APPENDIX A

FIELD DATA FORMS

LCR SWFL SURVEY AND DETECTION FORM 2003

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

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

Start	**Stop**
Time _____	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 #**: _____

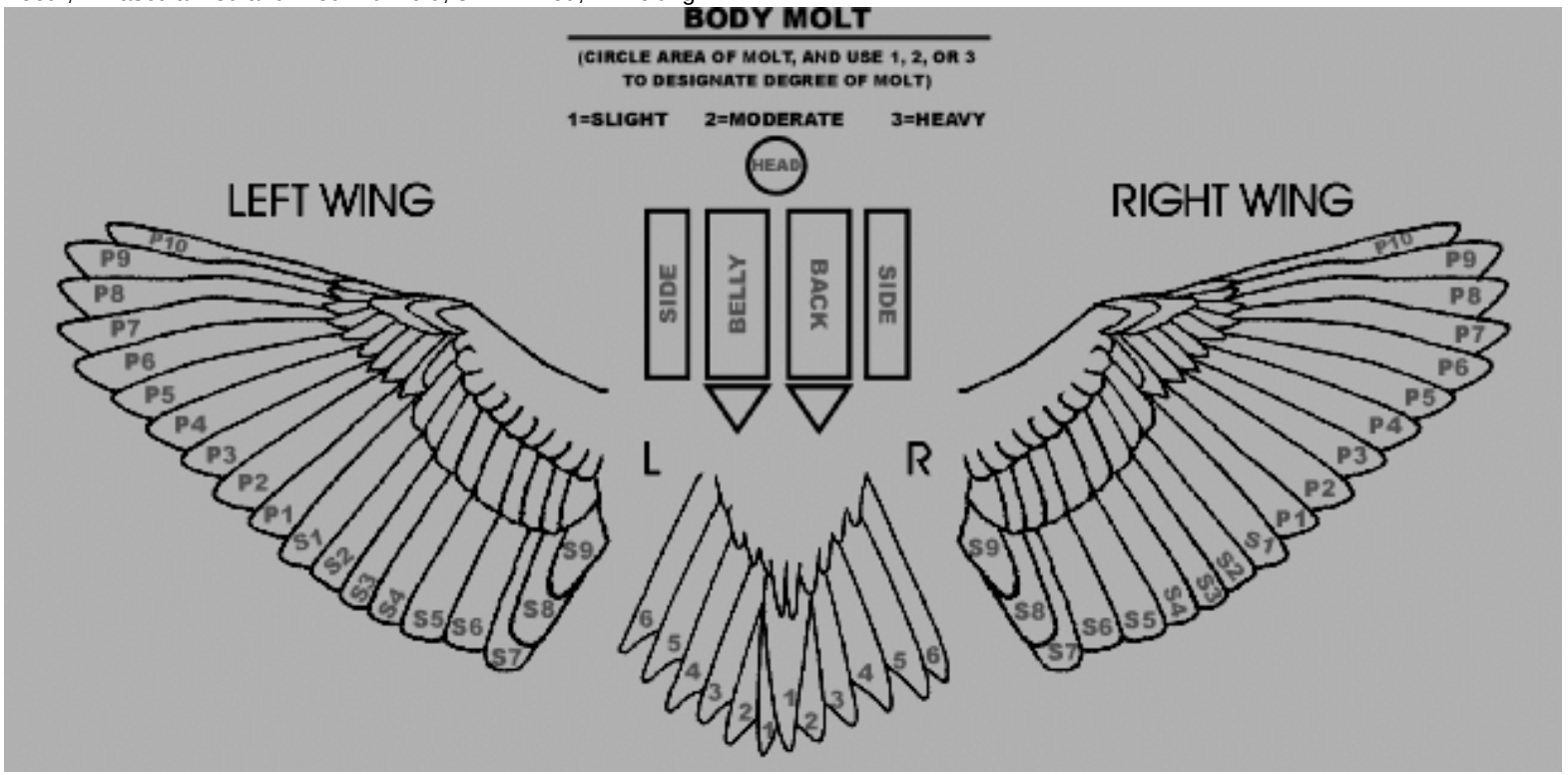
NOTES:_____
_____
_____
_____

FEDERAL BAND #	COLOR COMBO		STATUS N or R	SEX	CP	BP	AGE AHY, SY, L, or HY	BLOOD SAMPLE?		FECAL SAMPLE?	FEATHER SAMPLE?	WING CHORD	TAIL	CULMEN LENGTH	CULMEN WIDTH	FAT	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

RESIGHT DATA FORM

OBS Use 3 initials	SITE 4 Letter Code	TERRITORY	NEST	COLOR COMBO LEFT LEG (Top/ Bottom)	COLOR COMBO RIGHT LEG (Top/ Bottom)	CONF LEVL A, B, C, N, P	ASSOC WITH A NEST?	CAPTURE?	# WIFLS PRESENT	SEX (M/F/ U)	OBSERVATIONS AND COMMENTS: discuss observations & activities. **Include % confidence of N resights, including when only one leg was observed – or if unsure what band was on what leg.**
	-	-	-		-	-					Service Band Number =
	-	-	-		-	-					Service Band Number =
-	-	-	-		-	-					Service Band Number =
-	-	-	-		-	-					Service Band Number =
-	-	-	-		-	-					Service Band Number =
-	-	-	-		-	-					Service Band Number =
-	-	-	-		-	-					Service Band Number =
-	-	-	-		-	-					Service Band Number =
-	-	-	-		-	-					Service Band Number =
-	-	-	-		-	-					Service Band Number =
-	-	-	-		-	-					Service Band Number =

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

Trans dates	BD (T/F)	
		Found
		First egg
		Clutch completion
		Hatching
		Fledged or Failed

Willow Flycatcher

No. Presumed	Confirmed	
		Eggs
		Nestlings
		Fledglings

Cowbird

Trans dates	BD (T/F)	
		First egg
		Hatching
		Fledged

Cowbird

No.	Complete? (T/F)	
		Eggs
		Nestlings
		Fledgling

Outcome (Record code & describe**):**_____**:**_____

_____

_____

_____

_____

Mayfield success codes: **S**= successful; **D**= depredated; **U**= status unknown/nest occupied- fate unknown; **M**= mortality other that predation; **A**= abandoned with host egg(s) or young; **Z**= abandoned, no (zero) eggs laid.

Willow Flycatcher Nest Record Form (continued)

AGFD site no.:_______________Site name:______________________________ Nest no.:__________

Date	Time	Obs	Mon Type	Stage	Adult pres.	# WF Egg	# CB Egg	# WF Nstl	# CB Nstl	#WF Fldg	Age Yng	Comments

Return form to the AGFD (2221 W. Greenway Rd., Phoenix, AZ 85023) and keep a copy for your files.

COWBIRD TRAPPING DATA FORM

Name: _____ **Date:** _____

Start Time: _____

Location: _____ **End Time:** _____

Trap #

COWBIRDS	M	F	J	M	F	J	M	F	J	M	F	J	M	F	J	M	F	J
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			**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						
	Hits/Species					
Height (m)	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) Pahranagat (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:_______ H_2O depth: SAT <5cm 5-15cm 15-50cm >50cm **or SM reading:______ and serial # ______**
Date:_______ H_2O depth: SAT <5cm 5-15cm 15-50cm >50cm **or SM reading:______ and serial # ______**
Date:_______ H_2O depth: SAT <5cm 5-15cm 15-50cm >50cm **or SM reading:______ and serial # ______**
Date:_______ H_2O depth: SAT <5cm 5-15cm 15-50cm >50cm **or SM reading:______ and serial # ______**
Date:_______ H_2O depth: SAT <5cm 5-15cm 15-50cm >50cm **or SM reading:______ and serial # ______**
Date:_______ H_2O depth: SAT <5cm 5-15cm 15-50cm >50cm **or SM reading:______ and serial # ______**
Date:_______ H_2O depth: SAT <5cm 5-15cm 15-50cm >50cm **or SM reading:______ and serial # ______**
Date:_______ H_2O 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) Pahranagat (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: