

APPENDIX A
FIELD DATA FORMS

LCR SWFL SURVEY AND DETECTION FORM 2003

Site Name (specific to patch) _____ **Date** _____

Observer(s) _____ **UTM Zone** _____

Start Time _____	Stop Time _____
UTM E _____ N _____	UTM E _____ N _____

Intermediate Waypoints			
UTM E _____	N _____	UTM E _____	N _____
UTM E _____	N _____	UTM E _____	N _____
UTM E _____	N _____	UTM E _____	N _____
UTM E _____	N _____	UTM E _____	N _____
UTM E _____	N _____	UTM E _____	N _____
UTM E _____	N _____	UTM E _____	N _____
UTM E _____	N _____	UTM E _____	N _____

SWFL Detections			
UTM E _____	N _____	Pair? Y or N	Nest Found? Y or N
Comments _____			

UTM E _____	N _____	Pair? Y or N	Nest Found? Y or N
Comments _____			

UTM E _____	N _____	Pair? Y or N	Nest Found? Y or N
Comments _____			

Survey Summary			
# SWFLS found _____	Est. # Pairs _____	Est. # Territories _____	
Playbacks used? Y or N	Cowbirds Detected? Y or N		
Sign of Livestock? Y or N If yes, explain _____			

Additional Comments _____

LCR SWFL SURVEY AND DETECTION FORM 2003 – Additional Detections

Site Name (specific to patch) _____ **Date** _____

SWFL Detections

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

UTM E _____ N _____ Pair? Y or N Nest Found? Y or N

Comments _____

LCR SWFL General Site Description
(Complete 3 times during season: approx. mid-month in May, June, and July)

Site name: _____ Date (MM/DD/YY): _____

Observer(s): _____

Vegetation at site: >90% native 50-90% native 50-90% exotic >90% exotic

Canopy closure: <25% 25-50% 50-70% 70-90% >90%

Dominant overstory species: _____

Overstory height (m): _____

Dominant understory species: _____

Understory height (m): _____

Other vegetation types present (e.g., cattail)? Yes No

If yes, type of vegetation: _____ percentage of site: _____

type of vegetation: _____ percentage of site: _____

type of vegetation: _____ percentage of site: _____

% of site inundated: _____ Depth of surface water: _____

% of site with saturated soils: _____

If not inundated, distance to standing water or saturated soil (m): _____

Notes:

BANDING DATA FORM

SITE: _____ BANDER: _____ DATE: _____ TIME: _____ TERRITORY AND NEST #: _____

NOTES: _____

FEDERAL BAND #	COLOR COMBO		STATUS N or R	S E X	C P	B P	AGE AHY, SY, L, or HY	BLOOD SAMPLE?		FECAL SAMPLE?	FEATHER SAMPLE?	WING CHORD	TAIL	CULMEN LENGTH	CULMEN WIDTH	F A T	MASS	
	L	R						CARD	VIAL									

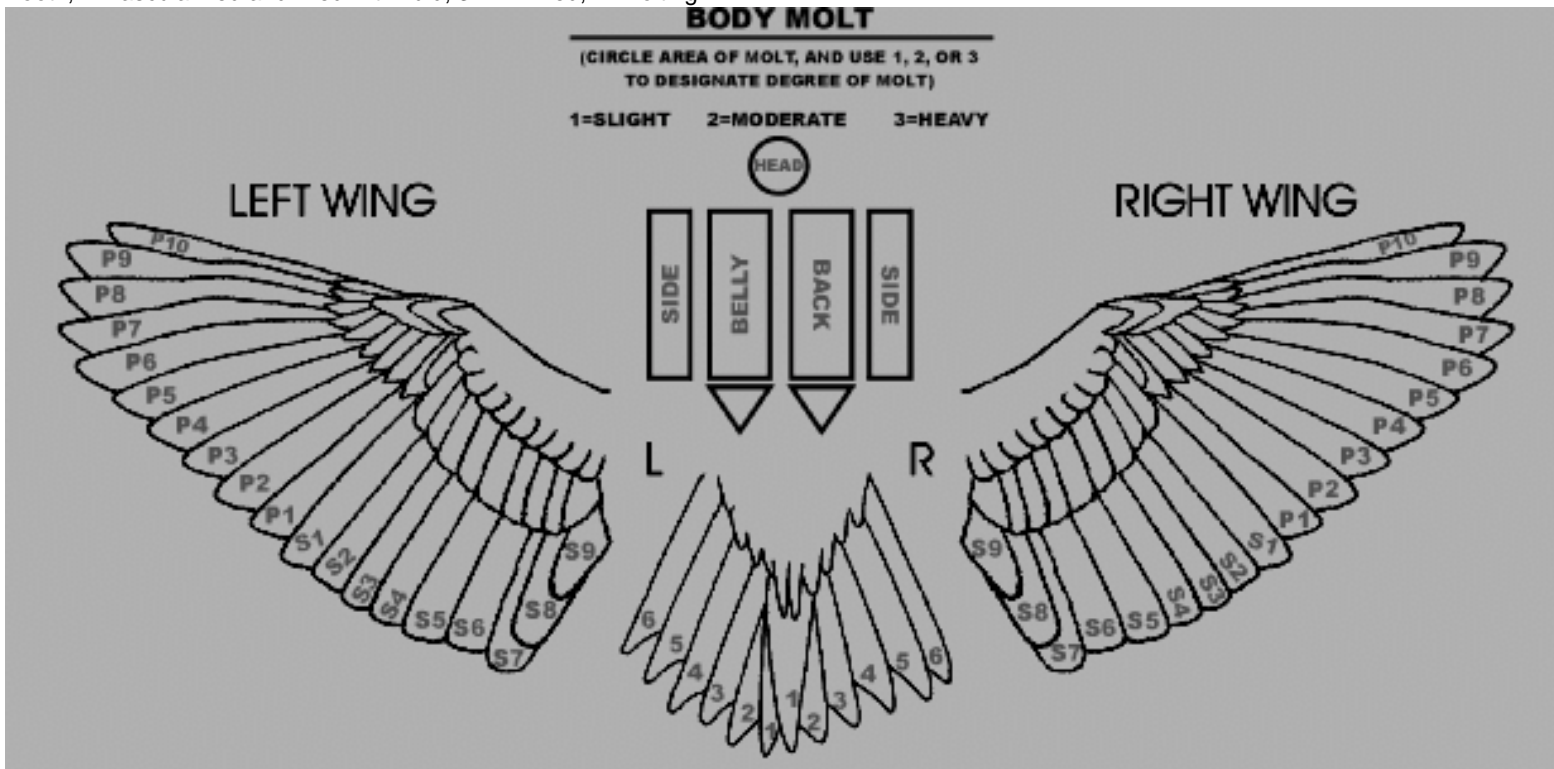
Retained Feathers Present: Yes or No (circle) – if Yes use diagram below

Active Molt: Yes or No (circle) – if Yes use diagram below

SEX: U=unknown, F=female, M=male

CP: 0=non-breeding, S=partial breeding, M=full breeding

BP: 0= none, 1=smooth, 2=vascularized and filled with fluid, 3 =wrinkled, 4=molting



DETAIL ALL MOLTS AND RETAINED FEATHERS ONTO DIAGRAM AND DETAIL IN NOTES

Willow Flycatcher Nest Record Form (2003)

AGFD site no.: _____ Site name: _____ Nest no.: _____
 (AZ Sites only)

IMS Nest no.: _____
 (AZ Sites only)

Nest Location: NAD: _____ Nest Height: _____ m
 Zone: _____ Nest Substrate: _____ (eg. TASP=tamarisk, SAGO=Gooding willow, POFR=cottonwood,
 SAGE=Geyer willow)
 Quad/Topo Name: _____ UTM's: Northing: _____
 Easting: _____

Bird 1: Color band combination: _____ **Band Number:** _____ **Female**
Bird 2: Color band combination: _____ **Band Number:** _____ **Male**

Willow Flycatcher			Willow Flycatcher			Cowbird			Cowbird		
Trans dates	B D	(T/F)	No.	Presumed	Confirmed	Trans dates	B D	(T/F)	No.	Complete? (T/F)	

Outcome (Record code & describe): _____ : _____

<p>Outcome codes: UN= unknown; FY= fledged young, with at least one young seen leaving or in the vicinity of nest; FP= fledged young, as determined by parents behaving as if dependent fledgling(s) nearby; FU= suspected fledging of at least one young; FC= fledged at least one host young with cowbird parasitism; FD= Nest partially depredated with confirmed fledging of at least one young; PO= predation observed; PE= probable predation, nest empty and intact; PD= probable predation, damage to nest structure; PC= probable predation by cowbird; AB= nest abandoned prior to egg(s) being laid; DE= deserted with egg(s) or young; AC= nest abandoned due to cowbird; CO= failure due to cowbird, host attempted to raise cowbird young. No host young were fledged from the nest; WE= failure due to weather; HA= failure due to human activities; IN= failure, entire clutch infertile; OT= failure due to other, or unknown, causes.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Mayfield Success</th> </tr> <tr> <th style="width: 33%;">(WIFL) Period</th> <th style="width: 33%;"># Exposure days</th> <th style="width: 33%;">Success</th> </tr> </thead> <tbody> <tr> <td>Egg Laying</td> <td></td> <td></td> </tr> <tr> <td>Incubation</td> <td></td> <td></td> </tr> <tr> <td>Nestling</td> <td></td> <td></td> </tr> </tbody> </table> <p>Mayfield success codes: S= successful; D= depredated; U= status unknown/nest occupied- fate unknown; M= mortality other than predation; A= abandoned with host egg(s) or young; Z= abandoned, no (zero) eggs laid.</p>	Mayfield Success			(WIFL) Period	# Exposure days	Success	Egg Laying			Incubation			Nestling		
Mayfield Success																
(WIFL) Period	# Exposure days	Success														
Egg Laying																
Incubation																
Nestling																

COWBIRD TRAPPING DATA FORM

Name: _____

Date: _____

Start Time: _____

Location: _____

End Time: _____

Trap

	M	F	J	M	F	J	M	F	J	M	F	J	M	F	J	
COWBIRDS																
Newly Trapped																
Previous Decoys																
Removed																
Added																
Total left in Trap																
Non-Target Species																

Comments

LCR Southwestern Willow Flycatcher Project - Vegetation Datasheet 2003

Date:	Obs:	Site:	Plot type:	ID#:	UTM:	E		N
Nest site only	Substr.:		All plot centers	Dist water: m	Woody Ground Cover		Total Canopy	
Substr. DBH: cm	Substr. Ht.: m		Dist canopy gap: m	Dist. Broadleaf: m	N:	E:	N:	
Nest Ht.: m	or %- % X m		Top Can.: m	or %- % X m	S:	W:	S:	
Species	TASP	SAGO	SAEX	POFR	SNAG	OTSP1:_____	OTSP2:_____	OTSP3:_____
Shrub/Sapling Count In 5m Plot < or = 8 cm dbh	<1							
	1-2.5							
	2.6-5.5							
	5.6-8							
	Sum							
Species	TASP	SAGO	SAEX	POFR	SNAG	OTSP1:_____	OTSP2:_____	OTSP3:_____
Tree Count In 5m Plot > 8 cm dbh	8.1-10.5							
	10.5-15							
	Measured Trees >15 cm dbh							
Species	TASP	SAGO	SAEX	POFR	SNAG	OTSP1:_____	OTSP2:_____	OTSP3:_____
Tree Count in 5m to 11.3m Plot >8 cm dbh								

NOTES

* If, at ankle height or above, shrub/sapling/tree splits into multiple branches, count it as one stem and measure the biggest stem. If splits below ankle height, count all stems

** If shrub/sapling/tree is not at least breast height, do not count

Vertical Foliage Sampling (i.e. "Hits on the pole") : Microplot Vegetation

CENTER PLOT						
Height (m)	Hits/Species					
	Tasp	Sago	Saex	Pofr	Snag	Otsp **
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Record number of decimeters with hits on pole (within 10 cm radius) per 1-m interval up to 8 m; above 8 m, estimate > or < 5 hits per meter interval.

**** Other species (common name)** _____

Vertical Foliage Sampling (i.e., "Hits on the pole") Data Form : Microplot Vegetation

Date:		Obs.:		Site:		Plot type:		ID#:					
Vertical Foliage Volume													
NORTH	Hits/Species						EAST	Hits/Species					
Height (m)	Tasp	Sago	Saex	Pofr	Snag	Otsp**	Height (m)	Tasp	Sago	Saex	Pofr	Snag	Otsp**
1							1						
2							2						
3							3						
4							4						
5							5						
6							6						
7							7						
8							8						
9							9						
10							10						
11							11						
12							12						
13							13						
14							14						
15							15						
16							16						
17							17						
18							18						
19							19						
20							20						
21							21						
22							22						
23							23						
24							24						
25							25						

SIDE 2

SOUTH	Tasp	Sago	Saex	Pofr	Snag	Otsp **	WEST	Tasp	Sago	Saex	Pofr	Snag	Otsp **
1							1						
2							2						
3							3						
4							4						
5							5						
6							6						
7							7						
8							8						
9							9						
10							10						
11							11						
12							12						
13							13						
14							14						
15							15						
16							16						
17							17						
18							18						
19							19						
20							20						
21							21						
22							22						
23							23						
24							24						
25							25						

Record hits on pole (within 10 cm radius) per 0.1 m intervals up to 8 m; above 8 m, estimate > or < 5 hits per interval.

** Other species (common name) _____

**SET UP – NEST NUMBER _____
or SEASONAL VARIATION**

SWFL Microclimate Study: Sensor Array Set-Up Sheet

(Circle choices; write neatly or die)

Study area: Mesquite West (MW) Mormon Mesa (MM) Pahranaagat (PA) Topock Marsh (TM)			
Sensor array location: Nest Site (NS) Within Territory (WT) Suitable but Unoccupied (SU) Seasonal Variation Riparian (SVR) Seasonal Variation Desertscrub (SVD)			
Date (MM/DD/YY):	Time (military):	Crew member(s)	
UTM coordinates of sensor array: Easting (x)		Northing (y)	
Dominant habitat within 10 m of sensor array:	Cottonwood/Willow	Tamarisk	Willow
	Mixed Native/Exotic	Other (specify: _____)	
Estimated canopy cover at the sensor array: Less than 25% 25%-75% More than 75%			

Temperature/Relative Humidity (T/RH) Sensor Array

Site identifier (see codes): _____	Sensor 6-digit serial number (e.g., #630863): _____
If NOT a nest site, what is the randomization sequence used? Sequence #: _____	
Column 1: _____	Column 2: _____
Column 3: _____	Column 4: _____
Column 5: _____	
If nest site, when was nest vacated (known or estimated; MM/DD/YY)? _____	
Sensor array location: Tree Shrub Est. overall height of tree or shrub? _____ meters	

Soil Moisture (SM) – Seasonal Variation (SV) Sensor Array and Probe Data

Site identifier (see codes): _____	If SV sensor, 6-digit serial number: _____
If SV sensor, dates sensor function was checked (approx. 10-day intervals): _____	
Soil sample taken (at set-up only)? Yes No If no, explain: _____	
For probe data, if site was inundated/saturated at time when temp./rel. humidity sensor array was set up, indicate depth of water below sensor array or presence of saturated soil (SAT – refer to decision rule) for each date (MM/DD/YY), including set-up, that site was monitored. If not inundated or saturated, give SM reading (%) from hand-held probe and serial number of probe.	
Date: _____	H₂O depth: SAT <5cm 5-15cm 15-50cm >50cm or SM reading: _____ and serial # _____
Date: _____	H₂O depth: SAT <5cm 5-15cm 15-50cm >50cm or SM reading: _____ and serial # _____
Date: _____	H₂O depth: SAT <5cm 5-15cm 15-50cm >50cm or SM reading: _____ and serial # _____
Date: _____	H₂O depth: SAT <5cm 5-15cm 15-50cm >50cm or SM reading: _____ and serial # _____
Date: _____	H₂O depth: SAT <5cm 5-15cm 15-50cm >50cm or SM reading: _____ and serial # _____
Date: _____	H₂O depth: SAT <5cm 5-15cm 15-50cm >50cm or SM reading: _____ and serial # _____
Date: _____	H₂O depth: SAT <5cm 5-15cm 15-50cm >50cm or SM reading: _____ and serial # _____

Site identifier format: Study area code (MW, MM, PA, TM) – Location code (NS, WT, SU, SVR, SVD) – Type of sensor (T/RH, SM) – Nest number (for NS, WT, SU locations); e.g., TM-SU-T/RH-09

SAT decision rule: A 1-cm-deep trench created with a stick fills with water or unstable mud in less than one minute.

Notes:

**SET UP – NEST NUMBER _____
or SEASONAL VARIATION**

SWFL Microclimate Study: Sensor Array Takedown Sheet

(Circle the appropriate response; write neatly or die)

Study area: Mesquite West (MW) Mormon Mesa (MM) Pahrnagat (PA) Topock Marsh (TM)		
Sensor array location: Nest Site (NS) Within Territory (WT) Suitable but Unoccupied (SU) Seasonal Variation Riparian (SVR) Seasonal Variation Desertscrub (SVD)		
Date (MM/DD/YY):	Time (military):	Crew member(s)
UTM coordinates of sensor array: Easting (x)		Northing (y)

Temperature/Relative Humidity (T/RH) Sensor Array

Site identifier (see codes):
Sensor 6-digit serial number (e.g. #630863):
If nest site, when was nest vacated (known or estimated; MM/DD/YY)? _____
When was sensor array set up? Date (MM/DD/YY): _____ Time (military): _____
Number of full (midnight-to-midnight) days this sensor array has been in place?
Did any events occur that might have interfered with accuracy of data gathered by this sensor array (e.g., array blown out of tree, etc.)? No Yes If yes, explain:

Soil Moisture (SM) - Seasonal Variation (SV) Sensor Array

Site identifier (see codes):
6-digit serial number (e.g., #631072):
Did any event (e.g., unexpected flood, dug up by animal, vandalism) occur that might have influenced the accuracy of the soil moisture data gathered by this sensor? No Yes If yes, explain:
Was site inundated/saturated at time when soil moisture array was taken down? Yes No If yes, indicate depth of water at sensor array or presence of saturated soils (SAT; refer to decision rule). SAT <5 cm 5-15 cm 15-50 cm >50 cm

Site identifier format: Study area code (MW, MM, PA, TM) – Location code (NS, WT, SU, SVR, SVD) – Type of sensor (T/RH, SM) – Nest number (for NS, WT, SU locations); e.g., TM-SU-T/RH-09

SAT decision rule: A 1-cm-deep trench created with a stick fills with water or unstable mud in less than one minute.

Notes: