

APPENDIX A

Field Data Forms

SWFL SURVEY AND DETECTION FORM

Study Area _____ Survey Site _____ Date _____

Observer(s) _____ UTM NAD and Zone _____

Start Time _____ UTM E 0 _____ N _____	Stop Time _____ UTM E 0 _____ N _____
---	--

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 _____

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 _____			

Survey Summary			
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 _____			

Additional Comments _____

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 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												

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

Colorimeter sample: Yes or No (circle)

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

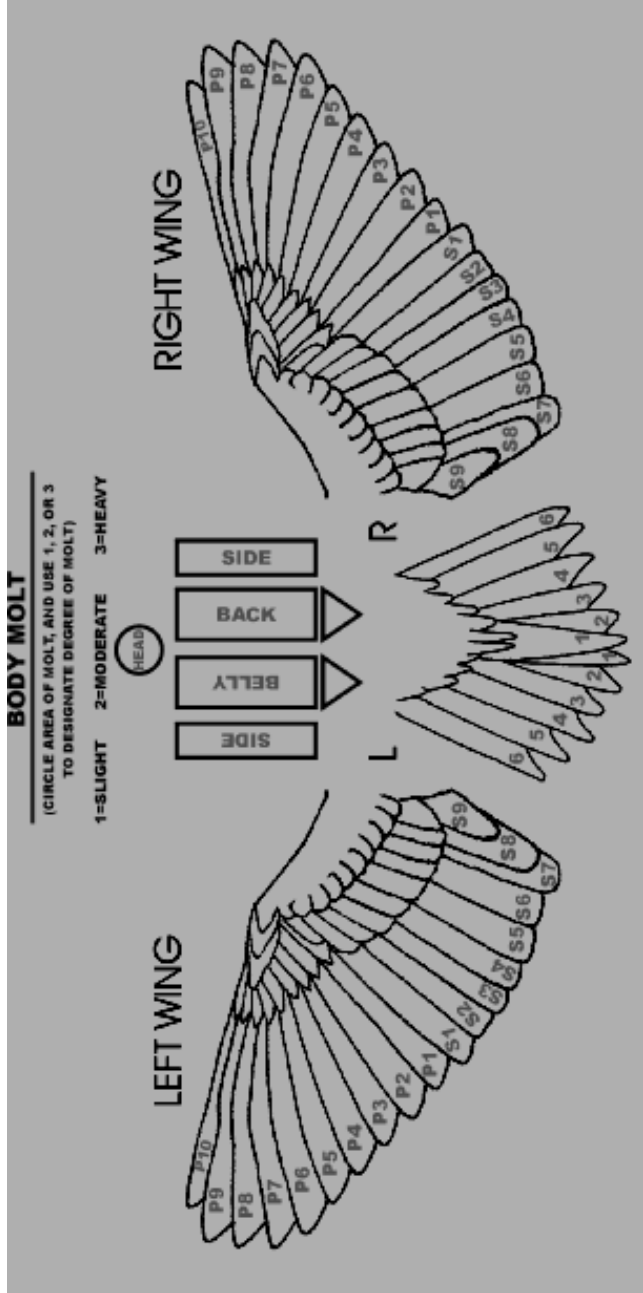
STATUS: NCP = new cap passive, NCT = new cap target, RCP = recap passive, RCT = recap target, NBN = nestling banded
 SEX: U = unknown, F = female, M = male

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 mounded on abdomen



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

Colorimetry Data Sheet

SITE: _____ DATE: _____

BANDER: _____ FED BAND NUMBER: _____

CROWN MEASUREMENTS

PAGE: _____

	L*	a*	b*
1			
2			
3			
4			
5			
6			
7			
8			
MAX			
MIN			
AVG			
SD			

BACK MEASUREMENTS

PAGE: _____

	L*	a*	b*
1			
2			
3			
4			
5			
6			
7			
8			
MAX			
MIN			
AVG			
SD			

NOTES:

OBS	STUDY AREA	TERR	NEST	COLOR COMBO			CONF LEVEL	ASSOC WITH A NEST?	CAPTURE?	# WIFLS 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 =
													Service Band Number =
													Service Band Number =
													Service Band Number =
													Service Band Number =
													Service Band Number =
													Service Band Number =
													Service Band Number =

Willow Flycatcher Territory/Nest Record Form

Study Area: _____ Survey Site: _____ Territory/Nest no.: _____

Territory/Nest Location:
NAD: _____ Zone: _____

Nest Height: _____ m (approximate)

Territory UTM's:

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

Distance from NU point to standing water or saturated soil when nest found: _____ (m)

How was distance determined? _____

Nest UTM's:

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	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; AB= nest abandoned prior to egg(s) being laid; DE= deserted with egg(s) or young; PA= parasitized, host attempted to raise cowbird young. No host young were fledged from the nest; WE= failure due to weather; AD= failure, entire clutch added/infertile; OT= failure due to other, or unknown, causes.</p>	<p style="text-align: center;">Mayfield Success</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <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>	(WIFL) Period	# Exposure days	Success	Egg Laying			Incubation			Nestling		
(WIFL) Period	# Exposure days	Success											
Egg Laying													
Incubation													
Nestling													

Brown-headed Cowbird Traps

Observer(s): _____ Start Time: _____ End Time: _____ Date: _____

Study Area: _____

	Trap #														
	M	F	J	M	F	J	M	F	J	M	F	J	M	F	J
COWBIRDS															
Decoys previously in trap ¹															
Newly trapped															
Added ²															
Died in trap															
Missing															
Escaped during trap check															
Transferred ³															
Euthanized															
Total left in trap ⁴															
NON-TARGET SPECIES⁵															

Comments _____

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:								
NORTH					EAST											
Height (m)	Hits/Species						Height (m)	Hits/Species								
	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*		OTSP2*	OTSP3*	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*	OTSP2*
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						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.**

SWFL Microclimate at Life History Study Areas

Study Area _____ **Survey Site** _____ **LOCATION ID** _____ - _____ - _____
 (Study area) – (Location) – (Number)

UTM coordinates: Easting (x) 0 _____ **Northing (y)** _____ **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%

Temperature/Relative Humidity (T/RH)

Set-up: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s) _____

Logger 6-digit serial number (e.g., #630863): _____ Was red LED checked at set-up? Y or N

If nest site, when was nest vacated (known or estimated; MM/DD/YY)? _____

Logger location: Tree Shrub Est. overall height of tree or shrub? _____ m Est. height of logger _____ m

Take-down: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____

Logger 6-digit serial number (e.g., #630863): _____

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)

Set-up: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s) _____

6-digit sensor serial number: _____ logger number: _____

Soil sample taken (at set-up only)? Yes No If no, explain: _____

Distance to saturated/inundated soil: _____ m **How distance was measured:** _____

SM readings: 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
----------------------------------	------------------------	----------------------------------	------------------------

Comments:

Take-down: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____

6-digit sensor serial number: _____ logger number: _____

Distance to saturated/inundated soil: _____ m **How distance was measured:** _____

SM readings: 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
----------------------------------	------------------------	----------------------------------	------------------------

Comments:

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)

Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____
 6-digit sensor serial number: _____ logger number: _____
Distance to saturated/inundated soil: _____ m **How distance was measured:** _____
SM readings: 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
Comments:

Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____
 6-digit sensor serial number: _____ logger number: _____
Distance to saturated/inundated soil: _____ m **How distance was measured:** _____
SM readings: 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
Comments:

Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____
 6-digit sensor serial number: _____ logger number: _____
Distance to saturated/inundated soil: _____ m **How distance was measured:** _____
SM readings: 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
Comments:

Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____
 6-digit sensor serial number: _____ logger number: _____
Distance to saturated/inundated soil: _____ m **How distance was measured:** _____
SM readings: 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
Comments:

Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____
 6-digit sensor serial number: _____ logger number: _____
Distance to saturated/inundated soil: _____ m **How distance was measured:** _____
SM readings: 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
Comments:

Microclimate at Sites South of Topock – T/RH Downloads

Study Area _____ **Survey Site** _____ **LOCATION ID** _____ - _____ - _____
 (Study area) – (Survey site) – (Number)

<p>Download: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____</p> <p>Logger 6-digit serial number (e.g., #630863): _____ Did you check red LED? Y or N</p> <p>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:</p> <p>Comments:</p>
<p>Download: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____</p> <p>Logger 6-digit serial number (e.g., #630863): _____ Did you check red LED? Y or N</p> <p>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:</p> <p>Comments:</p>
<p>Download: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____</p> <p>Logger 6-digit serial number (e.g., #630863): _____ Did you check red LED? Y or N</p> <p>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:</p> <p>Comments:</p>
<p>Download: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____</p> <p>Logger 6-digit serial number (e.g., #630863): _____ Did you check red LED? Y or N</p> <p>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:</p> <p>Comments:</p>
<p>Download: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____</p> <p>Logger 6-digit serial number (e.g., #630863): _____ Did you check red LED? Y or N</p> <p>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:</p> <p>Comments:</p>

Location ID codes: Study area codes – Topock Gorge = TG, Ehrenberg = EH, Cibola = CI, Imperial = IM, Mittry = MI, Yuma = YU.
 Survey site codes – Blankenship = BK, Havasu NE = HV, 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,
 Martinez Lake = ML, Mittry West = MW, Gila Confluence North = GC

