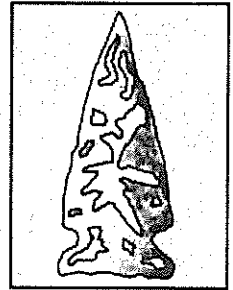


**SURVEY FOR SOUTHWESTERN WILLOW  
FLYCATCHERS  
ALONG LAS VEGAS WASH,  
CLARK COUNTY WETLANDS PARK, NEVADA**

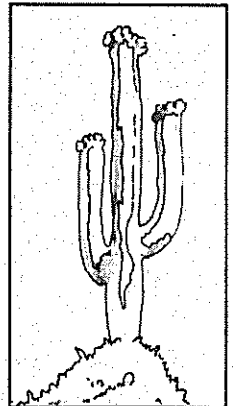
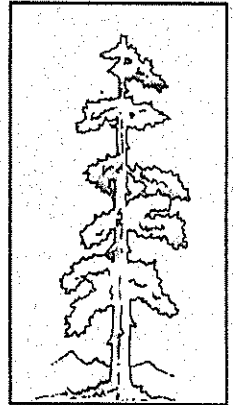
Submitted to:

**CLARK COUNTY DEPARTMENT OF  
PARKS AND RECREATION  
and  
VICTORY VALLEY LAND COMPANY, L.P.**



Submitted by:

**SOUTHWEST WETLANDS CONSORTIUM**



**NOVEMBER 1998**



**A SURVEY FOR SOUTHWESTERN WILLOW FLYCATCHERS  
ALONG LAS VEGAS WASH, CLARK COUNTY WETLANDS PARK, NEVADA**

Submitted to:

**Clark County Department of Parks and Recreation  
500 South Grand Central Parkway  
Las Vegas, Nevada 89155  
(702) 455-8287**

and

**Victory Valley Land Company L.P.  
P.O. Box 2065 Henderson, Nevada 89009  
(702) 565-6485**

Submitted by:

**Southwest Wetlands Consortium and  
SWCA, Inc. Environmental Consultants  
56 West 400 South, Suite 201  
Salt Lake City, Utah 84101  
(801) 322-4307**

**November 16, 1998**

## EXECUTIVE SUMMARY

Systematic surveys for the presence of Southwestern Willow Flycatchers (*Empidonax traillii extimus*) were conducted along Las Vegas Wash in the Clark County Wetlands Park, Nevada, from May through July 1998. The survey technique used playback recordings of male song after the standardized survey protocol of Sogge et al. (1997). No nesting, resident, or territorial flycatchers were detected. Two possibly paired flycatchers (a male and a probable female) were detected in late May and likely represented migrant individuals. A modest amount of apparently suitable nesting habitat for Southwestern Willow Flycatchers was estimated to exist within the Clark County Wetlands Park; it is not inconceivable that the subspecies could colonize this habitat as a nesting summer resident in the future.

Two special-status species were detected during surveys for Southwestern Willow Flycatchers: the federally endangered Yuma Clapper Rail (*Rallus longirostris yumanensis*) and the Yellow-billed Cuckoo (*Coccyzus americanus*), a species proposed for listing as endangered. Visual and aural detections of rails during the nesting season may indicate that this species breeds in Las Vegas Wash. A single cuckoo was aurally detected in July. This species could be a summer resident within the project area.

### Recommended Citation:

Southwest Wetlands Consortium. 1998. A survey for Southwestern Willow Flycatchers along Las Vegas Wash, Clark County Wetlands Park, Nevada. Final Report to the Clark County Dept. of Parks and Recreation, Las Vegas, Nevada, prepared by SWCA, Inc. Environmental Consultants, Salt Lake City, Utah.

## ACKNOWLEDGMENTS

This study was funded by the Clark County Department of Parks and Recreation and the Victory Valley Land Company. Jeff Harris and Bruce Sillitoe contributed greatly to this project's administration and coordination. Zane Marshall of the Southern Nevada Water Authority and Greg Schlink of Victory Valley assisted with field work. Pablo Arroyave (U.S. Bureau of Reclamation), Robert McKernan (San Bernadino County Museum), Chris Tomlinson (Nevada Division of Wildlife), and Kevin Sloan (U.S. Fish and Wildlife Service) provided input into the initial study design. Pablo Arroyave and Cynthia Martinez (U.S. Fish and Wildlife Service) reviewed the draft. These activities were conducted under the auspices of Endangered Species Permit No. TE819471-0 for Clark County, Nevada, as issued to Dr. Bryan T. Brown by the U.S. Fish and Wildlife Service, Albuquerque, New Mexico.

## TABLE OF CONTENTS

|  |    |
|--|----|
| EXECUTIVE SUMMARY .....  | i  |
| ACKNOWLEDGMENTS .....  | ii |
| INTRODUCTION .....   | 1  |
| STUDY AREA .....   | 1  |
| METHODS .....  | 1  |
| RESULTS .....  | 2  |
| Surveys for Southwestern Willow Flycatchers .....  | 2  |
| Nest Monitoring .....  | 3  |
| Detections of Other Bird Species of Special Status .....   | 3  |
| DISCUSSION .....   | 3  |
| Surveys for Southwestern Willow Flycatchers .....  | 3  |
| Detections of Other Bird Species of Special Status .....   | 4  |
| LITERATURE CITED .....   | 5  |
| APPENDIX I:<br>SURVEY ROUTES AND BIRD LOCATIONS  |    |
| APPENDIX II:<br>ANNOTATED CHECKLIST OF BIRD SPECIES DETECTED<br>IN CLARK COUNTY WETLANDS PARK, MAY - JULY, 1998  |    |
| APPENDIX III:<br>WILLOW FLYCATCHER SURVEY AND DETECTION FORM<br>SENT TO ARIZONA PARTNERS IN FLIGHT,<br>SOUTHWESTERN WILLOW FLYCATCHER SURVEY COORDINATOR |    |
| APPENDIX IV:<br>SWCA PERSONNEL CONDUCTING THIS STUDY   |    |

## INTRODUCTION

This study was undertaken in order to clarify the status of southwestern willow flycatchers within the boundaries of the proposed Clark County Wetlands Park in Las Vegas Wash, Clark County, Nevada pursuant to Term and Condition 2a. of the Biological Opinion File No. 1-5-98-F-051 issued to the U.S. Army Corps of Engineers on April 9, 1998, for the proposed construction of the Pabco Road Erosion Control Structure. A Biological Assessment (SWCA 1997) prepared in conjunction with the Programmatic Environmental Impact Statement for development of the Clark County Wetlands Park (Bureau of Reclamation 1998) reported that the endangered Southwestern Willow Flycatcher is not known to occur in Las Vegas Wash and determined that, due to a lack of suitable nesting habitat, Park development would have no effect on this species. Agency biologists recognized that there may be potentially suitable flycatcher habitat within the Wash and recommended that a systematic survey be undertaken to determine whether or not this subspecies breeds within the project area. The results of the ensuing survey effort are presented in this report.

## STUDY AREA

The general study area for this survey consisted of an approximately 1000-acre portion of Las Vegas Wash dominated by tamarisk (*Tamarix* spp.) and contained within the boundaries of the proposed Wetlands Park (Appendix I). This area is spread along a seven-mile reach of the Wash and includes portions of Whitney and the City of Henderson, as well as unincorporated portions of Clark County. It includes private, County, and Bureau of Reclamation lands. The study area was defined in consultation with Clark county and includes areas which could logically be part of or affected by Park planning.

Within the general study area, survey efforts focused on areas containing tamarisk and other species (e.g., Goodding willow) having the proper structure to be potentially suitable for use by willow flycatchers. These vegetation types are described in more detail in the Methods section, below. Areas dominated by desert scrub vegetation and other upland habitats known to be unsuitable for willow flycatchers were not surveyed and are not considered part of the general study area.

## METHODS

Surveys for Southwestern Willow Flycatchers were conducted between May and July 1998 using tape-recorded playback of male song (*fitz-bew* and *britt*) after the protocol of Sogge et al. (1997). Single or paired observers conducted surveys of the study area in each of three established survey periods: May 15-31, June 1-21, and 22 June - 10 July. Dates that surveys were conducted are presented in Appendix III. Other investigators have recommended other and/or more survey periods (Braden and McKernan 1998), but the influence of these

recognized survey protocol has yet to be determined. Two observers walking together constituted a single survey team during the first and second survey periods for reasons of safety and because it was important that all observers become familiar with all of the survey routes. A survey team during the third survey period in July consisted of a single observer.

Surveys were initiated approximately 1 hour before sunrise (as soon as it was light enough to safely walk) and were terminated at 10:00 a.m. (Pacific Daylight Savings Time). Observers played tape recordings of male song at approximately 30 meter intervals in appropriate flycatcher nesting habitat, which we defined as dense woody riparian vegetation >3 meters in height and >75% canopy cover. Excluded from the surveys were extensive areas of dense cattail (*Typha* spp.), common reed (*Phragmites australis*), or quailbush (*Atriplex lentiformis*), and large areas of tamarisk which exhibited low stature and <75% canopy cover. Survey routes (see Appendix I) primarily followed the edges of dense riparian patches and were designed to permit efficient coverage of as large an area as reasonable. Survey routes also followed the water's edge where possible; this was not possible in that portion of the park downstream of Pabco Road where the steep, eroded, and high (ca. 10-15 meters) banks of Las Vegas Wash prevented access to the water's edge. Surveys were conducted in this area by walking the "rim" of the Wash and broadcasting taped recordings to habitat below.

Locales at which Willow Flycatchers were detected were searched for the presence of active nests after the methods of Martin and Geupel (1993). Three observers searched each detection locale for 2 hours (a total of 6 person-hours). The discovery of an active Willow Flycatcher nest was to result in the initiation of nest monitoring protocol to determine productivity (Martin and Geupel 1993).

All bird species detected during the surveys for Southwestern Willow Flycatchers were recorded and are listed in Appendix II.

## RESULTS

### Surveys for Southwestern Willow Flycatchers

Willow Flycatchers were detected at one site during the first survey period and not at all during the second and third survey periods. A singing male Willow Flycatcher strongly responded to our playback recordings on the morning of May 29 at a point approximately 1.5 miles downstream of the Pabco Road crossing (Appendix I). Another nonsinging, but calling, Willow Flycatcher was also present. It is quite likely that this individual was a female paired with the observed male. The two individuals remained for several contiguous hours at the upstream end of a patch of well-developed tamarisk containing a single, large Goodding's willow. The pair was also present at this location the following morning (May 30). This patch was in the primary floodplain of Las Vegas Wash at the water's edge and was characterized by the presence of several braided overflow channels which apparently retained water during and after higher-than-normal streamflow. No nest was located and no flycatcher behavior was observed that led us to believe a nest was present

or under construction.

We did not detect Willow Flycatchers during our follow-up surveys at the site on the mornings of June 16 and July 7. We therefore concluded that the two flycatchers detected in May were probably migrants, and did not stay to nest.

### **Nest Monitoring**

No Willow Flycatcher nests were located and therefore nest monitoring activities were not initiated.

### **Detections of Other Bird Species of Special Status**

A diverse, healthy bird community was present along Las Vegas Wash during our surveys (see Appendix II). In addition, two bird species of note were detected during the flycatcher surveys. The distinctive clatter of a Yuma Clapper Rail (*Rallus longirostris yumanensis*) was detected on the morning of 28 May by Scott Mills and Helen Yard. This individual was calling from a slough flowing out of private property on the south side of the Wash just upstream of Pabco Road (Appendix I). Vegetation along this slough consists primarily of dense tamarisk in and along the water's edge. Cattails are locally common in this area. Helen Yard visually observed a Yuma Clapper Rail at the same location on the morning of 18 June (Appendix I).

The vocalization of a male Yellow-billed Cuckoo was detected by Bryan Brown on the morning of July 7 at a point approximately two miles upstream of Pabco Road (Appendix I). This riparian-obligate species has been formally proposed for listing as a federally endangered species in the western United States (Southwest Center for Biological Diversity 1998).

## **DISCUSSION**

### **Surveys for Southwestern Willow Flycatchers**

Nesting Willow Flycatchers were not detected during our surveys, indicating a very low probability that the species is a summer resident of Clark County Wetlands Park. The detection of two Willow Flycatchers (subspecies unknown) during the first survey window but not during the second and third survey windows strongly suggests that the two observed birds were migrants.

Historic information on the status of Willow Flycatchers (*extimus* or otherwise) along Las Vegas Wash is lacking (see Unitt 1987, Alcorn 1988) because this study represents the first systematic survey for the species in the area now encompassed by Clark County Wetlands Park. Our qualitative, visual evaluation of riparian habitats within the park suggested that a modest amount of apparently suitable nesting habitat for Willow Flycatchers was present in 1998. Most of what we estimated to be suitable nesting habitat occurred downstream of Pabco Road and immediately adjacent to flowing water as long, relatively narrow, linear patches dominated by tamarisk. This existing habitat appeared analogous to riparian habitat used by nesting Southwestern Willow



Flycatchers in nearby Arizona (Brown 1988). Structurally similar, though larger, patches of riparian habitat that have recently developed at the upstream delta of Lake Mead were colonized by nesting Willow Flycatchers sometime in the mid-1990s (Robert McKernan, personal communication). It is not inconceivable that flycatchers could likewise colonize portions of Clark County Wetlands Park as nesting residents in the future.

### **Detections of Other Bird Species of Special Status**

The two detections of Yuma Clapper Rail during the nesting season may be cautiously interpreted to suggest that this federally endangered species is a nesting summer resident within Las Vegas Wash. McKernan and Braden's detections of clapper rails at the Grand Canyon National Park/Lake Mead boundary in 1996 and 1997 and along the Virgin River 11.5 miles north of its confluence with Lake Mead in 1997 and 1998 (P. Arroyave, *pers. comm.*) certainly lend credence to this supposition. Should it be confirmed that Yuma Clapper Rails are nesting in Las Vegas Wash, Clark County Wetlands Park would be among the northernmost locales in the United States in which this species is known to breed (Eddleman and Conway 1998). Areas of open water with emergent cattails and bulrushes are present in the Park and may provide suitable nesting habitat for Clapper Rails (Eddleman and Conway 1998).

The status of the Yellow-billed Cuckoo that was detected in the park in July is unknown. However, given that McKernan and Braden have observed nesting Yellow-billed Cuckoos in similarly structured tamarisk at various locations along the lower Colorado River (P. Arroyave, *pers. comm.*), it is quite possible that this proposed endangered species breeds within the project area.

## LITERATURE CITED

- Alcorn, J.R. 1988. The birds of Nevada. Fairview West Publishing, Fallon, Nevada. 418 pp.
- American Ornithologists' Union. 1983. Check-list of North American Birds. Sixth Edition. American Ornithologists' Union, Washington, D.C. 877 pp.
- Braden, G.T., and R.L. McKernan. 1998. Observations on nest cycles, vocalization rates, the probability of detection, and survey protocols for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Final Report to the U.S. Bureau of Reclamation, Lower Colorado River Office, Boulder City, Nevada. 38 pp.
- Brown, B.T. 1988. Breeding ecology of a Willow Flycatcher population in Grand Canyon, Arizona. *Western Birds* 19:25-33.
- Bureau of Reclamation. 1988. Plant-soil-water relationships in Las Vegas Wash. Special Report, Division of Planning, Environmental and Reports Branch, Bureau of Reclamation, Lower Colorado Region, Boulder City, Nevada. 44 pp.
- Bureau of Reclamation. 1997. Draft Program Environmental Impact Statement for the Clark County Wetlands Park. U.S. Department of the Interior Bureau of Reclamation and Clark County Departments of Comprehensive Planning and Parks and Recreation. July 1997.
- Eddleman, W.R., and C.J. Conway. 1998. Clapper Rail (*Rallus longirostris*). In *The Birds of North America*, No. 340 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA. 32 pp.
- Martin, T.E., and G.R. Geupel. 1993. Protocols for nesting monitoring plots: locating nests, monitoring success, and measuring vegetation. *Journal of Field Ornithology* 64:507-519.
- Phillips, A.R., J. Marshall, and G. Monson. 1964. The birds of Arizona. University of Arizona Press, Tucson. 212 pp.
- Ryser, F.A., Jr. 1985. Birds of the Great Basin: a natural history. University of Nevada Press, Reno. 604 pp.
- Sogge, M.K., R.M. Marshall, S.J. Sferra, and T.J. Tibbitts. 1997. A Southwestern Willow Flycatcher natural history summary and survey protocol. Technical Report NPS/NAUCPRS/NRTR-97/12, Colorado Plateau Research Station, Northern Arizona University, Flagstaff. 39 pp.
- Southwest Center for Biological Diversity. 1998. Petition to list the Yellow-billed Cuckoo

*Coccyzus americanus* as a federally endangered species. Endangered Species Report No. 36, Southwest Center for Biological Diversity, Silver City, New Mexico. 60 pp.

SWCA, Inc. Environmental Consultants. 1997. Biological Assessment for the Clark County Wetlands Park.

Unitt, P. 1987. *Empidonax traillii extimus*: an endangered subspecies. Western Birds 18:137-162.

---

**APPENDIX I:**

**SURVEY ROUTE FOR SOUTHWESTERN WILLOW FLYCATCHERS**

---

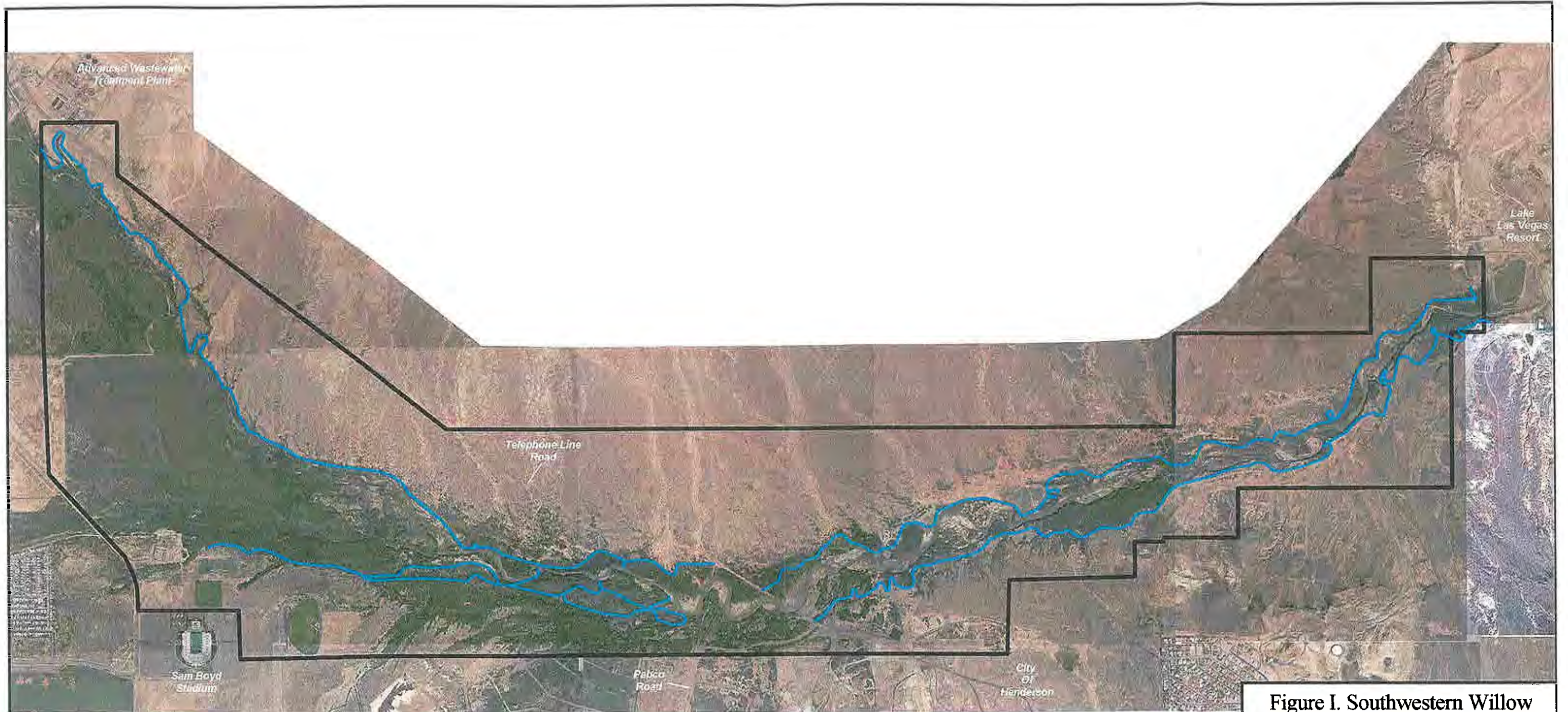


Figure I. Southwestern Willow Flycatcher Survey Routes (SNWA 1999)

- Legend
-  Survey Routes
  -  Clark County Wetland Park Boundary



---

**APPENDIX II:**

**ANNOTATED CHECKLIST OF BIRD SPECIES DETECTED  
IN CLARK COUNTY WETLANDS PARK, MAY - JULY, 1998**

---

**ANNOTATED CHECKLIST OF BIRD SPECIES DETECTED  
IN CLARK COUNTY WETLANDS PARK, MAY - JULY, 1998**

This annotated checklist identifies the bird species that were detected along Las Vegas Wash in Clark County Wetland Park, Nevada, during surveys for Southwestern Willow Flycatchers from late May through early July 1998. Presumed status is from Ryser (1985), Alcorn (1988), and/or our field observations. Relative abundance categories are modified after Phillips et al. (1964); abundance of a given species is based on our field observations. Common names and phylogenetic order conform to ornithological standards established by the American Ornithologists' Union (1983) and subsequent revisions.

**Presumed Status:**

- Resident (R)            Species apparently occurs in the area throughout the spring and summer nesting season, probably nesting.
- Migrant (M)            Species apparently passes through the area during migration, probably not nesting.
- Unknown (U)            The presumed status is in question because insufficient information existed for evaluation of status.

**Relative Abundance**

- Abundant (A)            Species is easily detected in large numbers (> 50) on a daily basis.
- Common (C)             Species is easily detected on a daily basis, but not in large numbers (5 - 50).
- Fairly Common (FC)    Species regularly detected in small numbers (2 - 4) on a daily basis.
- Uncommon (U)           Species regularly detected in very small numbers, although not necessarily every day.
- Rare (R)                 Species detected irregularly in very small numbers.

| Common Name               | Scientific Name              | Presumed Status | Relative Abundance |
|---------------------------|------------------------------|-----------------|--------------------|
| great blue heron          | <i>Ardea herodias</i>        | R               | U                  |
| snowy egret               | <i>Egretta thula</i>         | M               | U                  |
| green heron               | <i>Butorides striatus</i>    | R               | U                  |
| black-crowned night heron | <i>Nycticorax nycticorax</i> | R               | FC                 |

| Common Name                   | Scientific Name                       | Presumed Status | Relative Abundance |
|-------------------------------|---------------------------------------|-----------------|--------------------|
| white-faced ibis              | <i>Plegadis chihi</i>                 | M               | U                  |
| mallard                       | <i>Anas platyrhynchos</i>             | M               | FC                 |
| cinnamon teal                 | <i>Anas cyanoptera</i>                | R               | U                  |
| turkey vulture                | <i>Cathartes aura</i>                 | R               | U                  |
| sharp-shinned hawk            | <i>Accipiter striatus</i>             | R               | R                  |
| red-tailed hawk               | <i>Buteo jamaicensis</i>              | R               | U                  |
| American kestrel              | <i>Falco sparverius</i>               | R               | FC                 |
| Gambel's quail                | <i>Callipepla gambelii</i>            | R               | A                  |
| Yuma clapper rail             | <i>Rallus longirostris yumanensis</i> | U               | R                  |
| Virginia rail                 | <i>Rallus limicola</i>                | R               | U                  |
| common moorhen                | <i>Gallinula chloropus</i>            | R               | U                  |
| killdeer                      | <i>Charadrius vociferus</i>           | R               | C                  |
| spotted sandpiper             | <i>Actitis macularia</i>              | R               | C                  |
| white-winged dove             | <i>Zenaida asiatica</i>               | R               | A                  |
| mourning dove                 | <i>Zenaida macroura</i>               | R               | A                  |
| yellow-billed cuckoo          | <i>Coccyzus americanus</i>            | U               | R                  |
| greater roadrunner            | <i>Geococcyx californianus</i>        | R               | C                  |
| lesser nighthawk              | <i>Chordeiles acutipennis</i>         | R               | C                  |
| white-throated swift          | <i>Aeronautes saxatalis</i>           | R               | FC                 |
| black-chinned hummingbird     | <i>Archilochus alexandri</i>          | R               | FC                 |
| olive-sided flycatcher        | <i>Contopus borealis</i>              | M               | U                  |
| western wood-pewee            | <i>Contopus sordidulus</i>            | M               | U                  |
| willow flycatcher             | <i>Empidonax traillii</i>             | U               | R                  |
| black phoebe                  | <i>Sayornis nigricans</i>             | R               | C                  |
| ash-throated flycatcher       | <i>Myiarchus cinerascens</i>          | R               | FC                 |
| Say's phoebe                  | <i>Sayornis saya</i>                  | R               | U                  |
| northern rough-winged swallow | <i>Stelgidopteryx serripennis</i>     | R               | A                  |



| Common Name                   | Scientific Name                      | Presumed Status | Relative Abundance |
|-------------------------------|--------------------------------------|-----------------|--------------------|
| northern rough-winged swallow | <i>Stelgidopteryx serripennis</i>    | R               | A                  |
| barn swallow                  | <i>Hirundo rustica</i>               | M               | A                  |
| common raven                  | <i>Corvus corax</i>                  | R               | C                  |
| verdin                        | <i>Auriparus flaviceps</i>           | R               | C                  |
| Bewick's wren                 | <i>Thryomanes bewickii</i>           | R               | A                  |
| marsh wren                    | <i>Cistothorus palustris</i>         | R               | C                  |
| black-tailed gnatcatcher      | <i>Poliophtila melanura</i>          | R               | A                  |
| northern mockingbird          | <i>Mimus polyglottos</i>             | R               | FC                 |
| Crissal thrasher              | <i>Toxostoma crissale</i>            | R               | FC                 |
| phainopepla                   | <i>Phainopepla nitens</i>            | R               | U                  |
| warbling vireo                | <i>Vireo gilvus</i>                  | M               | U                  |
| Lucy's warbler                | <i>Vermivora luciae</i>              | R               | C                  |
| yellow warbler                | <i>Dendroica petechia</i>            | R               | FC                 |
| MacGillivray's warbler        | <i>Oporornis tolmiei</i>             | M               | U                  |
| common yellowthroat           | <i>Geothlypis trichas</i>            | R               | A                  |
| Wilson's warbler              | <i>Wilsonia pusilla</i>              | M               | U                  |
| yellow-breasted chat          | <i>Icteria virens</i>                | R               | A                  |
| blue grosbeak                 | <i>Guiraca caerulea</i>              | R               | C                  |
| Abert's towhee                | <i>Pipilo aberti</i>                 | R               | C                  |
| song sparrow                  | <i>Melospiza melodia</i>             | R               | A                  |
| red-winged blackbird          | <i>Agelaius phoeniceus</i>           | R               | C                  |
| yellow-headed blackbird       | <i>Xanthocephalus xanthocephalus</i> | R               | FC                 |
| great-tailed grackle          | <i>Quiscalus mexicanus</i>           | R               | A                  |
| brown-headed cowbird          | <i>Molothrus ater</i>                | R               | A                  |
| house finch                   | <i>Carpodacus mexicanus</i>          | R               | FC                 |
| lesser goldfinch              | <i>Carduelis psaltria</i>            | R               | FC                 |

---

**APPENDIX III:**

**WILLOW FLYCATCHER SURVEY AND DETECTION FORM  
SENT TO ARIZONA PARTNERS IN FLIGHT,  
SOUTHWESTERN WILLOW FLYCATCHER SURVEY COORDINATOR**

---

Willow Flycatcher Survey and Detection Form (rev. 4/98)

Site Name Clark County Wetlands Park / Las Vegas Wash Was site surveyed in previous year? Yes  No

If yes, what site name was used? \_\_\_\_\_  
 County Clark Co. State NV USGS Quad Name Henderson; Las Vegas SE

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?  Yes  No  
 Site Coordinates: Start: N 3998000 E 677500 UTM  
 Stop: N 3997000 E 685300 UTM Zone \_\_\_\_\_  
 Elevation 1660 - 1460 ft (feet) meters (circle one)

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

| Survey #<br>Observer(s)  | Date (m/d/y)<br>Survey time  | Number<br>of WIFLs<br>Found   | Estimated<br>Number<br>of Pairs | Estimated<br>Number of<br>Territories | Nest(s)<br>Found?<br>Y or N | Cowbirds<br>Detected?<br>Y or N  | Presence of<br>Livestock,<br>Recent sign<br>Y or N | Comments about this survey<br>(e.g., evidence of pairs or<br>breeding, number of nests, nest<br>contents or number of fledges<br>seen; potential threats) |
|--|--|-------------------------------|---------------------------------|---------------------------------------|-----------------------------|--|--|---|
| 1 G.S. Mills<br>B.T. Brown<br>H.K. Yard<br>S. Martin<br>M. Murov | Date 5/27/98 -<br>5/30/98<br>start 0510<br>stop 1000<br>total hrs 90 | 2<br>(1♂,<br>1 probable<br>♀) | 0                               | 0                                     | N                           | Y  | N  | (1♂, 1 probable<br>♀; they were<br>together in dense<br>patch of SAGO, TARA)  |
| 2 S. Martin<br>H.K. Yard<br>M. Murov<br>B.T. Brown               | Date 6/17/98 -<br>6/19/98<br>Start 0500<br>Stop 1000<br>total hrs 60 | 0                             | 0                               | 0                                     | N                           | Y  | N  | birds detected in<br>May not present,<br>probably migrants  |
| 3 S. Martin<br>B.T. Brown  | Date 7/7/98 -<br>7/8/98<br>Start 0500<br>Stop 1000<br>total hrs 20   | 0                             | 0                               | 0                                     | N                           | Y  | N  | birds detected in<br>May not present  |
| _____  | Date<br>start<br>stop<br>total hrs _____                             |                               |                                 |                                       |                             |  |  |   |
| _____  | Date<br>start<br>stop<br>total hrs _____                             |                               |                                 |                                       |                             |  |  |   |
| Overall Site Summary<br>(Total only resident WIFLs)              |  | Adults                        | Pairs                           | Territories                           | Nests                       | Were any WIFLs color-banded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |  |   |
| Total survey hrs <u>170</u>                                      |  | 0                             | 0                               | 0                                     | 0                           | If yes, report color combination(s) in the comments section on<br>back of form                   |  |   |

Name of Reporting Individual BRYAN T. BROWN Date Report Completed 8/25/98

Submit the original of this form. Retain a copy for your records.

Fill in the following information completely. Submit original form. Retain copy for your records.

Name of Reporting Individual BRYAN T. BROWN Phone # 801/583-2146  
Affiliation SWCA Environmental Consultants Email Bbrown@swcaslc.com

Site Name Clark Co. Wetlands Park / Las Vegas Wash  
Did you verify that this site name is consistent with that used in previous years? Yes No (circle one)

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private

Name of Management Entity or Owner (e.g., Tonto National Forest) Clark Co. Parks and Recreation Dept.

Length of area surveyed: 6 miles (specify units, e.g., miles = mi, kilometers = km, meters = m)

Did you survey the same general area during each visit to this site this year? Yes / No If no, summarize in comments below.

If site was surveyed last year, did you survey the same general area this year? Yes / No If no, summarize in comments below.

NA

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

- Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)
- Mixed native and exotic plants (mostly native)
- Mixed native and exotic plants (mostly exotic)
- Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: tamarisk

Average height of canopy: 5 meters (specify units)

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

Distance from the site to surface water or saturated soil: 0-100 m (specify units)

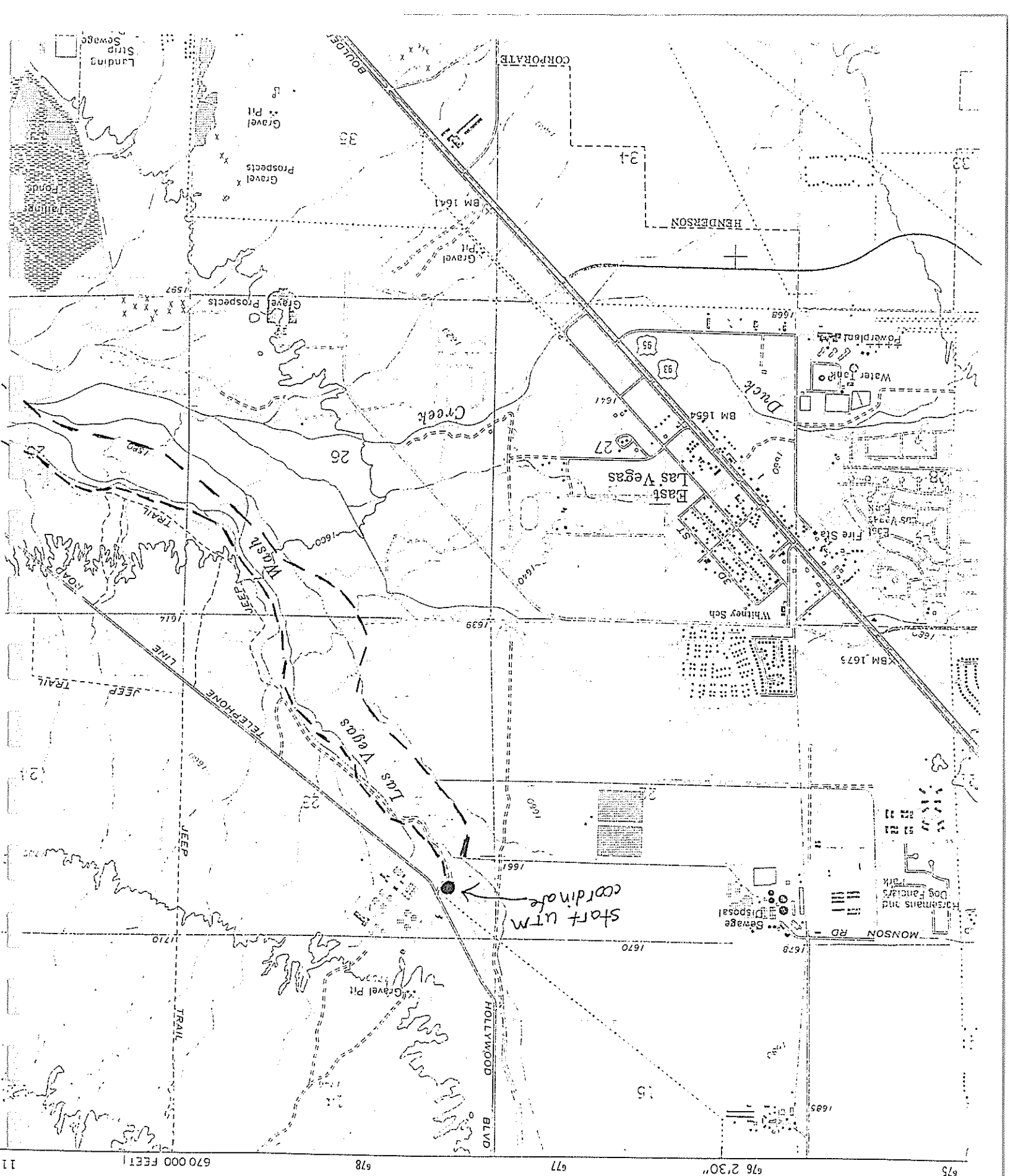
Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes No (circle one)

If yes, describe in comments section below.

Remember to attach a xerox copy of a USGS quad/topographical map (REQUIRED) of the survey area, noting the survey site and location of WIFL detections. You may also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map.

Comments (attach additional sheets if necessary): This huge site is maintained by sewage effluent, and did not exist prior to ca. 1960.

Our first two survey windows, we used 2 observers per survey team for safety reasons and so everyone would be familiar with all the survey routes. On our final survey window, we used only one observer per survey team.



1 of 2

Site name: Clark Co. Wetlands Part 1  
 Las Vegas East  
 Las Vegas SE Quadrangle  
 NEVADA-CLARK CO.  
 \* = WFL locations + det 7.5 MINUTE SERIES (TOPOGRAPHI)

675 976 2'30'' 977 978 979 980 670 000 FEET



---

**APPENDIX IV:**

**SWCA PERSONNEL CONDUCTING THIS STUDY**

---

**SWCA PERSONNEL CONDUCTING THIS STUDY**

Principal-in-Charge . . . . . Dr. Steven W. Carothers

Project Manager . . . . . R. Spencer Martin

Project Scientist . . . . . Dr. Bryan T. Brown

Field Ornithologists . . . . . Dr. G. Scott Mills  
Mimi Murov  
Helen Yard