Lake Havasu - Neptune	COHAVA	AZ	Lower Colorado	Hoover - Parker	137	Colorado River	Federal	2	Sasp	0	2005	English et al. 2006
Colorado River - Headgate Dam	COHEAD	CA	Lower Colorado	Parker - Mexico	107	Colorado River	Federal	2	Sasp	1	2002	Kenwood 2006
Colorado River - Hoge	COHOGE	AZ	Lower Colorado	Parker - Mexico	200	Colorado River	Federal	3	Tasp	0	2005	English et al. 2006

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Kanab Creek - Town of Kanab	COKANB	UT	Lower Colorado	Middle Colorado	1495	Colorado River	Unknown	3	Tasp	0	2005	Day 2005
Colorado River - Lake Mead Delta	COMEAD	AZ	Lower Colorado	Middle Colorado	365	Colorado River	Federal	1	Sasp	0	2005	English et al. 2006
Colorado River - Mittry Lake	COMITT	AZ	Lower Colorado	Parker - Mexico	49	Colorado River	Mixed Govt	3	Tasp	0	2005	English et al. 2006
Colorado River - Picacho East	COPICA	CA	Lower Colorado	Parker - Mexico	61	Colorado River	Federal	3	Tasp	0	2005	Koronkiewicz et al. 2006
Colorado River - Taylor Lake	COTAYL	CA	Lower Colorado	Parker - Mexico	61	Colorado River	Federal	2	Sasp	0	1998	Kenwood 2006
Colorado River Topock Marsh	COTOPO	AZ	Lower Colorado	Hoover - Parker	139	Colorado River	Federal	3	Tasp	21	2005	English et al. 2006
Colorado River - Trampas Wash	COTRAM	CA	Lower Colorado	Hoover - Parker	137	Colorado River	Federal	3	Tasp	0	2003	Kenwood 2006
Colorado River - Waterwheel Cove	COWACO	AZ	Lower Colorado	Hoover - Parker	195	Colorado River	Federal	1	Sasp	2	2005	English et al. 2006
Colorado River - Walker Lake	COWALK	CA	Lower Colorado	Parker - Mexico	67	Colorado River	Federal	2	Sasp	0	2004	McLeod et al. 2005
Gila River - Bird Area	GIBIRD	NM	Gila	Upper Gila	1371	Gila River	Federal	1	Alsp	2	2005	N. Baczek email May 2006
Gila River - Duncan	GIDUNC	AZ	Gila	Upper Gila	1112	Gila River	Mixed Govt	2	Sasp	2	2002	Smith et al. 2003
Gila River - Dysart Road	GIDYSA	AZ	Gila	Gila - San Pedro	280	Gila River	State	3	Tasp	0	2003	Smith et al. 2004
Gila River - Earven Flat	GIEAFL	AZ	Gila	Upper Gila	951	Gila River	Federal	2	Sago	0	2005	English et al. 2005
Gila River - Fort West Ditch	GIFORT	NM	Gila	Upper Gila	1402	Gila River	Federal/Private	1	Sasp	2	2005	N. Baczek email May 2006
Gila River Fort Thomas, Geronimo	GIFOTO	AZ	Gila	Upper Gila	805	Gila River	Federal	3	Tasp	5	2005	English et al. 2006
Gila River - Fortuna Wash	GIFOWA	AZ	Lower Colorado	Parker - Mexico	61	Gila River	Federal	2	Sasp	0	2005	English et al. 2006
Gila River - Fort Thomas Bridge	GIFTBR	AZ	Gila	Upper Gila	815	Gila River	Private	4	Tasp	0	1994	Paradzick et al. 2001
Gila River - Fort Thomas MS	GIFTMS	AZ	Gila	Upper Gila	810	Gila River	Private	2	Sasp	2	1998	Paradzick et al. 2001
Gila River GRSN031	GIGI31	AZ	Gila	Gila - San Pedro	505	Gila River	Federal	3	Tasp	0	1998	Paradzick et al. 2001
Gila River GRN004	GIGN04	AZ	Gila	Gila - San Pedro	585	Gila River	Private	4	Tasp	0	2005	English et al. 2006
Gila River GRN008	GIGN08	AZ	Gila	Gila - San Pedro	579	Gila River	Private	3	Tasp	0	2005	English et al. 2006



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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Gila River GRN009	GIGN09	AZ	Gila	Gila - San Pedro	579	Gila River	Private	3	Tasp	0	2005	English et al. 2006
Gila River GRN010	GIGN10	AZ	Gila	Gila - San Pedro	560	Gila River	Private	3	Tasp	0	2005	English et al. 2006
Gila River GRN011	GIGN11	AZ	Gila	Gila - San Pedro	579	Gila River	Private	4	Tasp	0	2000	Paradzick et al. 2001
Gila River GRN015	GIGN15	AZ	Gila	Gila - San Pedro	551	Gila River				0	2002	Smith et al. 2003
Gila River GRN018	GIGN18	AZ	Gila	Gila - San Pedro	561	Gila River	Private	3	Tasp	6	2005	English et al. 2006
Gila River GRN020 (Kelvin Bridge)	GIGN20	AZ	Gila	Gila - San Pedro	549	Gila River	Private	4	Tasp	0	2005	English et al. 2006
Gila River GRN 033	GIGN33	AZ	Gila	Gila - San Pedro	495	Gila River	Federal/Private	3	Tasp	0	2000	Paradzick et al. 2001
Gila River GRS007	GIGS07	AZ	Gila	Gila - San Pedro	573	Gila River	Private	3	Tasp	6	2005	English et al. 2006
Gila River GRS010	GIGS10	AZ	Gila	Gila - San Pedro	561	Gila River	Private	3	Tasp	1	2005	English et al. 2006
Gila River GRS011	GIGS11	AZ	Gila	Gila - San Pedro	561	Gila River	Private	4	Tasp	0	2005	English et al. 2006
Gila River GRS012	GIGS12	AZ	Gila	Gila - San Pedro	555	Gila River	Private	3	Tasp	0	2005	English et al. 2006
Gila River GRS013	GIGS13	AZ	Gila	Gila - San Pedro	558	Gila River	Private	3	Tasp	0	2003	Smith et al. 2004
Gila River GRS015	GIGS15	AZ	Gila	Gila - San Pedro	555	Gila River	Federal/Private	3	Tasp	0	2002	Smith et al. 2003
Gila River - GRS016	GIGS16	AZ	Gila	Gila - San Pedro	549	Gila River	Private	4	Tasp	1	2005	English et al. 2006
Gila River GRS018	GIGS18	AZ	Gila	Gila - San Pedro	542	Gila River	Private	3	Tasp	9	2005	English et al. 2006
Gila River - Guthrie	GIGUTH	AZ	Gila	Upper Gila	1029	Gila River	Federal	2	Posp	0	2005	English et al. 2006
Gila River Kearny Sewage Ponds	GIKRNY	AZ	Gila	Gila - San Pedro	555	Gila River	Local	3	Tasp	3	2005	English et al. 2006
Gila River - Lower Box, Ctnwod	GILBCO	NM	Gila	Upper Gila	1170	Gila River	Federal	1	Sasp	30	2005	N. Baczek email May 2006
Gila River - Lower Box : Main Canyon	GILBMC	NM	Gila	Upper Gila	1170	Gila River	Federal	1	Sasp	12	2005	N. Baczek email May 2006
Gila River - Lower Box	GILOBX	NM	Gila	Upper Gila	1170	Gila River	Federal	1	Sasp	13	2005	N. Baczek email May 2006
Gila River Pima Bridge	GIPIBR	AZ	Gila	Upper Gila	853	Gila River	Private	3	Tasp	2	1997	McCarthy et al. 1998
Gila River Pima East	GIPIEA	AZ	Gila	Upper Gila	856	Gila River	Federal/Private	2	Sasp	3	2004	Munzer et al. 2005
Gila River - Porter Wash Ponds	GIPOWP	AZ	Gila	Upper Gila	823	Gila River	Federal	3	Tasp	2	2005	English et al. 2006

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Gila River - Redrock	GIREDR	NM	Gila	Upper Gila	1280	Gila River	State/Private	1	Sasp	3	1996	Williams and Leal 1998
Gila River - San Jose	GISAJO	AZ	Gila	Gila - San Pedro	915	Gila River	Private	2	Sasp	0	2001	Smith et al. 2002
Gila River - Sanchez Road	GISANC	AZ	Gila	Upper Gila	896	Gila River	Private	2	Sasp	1	1998	Paradzick et al. 1999
Gila River - Smithville Canal	GISMIT	AZ	Gila	Upper Gila	878	Gila River	State/Private	3	Tasp	0	1997	McCarthy et al. 1998
Gila River - Solomon NW	GISONW	AZ	Gila	Upper Gila	899	Gila River	Private	2	Sasp	2	1998	Paradzick et al. 1999
Gila River - Dripping Springs Wash	GISPRG	AZ	Gila	Gila - San Pedro	622	Gila River	Federal	3	Tasp	2	2005	English et al. 2005
Gila River - Teague	GITEAG	AZ	Gila	Upper Gila	823	Gila River	Federal	3	Tasp	22	2005	English et al. 2006
Gila River - U Bar Ranch	GIUBAR	NM	Gila	Upper Gila	1372	Gila River	Private	1	Acne	150	2005	N. Baczek email May 2006
Gila River - Watson Wash	GIWAWA	AZ	Gila	Upper Gila	869	Gila River	Private	2	Sago	2	2005	English et al. 2006
Gila River - Whitlow Dam	GIWHDA	AZ	Gila	Gila - San Pedro	634	Gila River	Federal	3	Tasp	1	2005	English et al. 2006
Hassayampa Preserve	HAHASS	AZ	Gila	Hassayampa - Agua Fria	537	Hassayampa River	Private	1	Posp	0	2005	English et al. 2006
Canebrake Preserve	KECANE	CA	Basin & Mojave	Kern	850	Kern River	State	1	Sasp	0	2003	Kenwood 2006
Kern River Preserve	KEKERN	CA	Basin & Mojave	Kern	750	Kern River	Private	1	Sasp	20	2005	Kenwood 2006
Zuni/Black Rock	LCBLAC	NM	Lower Colorado	Little Colorado	1962	Little Colorado River	Tribal	2	Sasp	2	2002	Williams email 3/03
Little Colorado at Greer River Reservoir	LCGRRR	AZ	Lower Colorado	Little Colorado	2510	Little Colorado River	Federal	1	Sasp	2	2005	English et al. 2006
Little Colorado at Greer Township	LCGRTO	AZ	Lower Colorado	Little Colorado	2530	Little Colorado River	Federal	1	Sasp	0	2005	English et al. 2006
Zuni/Nutria Diversion Reservoir	LCNUTR	NM	Lower Colorado	Little Colorado	2081	Little Colorado River	Tribal	2	Sasp	1	2002	Williams email 3/03
Las Flores Creek	LFLAFL	CA	Coastal Calif	San Diego	100	Las Flores Creek	Federal	2	Sasp	0	2005	Kenwood 2006
Mimbres River - Highway 152 to San Juan	MIDISE	NM	Rio Grande	Lower Rio Grande	1737	Mimbres River	Private	2	Acne	1	2005	N. Baczek email May 2006
Mojave River - Jacoby Springs	MOJASP	CA	Basin & Mojave	Mojave	1978	Mojave River	Federal			1	2002	Kenwood 2006
Holcomb Creek - Little Bear	MOLBRS	CA	Basin & Mojave	Mojave	1951	Mojave River	Federal	1	Sasp	0	2004	Kenwood 2006

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Mojave River - Mojave Forks	MOMOFR	CA	Basin & Mojave	Mojave	914	Mojave River	Unknown	1	Posp	2	2001	Kenwood 2006
Mojave River - Oro Grande	MOORGR	CA	Basin & Mojave	Mojave	790	Mojave River	Unknown			0	2004	Kenwood 2006
Mojave River, Upper Narrows	MOUPNA	CA	Basin & Mojave	Mojave	900	Mojave River	State	1	Sasp	0	2004	Kenwood 2006
Mojave River, Victorville I-15	MOVICT	CA	Basin & Mojave	Mojave	900	Mojave River	State	1	Sasp	0	2004	Kenwood 2006
Meadow Valley Wash - Site 1	MVMV01	NV	Lower Colorado	Pahranagat	1250	Meadow Valley Wash	Unknown	2	Posp	0	2003	Koronkiewicz et al. 2004
Owen's River - Big Pine	OWBIGP	CA	Basin & Mojave	Owen's	1180	Owen's River	Unknown	1	Sasp	2	1999	Kenwood 2006
Owen's River - Chalk Bluff to 5 Bridges	OWCHBL	CA	Basin & Mojave	Owen's	1370	Owen's River	Utility	1	Sasp	21	2001	Kenwood 2006
Owen's River - Hwy 6	OWHWY6	CA	Basin & Mojave	Owen's	1310	Owen's River	Utility	1	Sasp	1	2001	Kenwood 2006
Owen's River - Lone Pine Creek	OWLPCR	CA	Basin & Mojave	Owen's	1175	Owen's River	Unknown	1	Sasp	2	1999	Kenwood 2006
Owen's River - Poleta Road	OWPOLE	CA	Basin & Mojave	Owen's	1280	Owen's River	Utility	1	Sasp	2	2001	Kenwood 2006
Pahranagat Valley - Crystal Springs	PACRSP	NV	Lower Colorado	Pahranagat	1140	Pahranagat River	Private	2	Posp	0	2005	Furtek and Tomlinson 2006
Key Pittman Wildlife Management Area	PAKEYP	NV	Lower Colorado	Pahranagat	1170	Pahranagat River	State	1	Sasp	5	2005	Furtek and Tomlinson 2006
Pahranagat River - North River Ranch	PANRRA	NV	Lower Colorado	Pahranagat	1100	Pahranagat River	Private	1	Sasp	6	2001	Furtek et al. 2002
Pahranagat Lake NWR	PAPHR	NV	Lower Colorado	Pahranagat	1143	Pahranagat River	Federal	1	Sasp	21	2005	Koronkiewicz et al. 2006
Sulphur Creek	PHSUCR	CA	Coastal Calif	Santa Clara	61	Sulphur Creek	Municipal	1	Sasp	0	2003	Kenwood 2006
Alamosa National Wildl. Refuge	RIALAM	CO	Rio Grande	San Luis Valley	2290	Rio Grande	Federal	1	Sasp	4	2004	Hawks Aloft 2004
Tierra Azul (Rio Grande del Rancho)	RIAZUL	NM	Rio Grande	Upper Rio Grande	2179	Rio Grande	Federal	1	Sasp	4	2005	N. Baczek email May 2006
Bluewater Creek	RIBLUE	NM	Rio Grande	Middle Rio Grande	2316	Rio Grande	Federal	1	Sasp	0	2005	N. Baczek email May 2006
Rio Grande Bosque del Apache	RIBOSQ	NM	Rio Grande	Middle Rio Grande	1378	Rio Grande	Federal	2	Sasp	0	2005	N. Baczek email May 2006

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Rio Grande Velarde-EI Guique	RIELGU	NM	Rio Grande	Upper Rio Grande	1798	Rio Grande	Private	2	Sasp	0	2002	Williams email 3/03
Rio Grande Velarde-Garcia Acequia	RIGARC	NM	Rio Grande	Upper Rio Grande	1798	Rio Grande	Private	2	Sasp	0	2005	N. Baczek email May 2006
Rio Grande - Higel SWA	RIHISW	CO	Rio Grande	San Luis Valley	2325	Rio Grande	State	1	Sasp	13	2005	Hawks Aloft 2005
Rio Grande - Hot Creek SWA	RIHTSW	CO	Rio Grande	San Luis Valley	2500	Rio Grande	State	1	Sasp	2	2002	Hawks Aloft 2002
Rio Grande Isleta	RIISLE	NM	Rio Grande	Middle Rio Grande	1554	Rio Grande	Tribal	1	Sasp	6	2005	N. Baczek email May 2006
Rio Grande Velarde-La Canova Acequia	RILACA	NM	Rio Grande	Upper Rio Grande	1762	Rio Grande	Private	2	Sasp	0	2005	N. Baczek email May 2006
Rio Grande - La Joya	RILAJO	NM	Rio Grande	Middle Rio Grande	1450	Rio Grande	State	4	Elan	7	2005	N. Baczek email May 2006
Rio Grande Velarde-La Rinconada	RILARI	NM	Rio Grande	Upper Rio Grande	1798	Rio Grande	Private	2	Sasp	0	2005	N. Baczek email May 2006
McIntire Springs (Conejos River)	RIMCSP	CO	Rio Grande	San Luis Valley	2300	Rio Grande	Federal	1	Sasp	20	2005	Cotton 2005
Rio Grande Orilla Verde	RIORIL	NM	Rio Grande	Upper Rio Grande	1829	Rio Grande	Federal	2	Sasp	2	2005	N. Baczek email May 2006
Rio Grande - Radium Springs	RIRADI	NM	Rio Grande	Lower Rio Grande	1280	Rio Grande	Private	2	Sasp	4	2004	Williams email 4/05
Rio Grande - Casa Colorado	RIRGCC	NM	Rio Grande	Middle Rio Grande	1250	Rio Grande	State	3	Tasp	1	2005	N. Baczek email May 2006
Rio Grande - San Acacia to Bosque Refuge	RIRGSA	NM	Rio Grande	Middle Rio Grande	1400	Rio Grande	Federal/Private	3	Tasp	0	2005	N. Baczek email May 2006
Rio Grande - Rio Grande SWA	RIRGSW	CO	Rio Grande	San Luis Valley	2321	Rio Grande	State	1	Sasp	15	2005	Hawks Aloft 2005
Rio Grande San Juan Pueblo Br	RISAJU	NM	Rio Grande	Upper Rio Grande	1716	Rio Grande	Tribal	2	Sasp	10	2005	N. Baczek email May 2006
Rio Grande San Marcial	RISAMA	NM	Rio Grande	Middle Rio Grande	1359	Rio Grande	Federal	2	Sasp	110	2005	N. Baczek email May 2006
Rio Grande - Selden Canyon	RISELD	NM	Rio Grande	Lower Rio Grande	1290	Rio Grande	State	3	Tasp	2	2004	Williams email 4/05
Rio Grande - Sevilleta NWR	RISEVL	NM	Rio Grande	Middle Rio Grande	1450	Rio Grande	Federal	4	Tasp	11	2005	N. Baczek email May 2006
Rio Grande - Sego Spring SWA	RISSSW	CO	Rio Grande	San Luis Valley	2344	Rio Grande	State	1	Sasp	1	2004	Hawks Aloft 2004
Rio Grande Taos Junction Bridg	RITAOS	NM	Rio Grande	Upper Rio Grande	1920	Rio Grande	Federal	2	Sasp	0	2005	N. Baczek email May 2006
Santa Ana River - SR 38 Bridge Cross	SA38BC	CA	Coastal Calif	Santa Ana	390	Santa Ana River	Unknown			1	2000	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Santa Ana River - Banning Canyon	SABANN	CA	Coastal Calif	Santa Ana	1160	Santa Ana River	Federal			1	2001	Kenwood 2006
Santa Ana River - Bear Creek	SABEAR	CA	Coastal Calif	Santa Ana	1100	Santa Ana River	Federal	1	Alsp	0	2004	Kenwood 2006
Santa Ana River - City Creek	SACICR	CA	Coastal Calif	Santa Ana	495	Santa Ana River	County	2	Sago	0	2002	Kenwood 2006
Santa Ana River - Cienega Seca	SACIEN	CA	Coastal Calif	Santa Ana	2158	Santa Ana River	Federal	1	Sasp	1	2001	Kenwood 2006
Santa Ana River - Day Canyon	SADAYC	CA	Coastal Calif	Santa Ana	878	Santa Ana River	Federal	1	Alsp	1	2001	Kenwood 2006
Santa Ana River - Deer Creek	SADEER	CA	Coastal Calif	Santa Ana	1500	Santa Ana River	Federal			0	2004	Kenwood 2006
Santa Ana River - East Etiwanda Creek	SAEECR	CA	Coastal Calif	Santa Ana	780	Santa Ana River	Federal			0	2001	Kenwood 2006
Santa Ana River - English Channel	SAENCH	CA	Coastal Calif	Santa Ana	215	Santa Ana River	Private	1	Sasp	1	2003	Kenwood 2006
Santa Ana River - Fairview Regional Park	SAFAIR	CA	Coastal Calif	Santa Ana	100	Santa Ana River	Unknown			2	2002	Kenwood 2006
Santa Ana River - Featherly Regional Park	SAFEAT	CA	Coastal Calif	Santa Ana	367	Santa Ana River	County			0	2001	Kenwood 2006
Santa Ana River - Forest Falls	SAFOFA	CA	Coastal Calif	Santa Ana	1700	Santa Ana River	Unknown			3	2001	Kenwood 2006
Santa Ana River - Garner Wash	SAGAWA	CA	Coastal Calif	Santa Ana	1300	Santa Ana River	Federal			1	1995	Kenwood 2006
Santa Ana River - Greenspot Thicket	SAGRTH	CA	Coastal Calif	Santa Ana	560	Santa Ana River	Unknown			1	2001	Kenwood 2006
Santa Ana River - Jenk's Meadow	SAJNKS	CA	Coastal Calif	Santa Ana	1743	Santa Ana River	Federal	1	Sasp	4	2001	Kenwood 2006
Santa Ana River - La Cadena to Waterman	SALACA	CA	Coastal Calif	Santa Ana	275	Santa Ana River	Local	2	Sasp	0	2004	Kenwood 2006
Santa Ana River - Lost Lake	SALOLA	CA	Coastal Calif	Santa Ana	850	Santa Ana River	Federal			1	2001	Kenwood 2006
Santa Ana River - Metcalf Creek	SAMECR	CA	Coastal Calif	Santa Ana	2060	Santa Ana River	Unknown	1	Sasp	0	2004	Kenwood 2006
Santa Ana River - Morton Canyon	SAMOCA	CA	Coastal Calif	Santa Ana	1000	Santa Ana River	Federal			1	2001	Kenwood 2006
Santa Ana River - Mtn Home Village	SAMTNH	CA	Coastal Calif	Santa Ana	1500	Santa Ana River	Federal	1	Alsp	0	2004	Kenwood 2006
Santa Ana River - Oak Glen	SAOAGL	CA	Coastal Calif	Santa Ana	1490	Santa Ana River	Unknown			3	2001	Kenwood 2006

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Santa Ana River - Prado Basin	SAPRAD	CA	Coastal Calif	Santa Ana	91	Santa Ana River	Federal	2	Sasp	6	2004	Kenwood 2006
Santa Ana River - Rattlesnake Creek	SARTSN	CA	Coastal Calif	Santa Ana	1865	Santa Ana River	Federal	1	Sasp	0	2004	Kenwood 2006
Santa Ana River - Sand Creek	SASNCR	CA	Coastal Calif	Santa Ana	1512	Santa Ana River	Federal	1	Sasp	4	2001	Kenwood 2006
Santa Ana River - San Timoteo Creek	SASNTI	CA	Coastal Calif	Santa Ana	425	Santa Ana River	Unknown	2	Sasp	0	2004	Kenwood 2006
Santa Ana River - Strawberry Creek	SASTCR	CA	Coastal Calif	Santa Ana	600	Santa Ana River	Unknown			0	2000	Kenwood 2006
Santa Ana River - Van Dusen Canyon	SAVDCA	CA	Coastal Calif	Santa Ana	2060	Santa Ana River	Federal			0	2002	Kenwood 2006
Santa Ana River - Waterman Creek	SAWACR	CA	Coastal Calif	Santa Ana	610	Santa Ana River	Federal	1	Plsp	0	2001	Kenwood 2006
San Gabriel River - Route 39	SBRT39	CA	Coastal Calif	Santa Clara	1550	San Gabriel River	Federal	1	Sasp	2	1997	Kenwood 2006
San Gabriel River	SBSAGA	CA	Coastal Calif	Santa Clara	175	San Gabriel River	Unknown			0	2005	Kenwood 2006
San Jacinto River - Bautista Canyon	SCBAUT	CA	Coastal Calif	Santa Ana	1180	Santa Ana River	Unknown			2	2003	Kenwood 2006
San Jacinto River and Levee	SCRVLV	CA	Coastal Calif	Santa Ana	470	Santa Ana River	County	2	Sasp	1	2003	Kenwood 2006
Santa Ysabel Creek-Battlefield	SDBATT	CA	Coastal Calif	San Diego	125	San Dieguito River	Private	1	Sasp	1	1997	Kenwood 2006
San Diego River - El Capitan	SDELCA	CA	Coastal Calif	San Diego	230	San Diego River	Muni/Tribal	2	Sasp	2	2001	Kenwood 2006
San Dieguito River	SDSADI	CA	Coastal Calif	San Diego	200	San Dieguito River	Local	2	Sasp	0	2004	Kenwood 2006
Santa Ysabel Creek - Tim's Canyon	SDTICA	CA	Coastal Calif	San Diego	125	San Dieguito River	Private	1	Sasp	0	2002	Kenwood 2006
William Heise Park	SDWHPA	CA	Coastal Calif	San Diego	1200	San Diego River	Municipal			1	2001	Kenwood 2006
San Felipe Creek - San Felipe	SESAFE	CA	Basin & Mojave	Salton	1005	San Felipe Creek	Private	1	Sasp	4	2002	Kenwood 2006
San Francisco Cr - Alpine Horse Pasture	SFALPI	AZ	Gila	San Francisco	2414	San Francisco River	Federal	1	Sasp	1	2005	English et al. 2006
San Fransisco River - Hwy 180	SFH180	NM	Gila	San Francisco	1554	San Francisco River	Private	1	Sasp	2	1993	Williams and Leal 1998
San Diego Creek - Laguna Lakes	SGLALA	CA	Coastal Calif	Santa Ana	90	San Diego Creek	Unknown			0	2004	Kenwood 2006

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
San Juan River - Bayfield	SJBAYF	CO	Upper Colorado	Upper San Juan	2100	San Juan River	Private	1	Sasp	1	2002	M. Fitzgerald pers comm
San Juan River - East Fork (Piano Cr)	SJEAFO	CO	Upper Colorado	Upper San Juan	2450	San Juan River	Private	1	Sasp	1	2000	Sugnet and Associates 2000
Los Pinos River - Bear Dance to 151	SJLPBD	CO	Upper Colorado	Upper San Juan	1980	San Juan River	Tribal	1	Sasp	4	2003	L. Alterman 2003
San Juan River - Shiprock	SJSHIP	NM	Upper Colorado	Upper San Juan	1463	San Juan River	Tribal	2	Sasp	0	1999	Fitzgerald unpub data
Williams Creek Reservoir	SJWICR	CO	Upper Colorado	Upper San Juan	2515	San Juan River	Federal	1	Sasp	2	2002	M. Fitzgerald pers comm
San Luis Rey River - Agua Caliente Creek	SLACCR	CA	Coastal Calif	San Diego	800	San Luis Rey River	Unknown			0	2001	Kenwood 2006
San Luis Rey River - Agua Tibia	SLAGTI	CA	Coastal Calif	San Diego	215	San Luis Rey River	Unknown			1	2001	Kenwood 2006
San Luis Rey River, Couser Cyn	SLCOUS	CA	Coastal Calif	San Diego	200	San Luis Rey River	Private	2	Sasp	0	2003	Kenwood 2006
San Luis Rey River - Guajome Lake	SLGUAJ	CA	Coastal Calif	San Diego	100	San Luis Rey River	Local	2	Sasp	2	2005	Kenwood 2006
San Luis Rey River - Pala	SLPALA	CA	Coastal Calif	San Diego	140	San Luis Rey River	Unknown			1	2001	Kenwood 2006
San Luis Rey River - Pilgrim Creek	SLPILG	CA	Coastal Calif	San Diego	100	San Luis Rey River	Federal	2	Sasp	0	2005	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	CA	Coastal Calif	San Diego	850	San Luis Rey River	Federal	1	Sasp	51	2004	Kenwood 2006
San Luis Rey River - Whelan Lake	SLWHEL	CA	Coastal Calif	San Diego	10	San Luis Rey River	Municipal/Feder	2	Sasp	3	2005	Kenwood 2006
Santa Margarita River - Camp Pendleton	SMCAPE	CA	Coastal Calif	San Diego	50	Santa Margarita River	Federal	2	Sasp	20	2005	Kenwood 2006
De Luz Creek - Camp Pendleton	SMDELU	CA	Coastal Calif	San Diego	200	Santa Margarita River	Federal	1	Sago	0	2005	Kenwood 2006
Santa Margarita River - Fallbrook Creek	SMFALL	CA	Coastal Calif	San Diego	50	Santa Margarita River	Federal	2	Sasp	1	2005	Kenwood 2006
Santa Maria River, Lower	SNSMLO	AZ	Lower Colorado	Bill Williams	354	Santa Maria River	Federal	2	Sasp	0	2005	English et al. 2006
San Mateo Creek	SOSMCR	CA	Coastal Calif	San Diego	50	San Mateo Creek	Federal	2	Sasp	0	2005	Kenwood 2006
San Pedro - 3 Links	SP3LIN	AZ	Gila	Gila - San Pedro	991	San Pedro River	Private	2	Sago	7	2005	English et al. 2006

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
San Pedro River - Apache Powder Rd	SPAPPO	AZ	Gila	Gila - San Pedro	1097	San Pedro River	Private	2	Sasp	0	2004	Munzer et al. 2005
San Pedro River- Aravaipa Cr Confl.	SPARAV	AZ	Gila	Gila - San Pedro	658	San Pedro River	Federal	2	Posp	10	2005	English et al. 2006
San Pedro River - Aravaipa Inflow North	SPARIN	AZ	Gila	Gila - San Pedro	661	San Pedro River	Private	2	Sasp	18	2005	English et al. 2006
San Pedro River - Aravaipa Inflow South	SPARIS	AZ	Gila	Gila - San Pedro	660	San Pedro River	Private	1	Sasp	16	2005	English et al. 2006
San Pedro River - Bingham Ciengena	SPBICI	AZ	Gila	Gila - San Pedro	690	San Pedro River	Municipal	2	Ceoc	0	2005	English et al. 2006
San Pedro River - Catalina Wash	SPCATA	AZ	Gila	Gila - San Pedro	774	San Pedro River	Private	1	Sasp	4	2005	English et al. 2006
San Pedro River - Caggage Wash	SPCAWA	AZ	Gila	Gila - San Pedro	681	San Pedro River	Private	3	Tasp	0	2005	English et al. 2006
San Pedro River - CB Crossing	SPCBCR	AZ	Gila	Gila - San Pedro	603	San Pedro River	Private	3	Tasp	1	2005	English et al. 2006
San Pedro River - Cooks Lake	SPCOLA	AZ	Gila	Gila - San Pedro	643	San Pedro River	Federal/Private	2	Ceoc	11	2005	English et al. 2006
San Pedro R. Dudleyville Crossing	SPDUVI	AZ	Gila	Gila - San Pedro	603	San Pedro River	Private	2	Sasp	15	2005	English et al. 2006
San Pedro River - Hereford Bridge	SPHEBR	AZ	Gila	Gila - San Pedro	1265	San Pedro River	Federal	2	Pofr	1	2005	English et al. 2006
San Pedro River - Indian Hills	SPINHI	AZ	Gila	Gila - San Pedro	603	San Pedro River	Private	3	Tasp	0	2005	English et al. 2006
San Pedro River - Malpais Hill	SPMAHI	AZ	Gila	Gila - San Pedro	634	San Pedro River	Federal/Private	2	Posp	0	2005	English et al. 2006
San Pedro River - PZ Ranch	SPPZRA	AZ	Gila	Gila - San Pedro	634	San Pedro River	Private	3	Tasp	1	2005	English et al. 2006
San Pedro River - San Manuel Crossing	SPSAMA	AZ	Gila	Gila - San Pedro	780	San Pedro River	Private	1	Sasp	55	2005	English et al. 2006
San Pedro River - Soza Wash	SPSOWA	AZ	Gila	Gila - San Pedro	914	San Pedro River	Private	2	Sasp	0	2003	Smith et al. 2004
San Pedro River, SR 90	SPSR90	AZ	Gila	Gila - San Pedro	1237	San Pedro River	Federal	2	Posp	0	2005	English et al. 2006
San Pedro River - Wheatfields	SPWHEA	AZ	Gila	Gila - San Pedro	671	San Pedro River	Private	3	Tasp	26	2005	English et al. 2006
Salt River - Cottonwood Acres I	SRCOTT	AZ	Gila	Roosevelt	652	Salt River	Federal	3	Tasp	42	2005	English et al. 2006



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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Salt River Inflow - Roos Lk: Lakeshore	SRLAKE	AZ	Gila	Roosevelt	640	Salt River	Federal	1	Sasp	1	2005	English et al. 2006
Salt River - Pinal Creek	SRPICR	AZ	Gila	Roosevelt	853	Salt River	Private/Federal	2	Pofr	7	2005	English et al. 2006
Salt River Inflow - Roosevelt Lake	SRSALT	AZ	Gila	Roosevelt	640	Salt River	Federal	4	Tasp	22	2005	English et al. 2006
Salt River - School House Point North	SRSCHN	AZ	Gila	Roosevelt	640	Salt River	Federal	3	Tasp	0	2005	English et al. 2006
Salt River - School House Point South	SRSCHS	AZ	Gila	Roosevelt	640	Salt River	Federal	4	Tasp	2	2005	English et al. 2006
Santa Clara River - Arco/Four Corners	STARCO	CA	Coastal Calif	Santa Clara	350	Santa Clara River	Private	2	Sasp	0	2005	Kenwood 2006
Santa Clara River - Elizabeth Lake Canyon	STELCA	CA	Coastal Calif	Santa Clara	630	Santa Clara River	Federal			2	1996	Kenwood 2006
Santa Clara River - Fillmore Fish Hatch	STFILL	CA	Coastal Calif	Santa Clara	140	Santa Clara River	State	2	Sasp	0	2002	Kenwood 2006
Santa Clara River - Lower Piru Creek	STLOPI	CA	Coastal Calif	Santa Clara	335	Santa Clara River	Federal	1	Sasp	1	2002	Kenwood 2006
Santa Clara River - Santa Paula	STSAPA	CA	Coastal Calif	Santa Clara	120	Santa Clara River	Private	2	Sasp	3	2002	Kenwood 2006
Santa Clara River - Saticoy	STSATI	CA	Coastal Calif	Santa Clara	60	Santa Clara River	Private	2	Sasp	0	2003	Kenwood 2006
Santa Clara River - San Francisquito Creek	STSFQR	CA	Coastal Calif	Santa Clara	800	Santa Clara River	Unknown			0	2001	Kenwood 2006
Santa Clara River - Soledad Cyn	STSOCA	CA	Coastal Calif	Santa Clara	340	Santa Clara River	Unknown			0	2004	Kenwood 2006
Santa Clara River - Upper Piru Creek	STUPPI	CA	Coastal Calif	Santa Clara	1440	Santa Clara River	Federal			0	2002	Kenwood 2006
San Juan Creek - Canada Gobernadora	SUCAGO	CA	Coastal Calif	Santa Ana	200	San Juan Creek	Unknown			0	2004	Kenwood 2006
San Juan Creek - La Novia Bridge	SUNOBR	CA	Coastal Calif	Santa Ana	35	San Juan Creek	Municipal	1	Sago	0	2005	Kenwood 2006
Cuyamaca Lake	SWCUYA	CA	Coastal Calif	San Diego	1500	Sweetwater River	State	1	Sasp	2	1998	Kenwood 2006
Sweetwater Reservoir	SWSWRE	CA	Coastal Calif	San Diego	100	Sweetwater River	Utility	2	Sasp	0	2005	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	CA	Coastal Calif	Santa Ynez	200	Santa Ynez River	Private	1	Sasp	6	2002	Kenwood 2006

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Site Name	Site Code	State	Recovery Unit	Management Unit	Elev (m)	Drainage	Owner	Veg	Dom Tree	Terr	Year	Reference
Santa Ynez River - Gibraltar	SYGIBR	CA	Coastal Calif	Santa Ynez	500	Santa Ynez River	Federal	1	Sasp	0	2002	Kenwood 2006
Santa Ynez River - Lompoc	SYLOMP	CA	Coastal Calif	Santa Ynez	75	Santa Ynez River	Fed, City, Priv	1	Sasp	0	2003	Kenwood 2006
Santa Ynez River - Vandenberg AFB	SYVAND	CA	Coastal Calif	Santa Ynez	50	Santa Ynez River	Federal	1	Sasp	1	2003	Kenwood 2006
Santa Cruz River - Cienega Creek	SZCICR	AZ	Gila	Santa Cruz	1310	Santa Cruz River	Federal	2	Sasp	0	2003	Smith et al. 2004
Temecula Creek - Aguanga	TEAGUA	CA	Coastal Calif	San Diego	400	Temecula Creek	Private	2	Sasp	0	2001	Kenwood 2006
Temecula Creek - Oak Grove	TEOAKG	CA	Coastal Calif	San Diego	900	Temecula Creek	Private	1	Sasp	1	1998	Kenwood 2006
Tonto Creek Inflow - Roosevelt Lk	TOTONT	AZ	Gila	Roosevelt	640	Tonto Creek	Federal	3	Tasp	84	2005	English et al. 2006
Verde River - Camp Verde	VECAVE	AZ	Gila	Verde	942	Verde River	Private	2	Sasp	0	2005	English et al. 2006
Verde River - Davenport	VEDAWA	AZ	Gila	Verde	576	Verde River	Federal	2	Prsp	0	2005	English et al. 2006
Verde River - Horseshoe Reservoir	VEHORE	AZ	Gila	Verde	604	Verde River	Federal	2	Sasp	20	2005	English et al. 2006
Verde River - Ister Flat	VEISTE	AZ	Gila	Verde	610	Verde River	Federal	3	Tasp	3	2005	English et al. 2006
Verde River - Tavasci Marsh	VETAVA	AZ	Gila	Verde	920	Verde River	Mixed Govt	1	Sasp	0	1999	Paradzick et al. 2000
Verde River - Tuzigoot Bridge	VETUZI	AZ	Gila	Verde	1006	Verde River	Federal	2	Posp	0	2001	Smith et al. 2002
Virgin River - St. George	VIGIOR	UT	Lower Colorado	Virgin	732	Virgin River	State/Private	3	Tasp	0	2005	Day 2005
Virgin River Delta - Lake Mead	VILAME	NV	Lower Colorado	Virgin	365	Virgin River	Federal	2	Sasp	6	2001	McKernan and Braden 2002
Virgin River - Littlefield	VILITT	AZ	Lower Colorado	Virgin	640	Virgin River	Federal			0	2005	English et al. 2006
Virgin River - Mesquite	VIMESQ	NV	Lower Colorado	Virgin	549	Virgin River	Private	3	Tasp	12	2005	Koronkiewicz et al. 2006
Virgin River - Morman Mesa	VIMOME	NV	Lower Colorado	Virgin	366	Virgin River	Federal	2	Sasp	7	2005	Koronkiewicz et al. 2006
Muddy River - Moapa Valley	VIMUMV	NV	Lower Colorado	Virgin	533	Virgin River	Federal	3	Tasp	2	2005	Furtek and Tomlinson 2006
Muddy River Delta - Overton Wildl. Area	VIMURI	NV	Lower Colorado	Pahranagat	370	Virgin River	State	2	Sasp	7	2005	Koronkiewicz et al. 2006
Virgin River - Seegmiller	VISEEG	UT	Lower Colorado	Virgin	790	Virgin River	Private	3	Tasp	4	2005	Day 2005

Habitat type: 1 = Native (>90%); 2 = Mixed – Native (50-90% native); 3 = Mixed – Exotic (50-90% exotic); 4 = Exotic (>90%)

Dominant Tree Species: Sasp = *Salix* spp.; Tasp = *Tamarix* spp.; Posp = *Populus* spp.; Prsp = *Prosopis* spp.; Acne = *Acer* spp.; Elan = *Elaeagnus* spp.; Ceoc = *Celtis* spp.; Alsp = *Alnus* spp.; Plsp = *Platanus* spp.

Appendix 2. Summary of all changes to Southwestern Willow Flycatcher breeding site database 1993-2005. A queryable version of this table can be found in the Rangewide Database. NS indicates a site was not surveyed.

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Agua Fria River - Waddell Dam	AFWADA	2004	TRUE	FALSE	FALSE	FALSE		Munzer et al. 2005
Agua Hedionda - Macario Canyon	AHMACA	2000	FALSE	FALSE	FALSE	TRUE	1 to 0 terr	Kenwood 2006
Amargosa River - Oasis Valley - Springdale	AMOVSP	2004	TRUE	FALSE	FALSE	FALSE		Furtek and Tomlinson 2004
Big Sandy Riv., US 93	BSUS93	2001	FALSE	FALSE	FALSE	TRUE	10 to 5 terr	Smith et al. 2003
Bill Williams River - Monkey's Head	BWMONK	2002	FALSE	FALSE	FALSE	TRUE	17 to 9 terr	Smith et al. 2003
Canadian River - La Cueva	CNLACU	2005	TRUE	FALSE	FALSE	FALSE		Baczek email May 2006
Canadian River - Mora	CNMORA	2003	TRUE	FALSE	FALSE	FALSE		Williams email 4/04
Canadian River - Ponil Creek	CNPOCR	2003	TRUE	FALSE	FALSE	FALSE		Williams email 4/04
Colorado River - Big Hole Slough	COBHSL	1999	FALSE	FALSE	FALSE	TRUE	2 to 1 terr	Kenwood 2006
Colorado River - BR Lagoon	COBRLA	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Colorado River - Draper Lake	CODRAP	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Colorado River - Grand Canyon RM 28-29	COGC29	2003	TRUE	FALSE	FALSE	FALSE		Smith et al. 2004
Colorado River - Headgate Dam	COHEAD	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Colorado River - Headgate Dam	COHEAD	1999	FALSE	FALSE	FALSE	TRUE	0 to 1 terr	Kenwood 2006
Colorado River - Headgate Dam	COHEAD	2002	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Colorado River - Hoge	COHOGE	2003	TRUE	FALSE	FALSE	FALSE		Smith et al. 2004

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Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Colorado River - Picacho East	COPICA	2000	FALSE	FALSE	FALSE	TRUE	1 to 0 terr	Smith et al. 2003
Colorado River - Taylor Lake	COTAYL	1998	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Colorado River - Walker Lake	COWALK	2001	FALSE	FALSE	FALSE	TRUE	2 to 0 terr	Smith et al. 2003
Gila River - Earven Flat	GIEAFL	2003	TRUE	FALSE	FALSE	FALSE		Smith et al. 2004
Gila River GRS012	GIGS12	2002	FALSE	FALSE	FALSE	TRUE	no data to 3 terr	Smith et al. 2004
Gila River - GRS016	GIGS16	2003	TRUE	FALSE	FALSE	FALSE		Smith et al. 2004
Gila River - Lower Box : Main Canyon	GILBMC	2002	FALSE	FALSE	FALSE	TRUE	no data to 6 terr	Williams email 4/04
Gila River - Porter Wash Ponds	GIPOWP	2005	TRUE	FALSE	FALSE	FALSE		English et al 2006
Gila River - Dripping Springs Wash	GISPRG	2005	FALSE	FALSE	TRUE	FALSE	combined with Gila River Dripping Springs Campground	English et al 2006
Gila River - Teague	GITEAG	2005	TRUE	FALSE	FALSE	FALSE		English et al 2006
Gila River - Watson Wash	GIWAWA	2005	TRUE	FALSE	FALSE	FALSE		English et al 2006
Gila River - Whitlow Dam	GIWHDA	2005	TRUE	FALSE	FALSE	FALSE		English et al 2006
Kern River Preserve	KEKERN	1995	FALSE	FALSE	FALSE	TRUE	34 to 36 terr	Kenwood 2006
Kern River Preserve	KEKERN	1996	FALSE	FALSE	FALSE	TRUE	29 to 30 terr	Kenwood 2006
Kern River Preserve	KEKERN	1999	FALSE	FALSE	FALSE	TRUE	27 to 25 terr	Kenwood 2006
Kern River Preserve	KEKERN	2003	FALSE	FALSE	FALSE	TRUE	20 to 17 terr	Kenwood 2006
Kern River Preserve	KEKERN	2002	FALSE	FALSE	FALSE	TRUE	no data to 17 terr	Kenwood 2006
Las Flores Creek	LFLAFL	1996	FALSE	FALSE	FALSE	TRUE	no data to 3 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Las Flores Creek	LFLAFL	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Las Flores Creek	LFLAFL	1998	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Las Flores Creek	LFLAFL	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Las Flores Creek	LFLAFL	2000	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Las Flores Creek	LFLAFL	2001	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Las Flores Creek	LFLAFL	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Mimbres River - Highway 152 to San Juan	MIDISE	2005	TRUE	FALSE	FALSE	FALSE		Baczek email May 2006
Mojave River - Jacoby Springs	MOJASP	2000	FALSE	FALSE	FALSE	TRUE	no data to 2 terr	Kenwood 2006
Holcomb Creek - Little Bear	MOLBRS	2002	FALSE	FALSE	FALSE	TRUE	no data to 3 terr	Kenwood 2006
Holcomb Creek - Little Bear	MOLBRS	2003	FALSE	FALSE	FALSE	TRUE	ns to 1 terr	Kenwood 2006
Mojave River - Mojave Forks	MOMOFR	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Mojave River - Mojave Forks	MOMOFR	2000	FALSE	FALSE	FALSE	TRUE	no data to 2 terr	Kenwood 2006
Mojave River - Oro Grande	MOORGR	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Mojave River - Oro Grande	MOORGR	2000	FALSE	FALSE	FALSE	TRUE	no data to 4 terr	Kenwood 2006
Mojave River - Oro Grande	MOORGR	2001	FALSE	FALSE	FALSE	TRUE	3 to 4 terr	Kenwood 2006
Mojave River, Upper Narrows	MOUPNA	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Mojave River, Upper Narrows	MOUPNA	1999	FALSE	FALSE	FALSE	TRUE	no data to 2 terr	Kenwood 2006
Mojave River, Upper Narrows	MOUPNA	2000	FALSE	FALSE	FALSE	TRUE	6 to 2 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Mojave River, Upper Narrows	MOUPNA	2001	FALSE	FALSE	FALSE	TRUE	3 to 2 terr	Kenwood 2006
Mojave River, Upper Narrows	MOUPNA	2003	FALSE	FALSE	FALSE	TRUE	2 to 0 terr	Kenwood 2006
Mojave River, Victorville I-15	MOVICT	1999	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Mojave River, Victorville I-15	MOVICT	2000	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Mojave River, Victorville I-15	MOVICT	2001	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Owen's River - Chalk Bluff to 5 Bridges	OWCHBL	1996	FALSE	FALSE	FALSE	TRUE	no data to 5 terr	Kenwood 2006
Owen's River - Chalk Bluff to 5 Bridges	OWCHBL	1998	FALSE	FALSE	FALSE	TRUE	no data to 3 terr	Kenwood 2006
Owen's River - Chalk Bluff to 5 Bridges	OWCHBL	1999	FALSE	FALSE	FALSE	TRUE	8 to 15 terr	Kenwood 2006
Owen's River - Hwy 6	OWHWY6	1993	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Owen's River - Hwy 6	OWHWY6	1999	FALSE	FALSE	FALSE	TRUE	2 to 5 terr	Kenwood 2006
Owen's River - Poleta Road	OWPOLE	1993	FALSE	FALSE	FALSE	TRUE	no data to 5 terr	Kenwood 2006
Owen's River - Poleta Road	OWPOLE	1999	FALSE	FALSE	FALSE	TRUE	2 to 7 terr	Kenwood 2006
Tierra Azul (Rio Grande del Rancho)	RIAZUL	2003	FALSE	FALSE	FALSE	TRUE	6 to 4 terr	Williams email Feb 2005
Rio Grande - Sego Spring SWA	RISSSW	2003	TRUE	FALSE	FALSE	FALSE		Hawks Aloft 2003
Santa Ana River - Banning Canyon	SABANN	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ana River - Banning Canyon	SABANN	2000	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ana River - Bear Creek	SABEAR	1999	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ana River - Bear Creek	SABEAR	2003	FALSE	FALSE	FALSE	TRUE	ns to 1 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Santa Ana River - Bear Creek	SABEAR	2002	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ana River - City Creek	SACICR	2000	FALSE	FALSE	FALSE	TRUE	ns to 1 terr	Kenwood 2006
Santa Ana River - City Creek	SACICR	2004	TRUE	FALSE	FALSE	FALSE	not surveyed since 2002	Kenwood 2006
Santa Ana River - Cienega Seca	SACIEN	2001	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ana River - Deer Creek	SADEER	2003	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Ana River - Deer Creek	SADEER	2002	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ana River - East Etiwanda Creek	SAEECR	2005	TRUE	FALSE	FALSE	FALSE		Kenwood 2006
Santa Ana River - English Channel	SAENCH	2003	TRUE	FALSE	FALSE	FALSE		Kenwood 2006
Santa Ana River - Featherly Regional Park	SAFEAT	2004	TRUE	FALSE	FALSE	FALSE	surveyed and 1999 and 2000	Kenwood 2006
Santa Ana River - Forest Falls	SAFOFA	2004	FALSE	FALSE	TRUE	FALSE	combined with Barton Creek	Kenwood 2006
Santa Ana River - Garner Wash	SAGAWA	2004	TRUE	FALSE	FALSE	FALSE	not surveyed since 1995	Kenwood 2006
Santa Ana River - Greenspot Thicket	SAGRTH	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ana River - Jenk's Meadow	SAJNKS	2004	FALSE	FALSE	TRUE	FALSE	combined with Santa Ana River - Heart Bar	Kenwood 2006
Santa Ana River - Jenk's Meadow	SAJNKS	2000	FALSE	FALSE	FALSE	TRUE	2 to 4 terr	Kenwood 2006
Santa Ana River - La Cadena to Waterman	SALACA	2001	FALSE	FALSE	FALSE	TRUE	no data to 4 terr	Kenwood 2006
Santa Ana River - La Cadena to Waterman	SALACA	2003	FALSE	FALSE	FALSE	TRUE	1 to 0 terr	Kenwood 2006
Santa Ana River - Lost Lake	SALOLA	2005	TRUE	FALSE	FALSE	FALSE		Kenwood 2006
Santa Ana River - Metcalf Creek	SAMECR	2001	FALSE	FALSE	FALSE	TRUE	1 to 2 terr	Kenwood 2006



2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Santa Ana River - Metcalf Creek	SAMECR	2000	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Ana River - Metcalf Creek	SAMECR	2003	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Ana River - Metcalf Creek	SAMECR	2004	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Ana River - Morton Canyon	SAMOCA	2001	FALSE	FALSE	FALSE	TRUE	ns to 1 terr	Kenwood 2006
Santa Ana River - Morton Canyon	SAMOCA	2004	TRUE	FALSE	FALSE	FALSE	surveyed in 1999 and 2000	Kenwood 2006
Santa Ana River - Mtn Home Village	SAMTNH	1997	FALSE	FALSE	FALSE	TRUE	2 to 1 terr	Kenwood 2006
Santa Ana River - Mtn Home Village	SAMTNH	1999	FALSE	FALSE	FALSE	TRUE	3 to 6 terr	Kenwood 2006
Santa Ana River - Mtn Home Village	SAMTNH	2002	FALSE	FALSE	FALSE	TRUE	no data to 3 terr	Kenwood 2006
Santa Ana River - Mtn Home Village	SAMTNH	2003	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Ana River - Mtn Home Village	SAMTNH	2004	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Ana River - Prado Basin	SAPRAD	2002	FALSE	FALSE	FALSE	TRUE	no data to 5 terr	Kenwood 2006
Santa Ana River - Rattlesnake Creek	SARTSN	2003	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Ana River - Sand Creek	SASNCR	2004	FALSE	FALSE	TRUE	FALSE	combined with Santa Ana River - Seven Oaks	Kenwood 2006
Santa Ana River - San Timoteo Creek	SASNTI	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ana River - San Timoteo Creek	SASNTI	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ana River - San Timoteo Creek	SASNTI	2001	FALSE	FALSE	FALSE	TRUE	2 terr to 0 terr	Kenwood 2006
Santa Ana River - Strawberry Creek	SASTCR	2000	FALSE	FALSE	FALSE	TRUE	1 to 0 terr	Kenwood 2006
Santa Ana River - Van Dusen Canyon	SAVDCA	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Santa Ana River - Van Dusen Canyon	SAVDCA	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ana River - Van Dusen Canyon	SAVDCA	2000	FALSE	FALSE	FALSE	TRUE	no data to 2 terr	Kenwood 2006
San Gabriel River - Route 39	SBRT39	2004	TRUE	FALSE	FALSE	FALSE	surveyed in 1997	Kenwood 2006
San Jacinto River - Bautista Canyon	SCBAUT	2002	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
San Jacinto River - Bautista Canyon	SCBAUT	2003	FALSE	FALSE	FALSE	TRUE	ns to 2 terr	Kenwood 2006
San Jacinto River - Bautista Canyon	SCBAUT	2003	FALSE	FALSE	FALSE	TRUE	changed name from SABAUT	Kenwood 2006
San Jacinto River and Levee	SCRVLV	2003	TRUE	FALSE	FALSE	FALSE		Kenwood 2006
San Diego River - El Capitan	SDELCA	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Dieguito River	SDSADI	2002	FALSE	FALSE	FALSE	TRUE	no data to 2 terr	Kenwood 2006
San Dieguito River	SDSADI	2000	FALSE	FALSE	FALSE	TRUE	3 to 2 terr	Kenwood 2006
Santa Ysabel Creek - Tim's Canyon	SDTICA	1998	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ysabel Creek - Tim's Canyon	SDTICA	2000	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ysabel Creek - Tim's Canyon	SDTICA	2001	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ysabel Creek - Tim's Canyon	SDTICA	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
William Heise Park	SDWHPA	2000	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
San Felipe Creek - San Felipe	SESAFE	2004	FALSE	FALSE	TRUE	FALSE	combined with San Felipe - Scissor's Crossing	Kenwood 2006
San Felipe Creek - San Felipe	SESAFE	2002	FALSE	FALSE	FALSE	TRUE	no data to 4 terr	Kenwood 2006
San Diego Creek - Laguna Lakes	SGLALA	1997	FALSE	FALSE	FALSE	TRUE	no data to 3 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
San Diego Creek - Laguna Lakes	SGLALA	2003	FALSE	FALSE	FALSE	TRUE	no data to 3 terr	Kenwood 2006
San Luis Rey River - Agua Caliente Creek	SLACCR	2004	FALSE	FALSE	TRUE	FALSE	combined with San Luis Rey River - Henshaw	Kenwood 2006
San Luis Rey River - Agua Tibia	SLAGTI	2000	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
San Luis Rey River - College to I15	SLCI15	2004	FALSE	TRUE	FALSE	FALSE	deleted in favor of SLGUAJ	Kenwood 2006
San Luis Rey River, Couser Cyn	SLCOUS	2000	FALSE	FALSE	FALSE	TRUE	2 to 1 terr	Kenwood 2006
San Luis Rey River, Couser Cyn	SLCOUS	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Luis Rey River, Couser Cyn	SLCOUS	2003	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Luis Rey River - Guajome Lake	SLGUAJ	2000	FALSE	FALSE	FALSE	TRUE	1 to 2 terr	Kenwood 2006
San Luis Rey River - Guajome Lake	SLGUAJ	2002	FALSE	FALSE	FALSE	TRUE	no data to 4 terr	Kenwood 2006
San Luis Rey River - Guajome Lake	SLGUAJ	2003	FALSE	FALSE	FALSE	TRUE	5 to 6 terr	Kenwood 2006
San Luis Rey River - Guajome Lake	SLGUAJ	2001	FALSE	FALSE	FALSE	TRUE	2 to 4 terr	Kenwood 2006
San Luis Rey River - I5 to College	SLI5CO	2004	FALSE	TRUE	FALSE	FALSE	deleted in favor of SLWHEL	Kenwood 2006
San Luis Rey River - Pilgrim Creek	SLPILG	2004	FALSE	FALSE	TRUE	FALSE	combined with Pilgrim Creek Cal-Trans Restoration site	Kenwood 2006
San Luis Rey River - Pilgrim Creek	SLPILG	1995	FALSE	FALSE	FALSE	TRUE	2 to 4 terr	Kenwood 2006
San Luis Rey River - Pilgrim Creek	SLPILG	1996	FALSE	FALSE	FALSE	TRUE	no data to 2 terr	Kenwood 2006
San Luis Rey River - Pilgrim Creek	SLPILG	1997	FALSE	FALSE	FALSE	TRUE	no data to 2 terr	Kenwood 2006
San Luis Rey River - Pilgrim Creek	SLPILG	1998	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Luis Rey River - Pilgrim Creek	SLPILG	2000	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
San Luis Rey River - Pilgrim Creek	SLPILG	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	1996	FALSE	FALSE	FALSE	TRUE	28 to 20 terr	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	1997	FALSE	FALSE	FALSE	TRUE	27 to 25 terr	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	1998	FALSE	FALSE	FALSE	TRUE	36 to 33 terr	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	1999	FALSE	FALSE	FALSE	TRUE	47 to 45 terr	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	2002	FALSE	FALSE	FALSE	TRUE	50 to 53 terr	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	2003	FALSE	FALSE	FALSE	TRUE	44 to 49 terr	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	2002	FALSE	FALSE	FALSE	TRUE	50 to 53 terr	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	2003	FALSE	FALSE	FALSE	TRUE	44 to 49 terr	Kenwood 2006
San Luis Rey River, Upper	SLSLUP	2002	FALSE	FALSE	FALSE	TRUE	no data to 50 terr	Kenwood 2006
San Luis Rey River - Whelan Lake	SLWHEL	2003	FALSE	FALSE	FALSE	TRUE	6 to 3 terr	Kenwood 2006
San Luis Rey River - Whelan Lake	SLWHEL	2003	TRUE	FALSE	FALSE	FALSE	surveyed since 2000 with first detections in 2003	Kenwood 2006
Santa Margarita River - Camp Pendleton	SMCAPE	1995	FALSE	FALSE	FALSE	TRUE	8 to 9 terr	Kenwood 2006
Santa Margarita River - Camp Pendleton	SMCAPE	1996	FALSE	FALSE	FALSE	TRUE	no data to 12 terr	Kenwood 2006
Santa Margarita River - Camp Pendleton	SMCAPE	1997	FALSE	FALSE	FALSE	TRUE	13 to 15 terr	Kenwood 2006
Santa Margarita River - Camp Pendleton	SMCAPE	1998	FALSE	FALSE	FALSE	TRUE	11 to 20 terr	Kenwood 2006
Santa Margarita River - Camp Pendleton	SMCAPE	2001	FALSE	FALSE	FALSE	TRUE	22 to 18 terr	Kenwood 2006
Santa Margarita River - Camp Pendleton	SMCAPE	2002	FALSE	FALSE	FALSE	TRUE	no data to 17 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
De Luz Creek - Camp Pendleton	SMDELU	2004	TRUE	FALSE	FALSE	FALSE	surveyed every year since 1995	Kenwood 2006
Santa Margarita River - Fallbrook Creek	SMFALL	1996	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Margarita River - Fallbrook Creek	SMFALL	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Margarita River - Fallbrook Creek	SMFALL	1997	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Margarita River - Fallbrook Creek	SMFALL	2000	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Margarita River - Fallbrook Creek	SMFALL	1998	FALSE	FALSE	FALSE	TRUE	no data to 2 terr	Kenwood 2006
Santa Margarita River - Fallbrook Creek	SMFALL	2002	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
San Mateo Creek	SOSMCR	2004	FALSE	FALSE	TRUE	FALSE	combined with San Onofre Creek - Camp Pendleton	Kenwood 2006
San Mateo Creek	SOSMCR	1995	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
San Mateo Creek	SOSMCR	1996	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Mateo Creek	SOSMCR	1998	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Mateo Creek	SOSMCR	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Mateo Creek	SOSMCR	2000	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Mateo Creek	SOSMCR	2001	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Mateo Creek	SOSMCR	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Mateo Creek	SOSMCR	2003	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Mateo Creek	SOSMCR	1997	FALSE	FALSE	FALSE	TRUE	2 to 1 terr	Kenwood 2006
San Pedro - 3 Links	SP3LIN	2004	TRUE	FALSE	FALSE	FALSE		Munzer et al. 2005

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
San Pedro River - Hereford Bridge	SPHEBR	2005	TRUE	FALSE	FALSE	FALSE		English et al 2006
San Pedro River - Wheatfields	SPWHEA	2003	FALSE	FALSE	TRUE	FALSE	combined with Wheatfields South	Smith et al. 2004
Salt River Inflow - Roos Lk: Lakeshore	SRLAKE	2005	FALSE	FALSE	TRUE	FALSE	combined with Grapevine	English et al 2006
Salt River Inflow - Roos Lk: Lakeshore	SRLAKE	2000	FALSE	FALSE	FALSE	TRUE	17 to 18 terr	Smith et al. 2003
Salt River - Pinal Creek	SRPICR	2004	TRUE	FALSE	FALSE	FALSE		Munzer et al. 2005
Salt River Inflow - Roosevelt Lake	SRSALT	2000	FALSE	FALSE	FALSE	TRUE	57 to 59 terr	Smith et al. 2003
Santa Clara River - Arco/Four Corners	STARCO	1994	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Clara River - Arco/Four Corners	STARCO	1995	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Clara River - Arco/Four Corners	STARCO	1996	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Clara River - Arco/Four Corners	STARCO	1997	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Clara River - Arco/Four Corners	STARCO	1998	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Clara River - Arco/Four Corners	STARCO	1999	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Clara River - Arco/Four Corners	STARCO	2000	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Clara River - Arco/Four Corners	STARCO	2001	FALSE	FALSE	FALSE	TRUE	ns to 0 terr	Kenwood 2006
Santa Clara River - Elizabeth Lake Canyon	STELCA	2004	TRUE	FALSE	FALSE	FALSE	not surveyed since 1996	Kenwood 2006
Santa Clara River - Fillmore Fish Hatch	STFILL	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Fillmore Fish Hatch	STFILL	1998	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Fillmore Fish Hatch	STFILL	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Santa Clara River - Fillmore Fish Hatch	STFILL	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Fillmore Fish Hatch	STFILL	2001	FALSE	FALSE	FALSE	TRUE	1 to 2 terr	Kenwood 2006
Santa Clara River - Lower Piru Creek	STLOPI	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Lower Piru Creek	STLOPI	2000	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Lower Piru Creek	STLOPI	2001	FALSE	FALSE	FALSE	TRUE	ns to 1 terr	Kenwood 2006
Santa Clara River - Santa Paula	STSAPA	1996	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Santa Paula	STSAPA	1997	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Santa Paula	STSAPA	1998	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Santa Paula	STSAPA	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Santa Paula	STSAPA	2001	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Santa Paula	STSAPA	1995	FALSE	FALSE	FALSE	TRUE	1 to 0 terr	Kenwood 2006
Santa Clara River - Santa Paula	STSAPA	2002	FALSE	FALSE	FALSE	TRUE	no data to 2 terr	Kenwood 2006
Santa Clara River - Saticoy	STSATI	1994	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Saticoy	STSATI	1995	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Saticoy	STSATI	1996	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Saticoy	STSATI	2003	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Clara River - Saticoy	STSATI	2001	FALSE	FALSE	FALSE	TRUE	1 to 0 terr	Kenwood 2006
Santa Clara River - San Francisquito Creek	STSFQR	1996	FALSE	FALSE	FALSE	TRUE	0 to 1 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Santa Clara River - San Francisquito Creek	STSF CR	2001	FALSE	FALSE	FALSE	TRUE	1 to 0 terr	Kenwood 2006
Santa Clara River - Soledad Cyn	STSOCA	1997	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Clara River - Soledad Cyn	STSOCA	2001	FALSE	FALSE	FALSE	TRUE	2 to 0 terr	Kenwood 2006
Santa Clara River - Upper Piru Creek	STUPPI	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
San Juan Creek - Canada Gobernadora	SUCAGO	2001	FALSE	FALSE	FALSE	TRUE	1 to 2 terr	Kenwood 2006
San Juan Creek - La Novia Bridge	SUNOBR	2005	TRUE	FALSE	FALSE	FALSE		Kenwood 2006
Sweetwater Reservoir	SWSWRE	1995	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Sweetwater Reservoir	SWSWRE	1996	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Sweetwater Reservoir	SWSWRE	1998	FALSE	FALSE	FALSE	TRUE	2 to 1 terr	Kenwood 2006
Sweetwater Reservoir	SWSWRE	2001	FALSE	FALSE	FALSE	TRUE	1 to 0 terr	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	1997	FALSE	FALSE	FALSE	TRUE	14 to 17 terr	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	1996	FALSE	FALSE	FALSE	TRUE	17 to 24 terr	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	2000	FALSE	FALSE	FALSE	TRUE	28 to 9 terr	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	2004	FALSE	FALSE	TRUE	FALSE	combined Santa Ynez River sites Gardner Ranch, Yvonne, and Santa Rosa	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	1995	FALSE	FALSE	FALSE	TRUE	10 to 7 terr	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	1996	FALSE	FALSE	FALSE	TRUE	12 to 17 terr	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	1997	FALSE	FALSE	FALSE	TRUE	13 to 14 terr	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	1998	FALSE	FALSE	FALSE	TRUE	9 to 12 terr	Kenwood 2006



2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Santa Ynez River - Buellton	SYBUEL	1999	FALSE	FALSE	FALSE	TRUE	ns to 11 terr	Kenwood 2006
Santa Ynez River - Buellton	SYBUEL	2002	FALSE	FALSE	FALSE	TRUE	ns to 6 terr	Kenwood 2006
Santa Ynez River - Gibraltar	SYGIBR	1999	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ynez River - Gibraltar	SYGIBR	2000	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ynez River - Gibraltar	SYGIBR	2001	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ynez River - Gibraltar	SYGIBR	2002	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006
Santa Ynez River - Lompoc	SYLOMP	1997	FALSE	FALSE	FALSE	TRUE	2 to 0 terr	Kenwood 2006
Santa Ynez River - Lompoc	SYLOMP	2004	TRUE	FALSE	FALSE	FALSE	territory detected in 1997 and surveyed most recently in 2003	Kenwood 2006
Santa Ynez River - Vandenberg AFB	SYVAND	1995	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ynez River - Vandenberg AFB	SYVAND	1996	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ynez River - Vandenberg AFB	SYVAND	2000	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ynez River - Vandenberg AFB	SYVAND	2002	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ynez River - Vandenberg AFB	SYVAND	2003	FALSE	FALSE	FALSE	TRUE	no data to 1 terr	Kenwood 2006
Santa Ynez River - Vandenberg AFB	SYVAND	1997	FALSE	FALSE	FALSE	TRUE	3 to 2 terr	Kenwood 2006
Santa Ynez River - Vandenberg AFB	SYVAND	1998	FALSE	FALSE	FALSE	TRUE	3 to 2 terr	Kenwood 2006
Santa Ynez River - Vandenberg AFB	SYVAND	1999	FALSE	FALSE	FALSE	TRUE	no data to 3 terr	Kenwood 2006
Temecula Creek - Aguanga	TEAGUA	1997	FALSE	FALSE	FALSE	TRUE	3 to 1 terr	Kenwood 2006
Temecula Creek - Aguanga	TEAGUA	2001	FALSE	FALSE	FALSE	TRUE	no data to 0 terr	Kenwood 2006

2005 Southwestern Willow Flycatcher Rangewide Summary

Site Name	Site Code	Year	New?	Deleted?	Combined?	Changed?	Comments	Reference
Tonto Creek Inflow - Roosevelt Lk	TOTONT	2003	FALSE	FALSE	TRUE	FALSE	combined with Bar-X	Smith et al. 2004
Tonto Creek Inflow - Roosevelt Lk	TOTONT	2004	FALSE	FALSE	TRUE	FALSE	combined with Bermuda Flats	Munzer et al. 2005
Virgin River - Mesquite	VIMESQ	2004	FALSE	FALSE	TRUE	FALSE	combined with all sites in Virgin River near Mesquite	SWCA 2004
San Pedro R. Dudleyville Crossing	SPDUVI	2002	FALSE	FALSE	FALSE	TRUE	43 to 26 terr	Smith et al. 2003
Muddy River - Moapa Valley	VIMUMV	2003	TRUE	FALSE	FALSE	FALSE	surveyed since 1999 with first detections in 2003	Furtek and Tomlinson 2003

Appendix 3. Distribution of sites and territories by year and state based on both estimated and surveyed values. Data for years prior to 2005 reflect the actual surveys conducted in the year and estimates based on the most recent surveys prior to that year. These updated numbers may differ from past reports.

Year	Estimated Sites and Territories					Surveyed Sites and Territories			
	State	# Sites	% of Total Sites by Year	# Terr.	% of Total Terr. by Year	# Sites	% of Total Sites by Year	# Terr.	% of Total Terr. by Year
2005	AZ	117	42.5	495	40.8	86	60.6	481	48.1
	CA	94	34.2	191	15.7	16	11.3	46	4.6
	CO	10	3.6	63	5.2	3	2.1	48	4.8
	NM	38	13.8	393	32.4	25	17.6	365	36.5
	NV	13	4.7	68	5.6	9	6.3	55	5.5
	UT	3	1.1	4	0.3	3	2.1	4	0.4
	<b>TOTAL</b>	<b>275</b>		<b>1214</b>		<b>142</b>		<b>999</b>	
2004	AZ	117	42.7	544	43.4	83	54.6	508	51.2
	CA	94	34.3	198	15.8	33	21.7	109	11.0
	CO	10	3.6	65	5.2	2	1.3	5	0.5
	NM	37	13.5	372	29.7	22	14.5	308	31.0
	NV	13	4.7	68	5.4	9	5.9	56	5.6
	UT	3	1.1	7	0.6	3	2.0	7	0.7
	<b>TOTAL</b>	<b>274</b>		<b>1254</b>		<b>152</b>		<b>993</b>	
2003	AZ	116	42.6	425	38.4	88	52.7	412	43.4
	CA	93	34.2	199	18.0	39	23.4	113	11.9
	CO	10	3.7	81	7.3	6	3.6	75	7.9
	NM	37	13.6	328	29.6	22	13.2	289	30.5
	NV	13	4.8	66	6.0	9	5.4	52	5.5
	UT	3	1.1	8	0.7	3	1.8	8	0.8
	<b>TOTAL</b>	<b>272</b>		<b>1107</b>		<b>167</b>		<b>949</b>	
2002	AZ	114	42.9	446	39.8	83	49.4	433	45.0
	CA	91	34.2	213	19.0	37	22.0	130	13.5
	CO	10	3.8	60	5.4	9	5.4	59	6.1
	NM	35	13.2	346	30.9	27	16.1	299	31.0
	NV	13	4.9	51	4.5	9	5.4	37	3.8
	UT	3	1.1	5	0.4	3	1.8	5	0.5
	<b>TOTAL</b>	<b>266</b>		<b>1121</b>		<b>168</b>		<b>963</b>	
2001	AZ	105	42.7	356	37.5	79	41.8	345	41.6
	CA	88	35.8	223	23.5	74	39.2	206	24.8
	CO	5	2.0	37	3.9	0	0.0	0	0.0
	NM	33	13.4	258	27.2	21	11.1	202	24.4
	NV	12	4.9	73	7.7	12	6.3	73	8.8

2005 Southwestern Willow Flycatcher Rangewide Summary

Year	Estimated Sites and Territories					Surveyed Sites and Territories			
	State	# Sites	% of Total Sites by Year	# Terr.	% of Total Terr. by Year	# Sites	% of Total Sites by Year	# Terr.	% of Total Terr. by Year
	UT	3	1.2	3	0.3	3	1.6	3	0.4
	<b>TOTAL</b>	<b>246</b>		<b>950</b>		<b>189</b>		<b>829</b>	
2000	AZ	104	43.2	346	37.2	76	41.1	331	40.3
	CA	85	35.3	217	23.4	66	35.7	171	20.8
	CO	5	2.1	37	4.0	1	0.5	1	0.1
	NM	33	13.7	263	28.3	28	15.1	252	30.7
	NV	11	4.6	56	6.0	11	5.9	56	6.8
	UT	3	1.2	10	1.1	3	1.6	10	1.2
	<b>TOTAL</b>	<b>241</b>		<b>929</b>		<b>185</b>		<b>821</b>	
1999	AZ	101	45.5	302	32.9	84	49.4	291	36.8
	CA	75	33.8	197	21.5	60	35.3	183	23.1
	CO	4	1.8	36	3.9	0	0.0	0	0.0
	NM	29	13.1	321	35.0	20	11.8	295	37.3
	NV	11	5.0	44	4.8	5	2.9	17	2.1
	UT	2	0.9	18	2.0	1	0.6	5	0.6
	<b>TOTAL</b>	<b>222</b>		<b>918</b>		<b>170</b>		<b>791</b>	
1998	AZ	98	51.0	227	30.4	90	57.3	221	33.4
	CA	54	28.1	151	20.2	37	23.6	131	19.8
	CO	4	2.1	36	4.8	1	0.6	1	0.2
	NM	26	13.5	281	37.7	19	12.1	257	38.9
	NV	8	4.2	30	4.0	8	5.1	30	4.5
	UT	2	1.0	21	2.8	2	1.3	21	3.2
	<b>TOTAL</b>	<b>192</b>		<b>746</b>		<b>157</b>		<b>661</b>	
1997	AZ	72	46.5	198	29.8	62	49.6	188	31.1
	CA	48	31.0	145	21.8	36	28.8	115	19.0
	CO	3	1.9	35	5.3	3	2.4	35	5.8
	NM	26	16.8	257	38.7	18	14.4	238	39.3
	NV	5	3.2	18	2.7	5	4.0	18	3.0
	UT	1	0.6	11	1.7	1	0.8	11	1.8
	<b>TOTAL</b>	<b>155</b>		<b>664</b>		<b>125</b>		<b>605</b>	
1996	AZ	49	44.1	151	30.3	41	43.2	144	30.4
	CA	34	30.6	135	27.1	27	28.4	118	24.9
	CO	0	0.0	0	0.0	0	0.0	0	0.0
	NM	25	22.5	208	41.7	24	25.3	206	43.6
	NV	2	1.8	3	0.6	2	2.1	3	0.6
	UT	1	0.9	2	0.4	1	1.1	2	0.4
	<b>TOTAL</b>	<b>111</b>		<b>499</b>		<b>95</b>		<b>473</b>	

2005 Southwestern Willow Flycatcher Rangewide Summary

Year	Estimated Sites and Territories					Surveyed Sites and Territories			
	State	# Sites	% of Total Sites by Year	# Terr.	% of Total Terr. by Year	# Sites	% of Total Sites by Year	# Terr.	% of Total Terr. by Year
1995	AZ	35	42.7	100	25.9	22	37.3	84	24.3
	CA	22	26.8	102	26.4	18	30.5	89	25.7
	CO	0	0.0	0	0.0	0	0.0	0	0.0
	NM	23	28.0	181	46.9	17	28.8	170	49.1
	NV	1	1.2	1	0.3	1	1.7	1	0.3
	UT	1	1.2	2	0.5	1	1.7	2	0.6
	<b>TOTAL</b>	<b>82</b>		<b>386</b>		<b>59</b>		<b>346</b>	
1994	AZ	28	45.9	116	30.5	23	46.0	110	30.7
	CA	14	23.0	97	25.5	10	20.0	84	23.5
	CO	0	0.0	0	0.0	0	0.0	0	0.0
	NM	19	31.1	167	43.9	17	34.0	164	45.8
	NV	0	0.0	0	0.0	0	0.0	0	0.0
	UT	0	0.0	0	0.0	0	0.0	0	0.0
	<b>TOTAL</b>	<b>61</b>		<b>380</b>		<b>50</b>		<b>358</b>	
1993	AZ	16	41.0	32	23.0	16	41.0	32	23.0
	CA	7	17.9	75	54.0	7	17.9	75	54.0
	CO	0	0.0	0	0.0	0	0.0	0	0.0
	NM	16	41.0	32	23.0	16	41.0	32	23.0
	NV	0	0.0	0	0.0	0	0.0	0	0.0
	UT	0	0.0	0	0.0	0	0.0	0	0.0
	<b>TOTAL</b>	<b>39</b>		<b>139</b>		<b>39</b>		<b>139</b>	

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