

NRR-PMDAPEm Resource

From: Steve Weege [steveweege@gmail.com]
Sent: Sunday, July 06, 2014 1:04 PM
To: Meghan Koperski
Cc: Audra Livergood - NOAA Federal; Ed Hollowell; Jodie Gless; John Jones; Ken Frehafer; Marine Turtle Permit; Michael Bresette; EndangeredSpecies Resource; SCO@dep.state.fl.us; Shelley Norton; Vince Munne; Cody Mott; Jeff Guertin; Ryan Welsh; Serge Aucoin
Subject: June 2014 FPL Marine Turtle Removal Monthly Report
Attachments: June 2014 Marine Turtle Captures.rtf; Monthly Report Notes 2014.xls; FPL St. Lucie Capture Summary 2014.xls; Power Plant Causal Turtles.xlsx

Mrs. Meghan Koperski
Tequesta Field Laboratory
19100 SE Federal Highway
Tequesta, FL 33469

**Subject: Marine Turtle Removal Monthly Summary
June 2014**

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for June 2014. This month, we captured thirty-six (36) *Caretta caretta* and four (4) *Chelonia mydas* in the intake canal of the St. Lucie power plant on Hutchinson Island. There were no mortalities and only one sea turtle was sent for rehabilitation in the month of June. As with all sea turtle strandings at the Saint Lucie Plant (alive or dead), the Florida Fish and Wildlife Conservation Commission (FWC) was consulted and a stranding form was filed with the state through the Sea Turtle Stranding and Salvage Network. The stranding incident in June was not considered causal to power plant operations.

There was one noncausal stranding recorded at the Saint Lucie Power Plant during the month of June. A subadult loggerhead was hand captured that had a healing boat strike wound to its posterior carapace. The prop wound was 21 cm long by 9 cm wide and the posterior scutes were flexible to the touch. Although the animal was underweight, it was still active. After consultation with FWC, the regional stranding coordinator transported this turtle to the Brevard Zoo for rehabilitation.

Throughout the month, the 5-inch barrier net experienced severe loads of algae and jellyfish that entered into the intake canal system. During the last three weeks of the month, repeated severe algae intrusions threatened the integrity of the temporary 5-inch barrier net. Underwater Engineering Services, Inc. was called upon to clean and inspect the temporary 5-inch barrier net on numerous occasions. In addition, Inwater Research Group biologists helped to mitigate the potential impact of the algae event by performing around-the-clock monitoring during and after periods of heavy debris intrusion. Through these combined efforts, the temporary barrier net was maintained above water for the duration of the severe algae event. Overall, the temporary barrier net has performed as designed and no turtles have been observed beyond the 5-inch net. Construction of a permanent 5-inch barrier net is currently underway and completion has been projected for late 2014.

The tag numbers and morphometric data for all turtles captured during the month have been included with this report (see attachments/addendums). Also included is a spreadsheet for all captures, mortalities, injuries, and causal events delineated by species and by month for the year 2014. In addition, this spreadsheet also tracks fresh scrapes incurred on captured turtles for the current month, as well as the entire year. An additional Excel spreadsheet tracks all causal injuries and mortalities incurred by sea turtles at the St. Lucie Plant since 2002.

Please feel free to contact me with any questions.

Sincerely,

Steve

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June 2014 Marine Turtle Captures.rtf		25028
Monthly Report Notes 2014.xls	137280	
FPL St. Lucie Capture Summary 2014.xls		177728
Power Plant Causal Turtles.xlsx		22049

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**MARINE TURTLE REMOVALS
ST. LUCIE PLANT INTAKE CANAL
JUNE 2014**

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
6/2/2014	<i>Caretta caretta</i>	1	EEP730/EEP731	85.2	85.5	90.9	80.1	64.1	65.3	75.7	South net
6/3/2014	<i>Caretta caretta</i>	2	EEA388/EEA389	61.2	61.6	68.0	62.4	49.9	49.6	34.3	North net
6/5/2014	<i>Caretta caretta</i>	3	EEP732/EEP733	84.9	86.4	92.5	83.7	69.1	64.8	94.6	South net
6/6/2014	<i>Caretta caretta</i>		EEP734/EEP735	65.1	66.5	70.3	67.6	54.8	51.4	39.8	North net
6/6/2014	<i>Caretta caretta</i>	4	EEP736/EEP737	85.8	86.0	91.6	80.1	65.1	67.1	91.8	North net
6/7/2014	<i>Caretta caretta</i>	5	EEP738/EEP739	93.1	94.4	100.9	70.7	89.7	74.0		Hand capture
6/7/2014	<i>Caretta caretta</i>	6	EEP740/EEP741	81.6	82.8	85.9	80.6	64.8	64.1		Hand capture
6/7/2014	<i>Caretta caretta</i>	7	EEP742/EEP743	91.7	93.6	100.3	91.2	72.4	68.9	94.6	Hand capture
6/7/2014	<i>Caretta caretta</i>		EEP744/EEP745	62.7	63.9	67.2	62.0	51.6	50.0	36.6	Hand capture
6/7/2014	<i>Caretta caretta</i>	8	EEP746/EEP747	92.4	94.1	99.9	88.0	72.2	72.2	107.9	Hand capture
6/7/2014	<i>Caretta caretta</i>		EEP748/EEP749	65.9	67.4	72.2	70.0	58.5	53.5	48.4	Hand capture
6/9/2014	<i>Caretta caretta</i>		EEP750/EEP751	59.4	61.4	63.8	66.0	53.6	49.0	34.8	Hand capture
6/10/2014	<i>Caretta caretta</i>		EEP752/EEP753	65.0	66.4	72.3	71.7	58.3	51.1	41.8	Hand capture
6/12/2014	<i>Caretta caretta</i>	9	EEP754/EEP755	54.7	56.2	59.5	58.1	47.9	44.4		Hand capture
6/14/2014	<i>Caretta caretta</i>		EEP756/EEP757	59.1	60.6	63.0	60.0	50.8	48.2	29.3	Hand capture

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
6/15/2014	<i>Caretta caretta</i>	10	EEP758/EEP759	96.7	97.8	105.2	93.2	69.6	75.7	136.8	South net
6/16/2014	<i>Caretta caretta</i>	11	EEP760/EEP761	91.1	92.5	97.9	87.8	70.6	69.5	104.5	South net
6/16/2014	<i>Caretta caretta</i>	12	RCW140616-01	60.4	61.4	64.2	60.8	51.3	49.4	30.9	Hand capture
6/17/2014	<i>Caretta caretta</i>		EEP762/EEP763	78.0	80.0	83.0	76.1	60.8	60.5	67.8	South net
6/17/2014	<i>Caretta caretta</i>		EEP764/EEP765	59.0	59.9	64.5	65.8	54.8	46.0	32.5	North net
6/19/2014	<i>Caretta caretta</i>	13	EEP766/EEP767	85.7	87.1	93.2	84.9	65.4	64.2	91.6	South net
6/19/2014	<i>Caretta caretta</i>		EEP768/EEP769	82.3	83.7	90.9	80.4	64.8	68.4	89.6	South net
6/20/2014	<i>Caretta caretta</i>		EEP770/EEP772	83.8	84.5	90.2	82.6	62.2	64.0	84.6	North net
6/21/2014	<i>Caretta caretta</i>	14	EEP773/EEP774	85.5	86.5	93.4	85.0	65.2	64.9	93.5	Hand capture
6/21/2014	<i>Caretta caretta</i>		EEP775/EEP776	81.6	82.3	87.3	80.0	63.4	63.7	83.1	Hand capture
6/21/2014	<i>Chelonia mydas</i>		EEP777/EEP778	68.3	68.5	73.0	68.6	55.1	56.5	44.5	Hand capture
6/21/2014	<i>Caretta caretta</i>		EEP779/EEP780	61.0	61.7	67.1	64.5	53.9	48.2	33.9	Hand capture
6/21/2014	<i>Caretta caretta</i>		EEP781/EEP782	64.9	66.3	68.9	67.2	51.9	51.0	40.0	Hand capture
6/21/2014	<i>Caretta caretta</i>	15	EEP783/EEP784	89.4	91.7	96.5	85.7	70.9	69.7	105.1	Hand capture
6/21/2014	<i>Caretta caretta</i>		EEP785/EEP786	67.2	68.1	73.2	71.2	56.9	53.1	48.3	Hand capture
6/22/2014	<i>Caretta caretta</i>	16	EEP631/EEP792	57.8	59.3	63.2	62.4	51.5	46.0	30.7	Hand capture
6/22/2014	<i>Caretta caretta</i>		EEP787/EEP788	80.1	82.9	87.2	78.3	63.4	64.6	74.7	Hand capture
6/22/2014	<i>Chelonia mydas</i>	17	EEP789	45.9	46.0	48.6	43.8	36.4	38.2	12.8	Hand capture
6/22/2014	<i>Caretta caretta</i>		EEP790/EEP791	63.0	64.6	70.1	68.3	53.5	51.1	43.2	Hand capture
6/23/2014	<i>Chelonia mydas</i>	18	EEL522/EEP795	54.2	54.4	57.3	49.4	43.9	45.4	21.3	Hand capture

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCl (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
6/23/2014	<i>Caretta caretta</i>	19	EEP793/EEP794	94.5	95.2	100.7	94.6	74.0	71.9	121.0	Hand capture
6/25/2014	<i>Caretta caretta</i>		EEP796/EEP797	65.6	66.9	70.4	71.4	56.3	51.0	42.0	Hand capture
6/25/2014	<i>Caretta caretta</i>		EEP798/EEP799	69.0	70.4	75.9	70.8	58.9	54.6	44.4	Hand capture
6/30/2014	<i>Chelonia mydas</i>	20	EEP800	55.9	56.6	59.5	53.1	45.0	46.4	23.8	South net
6/30/2014	<i>Caretta caretta</i>		LLA000/LLA001	83.2	84.0	89.7	86.3	67.0	64.6	81.7	North net

NOTES

1. Adult female. Tail length = 150 mm. Partially healed wound in lower tomium (possible hooking wound).
2. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/9/13, 11/19/13, 3/2/14 and 6/3/14. Healed shark bite in right side of carapace (arc-shaped piece missing). Turtle also missing 20% of left rear flipper (healed).
3. Adult female. Tail length = 244 mm. Moderate 6cm fresh scrape above left eye.
4. Adult female. Tail length = 223 mm.
5. Adult female. Tail length = 248 mm. Ultrasound revealed shelled eggs. Skull exposed from moderate 3cm fresh scrape to top of head. Healed prop scars in right posterior carapace. Weight not taken (scale broken).
6. PAPILLOMAS (Balazs Tumor Score = 1 {light}, Total Tumor Score = 1). One 1cm tumor on dorsal surface of neck. Sex determined from ultrasound (follicles present, but no shelled eggs). Extensive scar tissue in left axilla (possible mating scar). Scale broken (no weight taken).
7. Adult female. Tail length = 205 mm. Ultrasound revealed shelled eggs and developed follicles. Skull exposed from moderate fresh scrape to top of head (1cm in diameter). Additional deep moderate fresh scrapes on right side of carapace.
8. Adult female. Tail length = 218 mm. Ultrasound revealed shelled eggs.
9. Weight not taken (scale inoperable).
10. Adult female. Tail length = 225 mm.
11. Adult female. Tail length = 262 mm. Turtle missing 80% of left front flipper (healed).
12. REHAB (NON-CAUSAL). Stranding# RCW140616-01. Subadult loggerhead hand captured with healing boat strike wound to posterior carapace. Turtle had prop wound 21cm long x 9cm wide. Posterior scutes of carapace flexible to the touch. Turtle underweight but active. Florida Fish & Wildlife Conservation Commission transported the turtle to the Brevard Zoo for rehab.
13. Adult female. Tail length = 225 mm. Ultrasound revealed ovarian follicles. Moderate fresh scrape above right eye and in right anterior carapace.
14. Adult female. Tail length = 210 mm. Ultrasound confirmed the sex (shelled eggs found).
15. Adult female. Tail length = 226 mm. Moderate fresh scrape in anterior surface of head. Mating scar on dorsal surface of neck. Ultrasound revealed shelled eggs.
16. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/21/14 and 6/22/14. New Inconel tag #EEP792 inserted in the right front flipper.
17. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/16/10 and 6/22/14. Moderate fresh scrape in right anterior carapace (1cm x 3cm, bone exposed). New Inconel tag inserted in right front flipper.
18. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/6/08, 5/18/11, 10/11/11, 6/14/13 and 6/23/14. Moderate fresh scrape on top of head (2.5cm long, skull exposed).
19. Adult female. Tail length = 284 mm. Ultrasound revealed follicles, but no shelled eggs.
20. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/25/08, 11/4/09, 9/12/10, 9/7/11, 10/31/11, 5/30/12, 1/15/13 and 6/30/14. New Inconel tag inserted in left front flipper.

SMCL = Straight Minimum Carapace Length

SMCL = Straight Standard Carapace Length

CSCL = Curved Standard Carapace Length

CMCW = Curved Maximum Carapace Width

SMCW = Straight Maximum Carapace Width

SMPL = Straight Midline Plastron Length

	Loggerheads (<i>Caretta caretta</i>)		Green turtles (<i>Chelonia mydas</i>)		Hawksbills (<i>Eretmochelys imbricata</i>)		Leatherbacks (<i>Dermochelys coriacea</i>)		Kemp's ridley (<i>Lepidochelys kempii</i>)		Overall Totals	
	Jun-	Year to Date	Jun-	Year to Date	Jun-	Year to Date	Jun-	Year to Date	Jun-	Year to Date	Jun-	Year to Date
Captures	36	163	4	76	0	2	0	0	0	2	40	243
Causal Mortalities	0	0	0	0	0	0	0	0	0	0	0	0
Non-causal Mortalities	0	1	0	2	0	1	0	0	0	0	0	4
Causal Injuries	0	0	0	0	0	0	0	0	0	0	0	0
Sent to rehab	1	6	0	3	0	0	0	0	0	1	1	10
Fresh Scrapes	Jun-	Year to Date	Jun-	Year to Date	Jun-	Year to Date	Jun-	Year to Date	Jun-	Year to Date	Jun-	Year to Date
None	4	27	0	18	0	2	0	0	0	1	4	48
Minor	24	120	2	51	0	0	0	0	0	1	26	172
Moderate	8	16	2	7	0	0	0	0	0	0	10	23
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with mod/sev scrapes	22.2%	9.8%	50.0%	9.2%	N/A	0.0%	N/A	N/A	N/A	N/A	25.0%	9.5%

St Lucie Power Plant Causal Turtles		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	**2014	Injury / Mortality Totals by Species
Loggerhead	Total Captures	341	538	623	484	419	227	420	260	295	302	232	303	163	4,607
	Injuries	0	0	0	1	*3	0	1	1	0	0	1	1	0	5
	Mortalities	0	0	1	0	*21	0	0	0	0	1	0	0	0	2
Green	Total Captures	292	394	286	428	267	101	299	161	444	217	127	196	76	3,288
	Injuries	0	1	0	3	7	0	2	2	1	0	0	0	0	16
	Mortalities	2	1	1	1	1	1	2	0	3	1	2	2	0	17
Leatherback	Total Captures	0	4	2	0	1	1	0	1	2	0	2	2	0	15
	Injuries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mortalities	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kemp's Ridley	Total Captures	0	2	1	3	3	0	2	0	7	0	0	0	2	20
	Injuries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mortalities	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawksbill	Total Captures	3	6	2	2	2	1	4	2	3	2	1	2	2	32
	Injuries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mortalities	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Injury & Mortality Yearly Totals		2	2	2	5	32	1	5	3	5	1	3	3	0	64
Total Captures per Year		636	944	914	917	692	330	725	424	751	521	362	503	243	7,962

*The loggerhead causal injuries and mortalities in 2006 were all hatchlings.

**2014 is a partial year.