





### SWFL SURVEY AND DETECTION FORM

Study Area \_\_\_\_\_ Survey Site \_\_\_\_\_ Date \_\_\_\_\_

Observer(s) \_\_\_\_\_ UTM NAD and Zone \_\_\_\_\_

<b>Start</b> Time _____ UTM E 0 _____ N _____	<b>Stop</b> Time _____ UTM E 0 _____ N _____
---	--

<b>Intermediate Waypoints</b>			
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____

<b>SWFL Detections</b>			
UTM E 0 _____	N _____	Banded? Y N U	Pair? Y N Nest Found? Y N
Comments _____			
UTM E 0 _____	N _____	Banded? Y N U	Pair? Y N Nest Found? Y N
Comments _____			
UTM E 0 _____	N _____	Banded? Y N U	Pair? Y N Nest Found? Y N
Comments _____			
UTM E 0 _____	N _____	Banded? Y N U	Pair? Y N Nest Found? Y N
Comments _____			

<b>Survey Summary</b>			
Total survey hours _____	# SWFLS found _____	Est. # Pairs _____	Est. # Territories _____
Playbacks used? Y or N Cowbirds Detected? Y or N If Y, approx # _____			
Sign of Livestock? Y or N If yes, explain _____			

<b>Additional Comments</b> _____
_____
_____
_____
_____

# SWFL SURVEY AND DETECTION FORM – Additional Waypoints

Study Area \_\_\_\_\_ Survey Site \_\_\_\_\_ Date \_\_\_\_\_

Observer(s) \_\_\_\_\_ UTM NAD and Zone \_\_\_\_\_

## Intermediate Waypoints

UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____

Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SWFL SURVEY AND DETECTION FORM – Additional Detections**

Study Area \_\_\_\_\_ Survey Site \_\_\_\_\_ Date \_\_\_\_\_

Observer(s) \_\_\_\_\_ UTM NAD and Zone \_\_\_\_\_

**SWFL Detections**

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

UTM E 0 \_\_\_\_\_ N \_\_\_\_\_ Banded? Y N U Pair? Y N Nest Found? Y N  
Comments \_\_\_\_\_

## SWFL General Site Description

(Complete at least 3 times during season: early (10–25 May), mid-season (10–25 June), and late season (10–25 July))

Study Area: \_\_\_\_\_ Survey Site: \_\_\_\_\_ Date: \_\_\_\_\_

Observer(s): \_\_\_\_\_ early \_\_\_\_\_ mid \_\_\_\_\_ late \_\_\_\_\_ other \_\_\_\_\_

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

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

Overstory height (m): \_\_\_\_\_ Dominant overstory species: TASP      SAGO      SAEX      POFR      Other \_\_\_\_\_

Understory height (m): \_\_\_\_\_ Dominant understory species: TASP      SAGO      SAEX      PLSE      Other \_\_\_\_\_

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: \_\_\_\_\_

Describe type of surface water (e.g., open marsh, surface water within woody vegetation, stream, etc):  
\_\_\_\_\_

Average depth of surface water:

toes (<5cm)      ankles (5-15 cm)      calves (15-40 cm)      knees (40-60 cm)  
thighs (60-80 cm)      waist (100 cm)      too deep to wade (>100 cm)

% of site with saturated soils (do not include inundated areas in percentage!): \_\_\_\_\_

% of site with damp soils (do not include inundated or saturated areas): \_\_\_\_\_

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

How was distance determined?      Visually estimated in field      Measured in field using GPS

Measured from aerial photograph      Other \_\_\_\_\_

Describe type of nearest surface water: \_\_\_\_\_

Does this description cover the entire site?      Y      N      If not, which portion is described? \_\_\_\_\_

Give a narrative description of the site, including adjacent habitats:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Additional comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

STUDY AREA: \_\_\_\_\_ SITE: \_\_\_\_\_ BANDER: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ TERR/NEST #: \_\_\_\_\_  
 UTM: NAD \_\_\_\_\_ Zone \_\_\_\_\_ E \_\_\_\_\_ N \_\_\_\_\_ NBN: \_\_\_\_\_ of \_\_\_\_\_ nestlings banded.  
 NOTES: \_\_\_\_\_

FEDERAL BAND #	COLOR COMBO		STATUS	SEX	CP	BP	AGE	FECAL SAMPLE? (Y or N)	GENETIC SAMPLE? (Y or N)	WING CHORD (mm)	TAIL (mm)	CULMEN LENGTH (mm)	CULMEN WIDTH (mm)	FAT
	L	R												

Colorimeter sample: Yes or No (circle)

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

\*\*\* If a genetic sample or metric was not taken, explain why in notes \*\*\*

STATUS: NCP = new cap passive, NCT = new cap target, RCP = recap passive, RCT = recap target, NBN = nestling banded

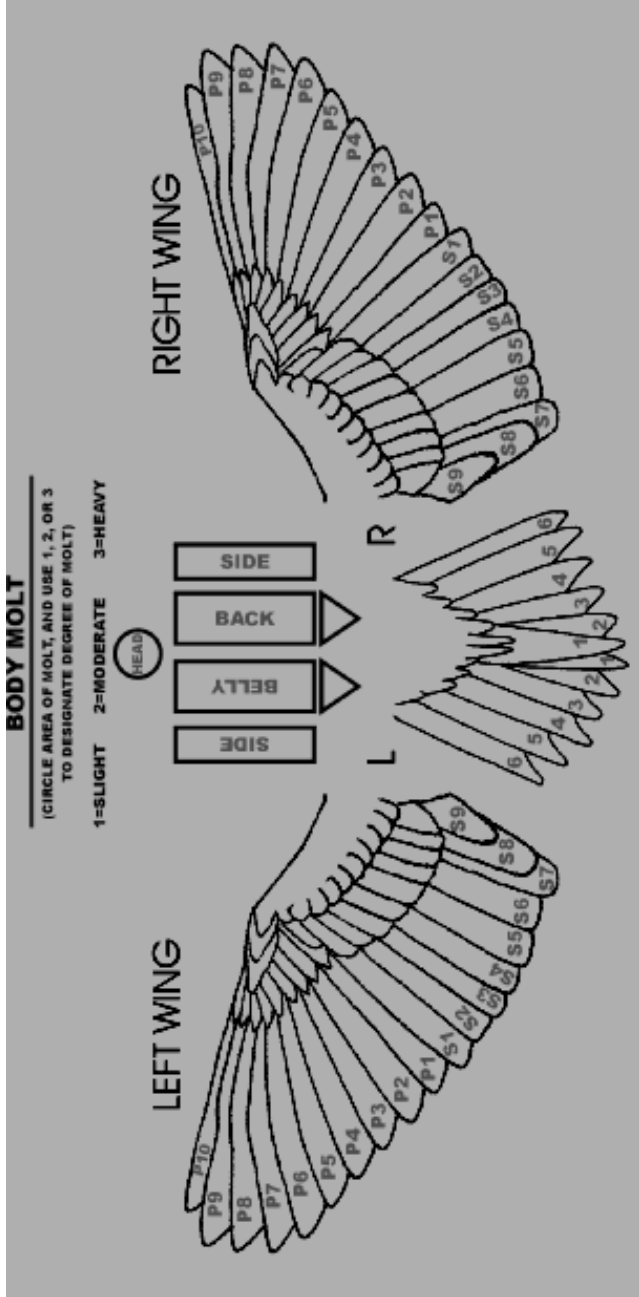
SEX: U = unknown, F = female, M = male

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

AGE: AHY = after hatch year; SY = second year; L = nestling banded in nest; HY = hatch year/young of the year

FAT: 0 = no fat; 1 = trace of fat in furculum, deeply concave, scattered patches, less than 5 percent filled; 2 = thin layer of fat in furculum, less than a third filled, trace of thin layer of fat in abdomen; 3 = furculum is 1/2 filled or more; small patches, not covering some areas, on abdomen; 4 = furculum more than 2/3 filled, level with clavicles, slightly rounded on abdomen



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

Date: \_\_\_\_\_

Page \_\_\_\_ of \_\_\_\_

OBS	STUDY AREA	TERR	NEST	COLOR COMBO		CONF LEVEL	ASSOC WITH A NEST?	CAPTURE?	# WFLS PRESENT	SEX	NBN (__ of __)	OBSERVATIONS AND COMMENTS: discuss observations & activities.
				LEFT LEG (Top/ Bottom)	RIGHT LEG (Top/ Bottom)							
												Service Band Number =
												Service Band Number =
												Service Band Number =
												Service Band Number =
												Service Band Number =
												Service Band Number =
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												Service Band Number =

Entered by: \_\_\_\_\_ Date entered: \_\_\_\_\_



## Willow Flycatcher Territory/Nest Record Form

Study Area: \_\_\_\_\_ Survey Site: \_\_\_\_\_ Territory/Nest no.: \_\_\_\_\_

Territory/Nest Location: \_\_\_\_\_ Nest Height: \_\_\_\_\_ m (approximate)  
 NAD: \_\_\_\_\_ Zone: \_\_\_\_\_  
 Territory UTMs: \_\_\_\_\_ Nest Substrate: \_\_\_\_\_ (e.g., TASP=tamarisk, SAGO=Goodding willow, POFR=cottonwood, SAEX = coyote willow, etc.)  
 Easting: \_\_\_\_\_ Distance to standing water or saturated soil when nest found: \_\_\_\_\_ (m)  
 Northing: \_\_\_\_\_ How was distance determined? \_\_\_\_\_  
 GPS Accuracy: \_\_\_\_\_ m Date distance to water determined: \_\_\_\_\_  
 Nest UTMs: \_\_\_\_\_ Depth of surface water at nest (please circle how wet you got when nest was found):  
 Easting: \_\_\_\_\_ dry damp muddy toes (<5cm) ankles (5-15 cm)  
 Northing: \_\_\_\_\_ calves (15-40 cm) knees (40-60 cm) thighs (60-80 cm)  
 GPS Accuracy: \_\_\_\_\_ m waist (100 cm) too deep to wade (>100 cm)

### PLEASE DO NOT FILL OUT ANYTHING BELOW

**Bird 1: Color band combination:** \_\_\_\_\_ **Band Number:** \_\_\_\_\_ **Female**

**Bird 2: Color band combination:** \_\_\_\_\_ **Band Number:** \_\_\_\_\_ **Male**

Willow Flycatcher			Willow Flycatcher			Cowbird			Cowbird		
Trans dates	<sup>B</sup> / <sub>D</sub>	(T/F)	No.	Presumed	Confirmed	Trans dates	<sup>B</sup> / <sub>D</sub>	(T/F)	No.	Complete? (T/F)	
											Eggs
											Nestlings
											Fledglings

**Outcome (Record code & describe):** \_\_\_\_\_ :

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

<p><b>Outcome codes:</b>                  UN= unknown; <b>FY</b>= fledged young, with at least one young seen leaving or in the vicinity of nest; <b>FP</b>= fledged young, as determined by parents behaving as if dependent fledgling(s) nearby; <b>FU</b>= suspected fledging of at least one young; <b>FC</b>= fledged at least one host young with cowbird parasitism; <b>FD</b>= Nest partially depredated with confirmed fledging of at least one young; <b>PO</b>= predation observed; <b>PE</b>= probable predation, nest empty and intact; <b>PD</b>= probable predation, damage to nest structure; <b>AB</b>= nest abandoned prior to egg(s) being laid; <b>DE</b>= deserted with egg(s) or young; <b>PA</b>= parasitized, host attempted to raise cowbird young. No host young were fledged from the nest; <b>WE</b>= failure due to weather; <b>AD</b>= failure, entire clutch added/infertile; <b>OT</b>= failure due to other, or unknown, causes.</p>	<b>Mayfield Success</b>		
	(WIFL) Period	# Exposure days	Success
	Egg Laying		
	Incubation		
	Nestling		
<p><b>Mayfield success codes:</b> <b>S</b>= successful; <b>D</b>= depredated; <b>U</b>= status unknown/nest occupied- fate unknown; <b>M</b>= mortality other than predation; <b>A</b>= abandoned with host egg(s) or young; <b>Z</b>= abandoned, no (zero) eggs laid.</p>			



## Brown-headed Cowbird Traps

Date: \_\_\_\_\_ Study Area: \_\_\_\_\_ Observer(s): \_\_\_\_\_

	Trap #											
	1		2		3		4		5		6	
<b>COWBIRDS</b>	M	F	J	M	F	J	M	F	J	M	F	J
Decoys previously in trap <sup>1</sup>												
Newly trapped												
Recaptures <sup>2</sup>												
Added <sup>3</sup>												
Died in trap <sup>4</sup>												
Missing <sup>5</sup>												
Escaped during trap check												
Transferred <sup>6</sup>												
Euthanized												
Total left in trap <sup>7</sup>												

### NON-TARGETS<sup>8</sup>

Trap #	Species	M	F	J	U	Band number(s)

Comments \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

<sup>1</sup> Get number of decoys from the previous data sheet. Check whether the number of wing-clipped birds in the trap matches the number that were left in there the previous day  
<sup>2</sup> If there are more wing-clipped birds in the trap than were left there on the last trap check, this probably means that a wing-clipped bird escaped on a previous day and now is back in the trap. Record these birds as recaptures  
<sup>3</sup> Indicate from where birds were obtained  
<sup>4</sup> If cowbirds appear to be missing, check the floor and corners of the trap for possible mortalities. Record any mortalities under "Died in trap"  
<sup>5</sup> If there is a discrepancy between the number of decoys previously in the trap and those currently present, and there are no dead birds, record any missing birds as such  
<sup>6</sup> Indicate where birds went  
<sup>7</sup> Total left must equal previous decoys + newly trapped + added - died - missing - escaped - transferred - euthanized!  
<sup>8</sup> Indicate number of individuals of each gender in the appropriate box







## Vertical Foliage Sampling (i.e., "Hits on the pole")

CENTER PLOT								
Height (m)	Hits/Species							
	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*: _____	OTSP2*: _____	OTSP3*: _____
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 0, < 5, or > 5 or hits per meter interval.

**\*Use same OTSP (1,2,3) as listed on main record.**

## Vertical Foliage Sampling (i.e., "Hits on the pole")

Study Area:		Survey Site:		Plot type:		ID#		Date:	
EAST									
Height (m)	Hits/Species								
	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*	OTSP2**	OTSP3**	Height (m)
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 number of decimeters with hits on pole (within 10 cm radius) per 1-m interval up to 8 m; above 8 m, estimate 0, < 5, or > 5 or hits per meter interval.

**\*Use same OTSP (1,2,3) as listed on main record.**



## Vertical Foliage Sampling (i.e., "Hits on the pole")

SOUTH										WEST						
Height (m)	Hits/Species									Height (m)	Hits/Species					
	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*	OTSP2*	OTSP3*	TASP		SAGO	SAEX	POFR	SNAG	OTSP1*	OTSP2*
1																
2																
3																
4																
5																
6																
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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 0, < 5, or > 5 or hits per meter interval.

**\*Use same OTSP (1,2,3) as listed on main record.**

### SWFL Microclimate at Life History Study Areas

**Study Area** \_\_\_\_\_ **Survey Site** \_\_\_\_\_ **LOCATION ID** \_\_\_\_\_  
(Study area) – (Location) – (Number)

<b>For NU sites, UTM coordinates of NU point:</b> E 0 _____ N _____ Accuracy _____ m
<b>UTM coordinates of actual logger:</b> E 0 _____ N _____ Accuracy _____ m
<b>Dominant habitat within 10 m:</b> Cottonwood/Willow Tamarisk Mixed Native/Exotic Other (specify: _____ )
<b>Estimated canopy cover at the logger:</b> Less than 25%      25%-75%      More than 75%

#### Temperature/Relative Humidity (T/RH)

<b>Set-up:</b> Date: _____ Time: _____ Observer(s) _____
Logger 6-digit serial number (e.g., #630863): _____ Was red LED checked at set-up? Y or N
<b>If nest site, when was nest vacated (known or estimated: MM/DD/YY)?</b>
If NOT a nest site, what is the randomization sequence used? Sequence #: _____
Column 1: _____ Column 2: _____ Column 3: _____ Column 4: _____ Column 5: _____
Logger location: Tree Shrub Est. overall height of tree or shrub? _____ m Est. height of logger _____ m
<b>Take-down:</b> Date: _____ Time: _____ Crew member(s): _____
Logger 6-digit serial number (do NOT copy from above; read the number on the logger!): _____
Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)? No Yes If yes, explain:

#### Soil Moisture (SM)

<b>For NS/NU points, initial set-up when nest found with eggs:</b> Date: _____ Observer: _____								
Dist. to water/saturated soil: _____ m How measured? _____ H <sub>2</sub> O UTM: E _____ N _____								
<b>Logger deployment:</b> Date: _____ Time: _____ Observer(s) _____								
6-digit sensor serial number (on cord of probe): _____ logger number (on back of HH2) : _____								
Soil sample taken? Yes No If no, explain:								
<b>Distance to saturated/inundated soil:</b> _____ m <b>How distance was measured:</b> _____								
<b>SM readings:</b> Plot center _____ % _____ mV								
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;">N: 1.0 m _____ % _____ mV</td> <td style="border-right: 1px solid black; padding: 2px;">2.0 m _____ % _____ mV</td> <td style="border-right: 1px solid black; padding: 2px;">S: 1.0 m _____ % _____ mV</td> <td style="padding: 2px;">2.0 m _____ % _____ mV</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">E: 1.0 m _____ % _____ mV</td> <td style="border-right: 1px solid black; padding: 2px;">2.0 m _____ % _____ mV</td> <td style="border-right: 1px solid black; padding: 2px;">W: 1.0 m _____ % _____ mV</td> <td style="padding: 2px;">2.0 m _____ % _____ mV</td> </tr> </table>	N: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	S: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	E: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	W: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
N: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	S: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV					
E: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	W: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV					
<b>Comments:</b>								
<b>Take-down:</b> Date: _____ Time: _____ Observer(s): _____								
6-digit sensor serial number (on cord of probe): _____ logger number (on back of HH2) : _____								
<b>Distance to saturated/inundated soil:</b> _____ m <b>How distance was measured:</b> _____								
<b>SM readings:</b> Plot center _____ % _____ mV								
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;">N: 1.0 m _____ % _____ mV</td> <td style="border-right: 1px solid black; padding: 2px;">2.0 m _____ % _____ mV</td> <td style="border-right: 1px solid black; padding: 2px;">S: 1.0 m _____ % _____ mV</td> <td style="padding: 2px;">2.0 m _____ % _____ mV</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">E: 1.0 m _____ % _____ mV</td> <td style="border-right: 1px solid black; padding: 2px;">2.0 m _____ % _____ mV</td> <td style="border-right: 1px solid black; padding: 2px;">W: 1.0 m _____ % _____ mV</td> <td style="padding: 2px;">2.0 m _____ % _____ mV</td> </tr> </table>	N: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	S: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	E: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	W: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
N: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	S: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV					
E: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	W: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV					
<b>Comments:</b>								

**Location identifier format:** Study area code (MD, MQ, MM, PA, TM) – Location code (NS, WT, NU, SVR, SVD) – Nest number (for NS, WT, NU locations) or Seasonal Variation number; e.g., TM-NU-9A or MM-SVD-2

## SWFL Microclimate Soil Moisture Supplement

Study Area \_\_\_\_\_ Survey Site \_\_\_\_\_ LOCATION ID \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_  
(Study area) – (Location) – (Number)

UTM coordinates: E 0 \_\_\_\_\_ N \_\_\_\_\_

Date: _____ Time: _____ Observer(s): _____			
6-digit sensor serial number (on cord of probe): _____ logger number (on back of HH2) : _____			
<b>Distance to saturated/inundated soil:</b> _____ m <b>How distance was measured:</b> _____			
<b>SM readings:</b> Plot center _____ % _____ mV			
N: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	S: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
E: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	W: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
<b>Comments:</b>			
Date: _____ Time: _____ Observer(s): _____			
6-digit sensor serial number (on cord of probe): _____ logger number (on back of HH2) : _____			
<b>Distance to saturated/inundated soil:</b> _____ m <b>How distance was measured:</b> _____			
<b>SM readings:</b> Plot center _____ % _____ mV			
N: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	S: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
E: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	W: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
<b>Comments:</b>			
Date: _____ Time: _____ Observer(s): _____			
6-digit sensor serial number (on cord of probe): _____ logger number (on back of HH2) : _____			
<b>Distance to saturated/inundated soil:</b> _____ m <b>How distance was measured:</b> _____			
<b>SM readings:</b> Plot center _____ % _____ mV			
N: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	S: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
E: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	W: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
<b>Comments:</b>			
Date: _____ Time: _____ Observer(s): _____			
6-digit sensor serial number (on cord of probe): _____ logger number (on back of HH2) : _____			
<b>Distance to saturated/inundated soil:</b> _____ m <b>How distance was measured:</b> _____			
<b>SM readings:</b> Plot center _____ % _____ mV			
N: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	S: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
E: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	W: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
<b>Comments:</b>			
Date: _____ Time: _____ Observer(s): _____			
6-digit sensor serial number (on cord of probe): _____ logger number (on back of HH2) : _____			
<b>Distance to saturated/inundated soil:</b> _____ m <b>How distance was measured:</b> _____			
<b>SM readings:</b> Plot center _____ % _____ mV			
N: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	S: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
E: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV	W: 1.0 m _____ % _____ mV	2.0 m _____ % _____ mV
<b>Comments:</b>			

## Habitat Monitoring Sites – T/RH Downloads

Study Area \_\_\_\_\_ Survey Site \_\_\_\_\_ LOCATION ID \_\_\_\_\_  
(Study area) – (Survey site) – (Number)

UTM coordinates: E 0 \_\_\_\_\_ N \_\_\_\_\_ Accuracy: \_\_\_\_\_ m

**Dominant habitat within 10 m:** Cottonwood/Willow Tamarisk Mixed Native/Exotic Other (specify: \_\_\_\_\_ )

**Estimated canopy cover at the logger:** Less than 25% 25%-75% More than 75%

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Observer(s): \_\_\_\_\_ Was red LED blinking at download? Y or N

Logger 6-digit serial number (e.g., #630863): \_\_\_\_\_ Did you check red LED after (re)launch? Y or N

Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)?  
No Yes If yes, explain:

Was logger downloaded on-site? Y or N If N, date and time of download: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Did you replace the existing logger? Y or N If Y, serial number of new logger: \_\_\_\_\_

Comments:

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Observer(s): \_\_\_\_\_ Was red LED blinking at download? Y or N

Logger 6-digit serial number (e.g., #630863): \_\_\_\_\_ Did you check red LED after (re)launch? Y or N

Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)?  
No Yes If yes, explain:

Was logger downloaded on-site? Y or N If N, date and time of download: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Did you replace the existing logger? Y or N If Y, serial number of new logger: \_\_\_\_\_

Comments:

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Observer(s): \_\_\_\_\_ Was red LED blinking at download? Y or N

Logger 6-digit serial number (e.g., #630863): \_\_\_\_\_ Did you check red LED after (re)launch? Y or N

Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)?  
No Yes If yes, explain:

Was logger downloaded on-site? Y or N If N, date and time of download: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Did you replace the existing logger? Y or N If Y, serial number of new logger: \_\_\_\_\_

Comments:

**Location ID codes:** Study area codes – Topock Marsh = TM, Topock Gorge = TG, Ehrenberg = EH, Cibola = CI, Imperial = IM, Mittry = MI, Yuma = YU. Survey site codes – In Between = IB, Blankenship = BK, Havasu NE = HV, Ehrenberg = EH, Three Fingers Lake = TF, Cibola Lake = CL, Walker Lake = WL, Paradise = PV, Hoge Ranch = HR, Rattlesnake = RS, Clear Lake = LK, Ferguson Lake = FL, Ferguson Wash = FW, Great Blue Heron = GB, Mittry West = MW, Gila Confluence North = GC

