

NRR-PMDAPem Resource

From: Steve Weege <steveweege@gmail.com>
Sent: Monday, August 08, 2016 4:21 PM
To: Meghan Koperski
Cc: Ed Hollowell; Jodie Gless; John Jones; Ken Frehafer; Marine Turtle Permit; Michael Bresette; EndangeredSpecies Resource; SCO@dep.state.fl.us; Vince Munne; Cody Mott; Jeff Guertin; Ryan Welsh; debbie.spring@noaa.gov; Kristin.Eaton@fpl.com; Jonathan Gorham; Terri.Taylor@fpl.com
Subject: [External_Sender] July 2016 FPL Marine Turtle Removal Monthly Report
Attachments: July 2016 Marine Turtle Captures.pdf; Monthly Report Notes 2016.pdf; FPL St Lucie Capture Summary 2016.pdf; Power Plant Causal Turtles.pdf

Mrs. Meghan Koperski

Tequesta Field Laboratory

19100 SE Federal Highway

Tequesta, FL 33469

Subject: Marine Turtle Removal Monthly Summary

July 2016

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for July 2016. This month, we captured forty-one (41) *Caretta caretta*, four (4) *Chelonia mydas*, and one (1) *Eretmochelys imbricata* in the intake canal of the St. Lucie power plant on Hutchinson Island. There were no mortalities or sea turtles sent for rehabilitation in July.

With the exception of comb jellies (ctenophores), algae and jellyfish entrainment into the intake canal was light during the month of July. The barrier net system has performed as designed and no turtles have been observed beyond the permanent 5-inch net this month.

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 2016. 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 2003.

Please feel free to contact me with any questions.

Sincerely,

Steve

Steve Weege

Sr. Environmental Specialist

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From: Steve Weege

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Files	Size	Date & Time
MESSAGE	1615	8/8/2016 4:20:40 PM
July 2016 Marine Turtle Captures.pdf		79757
Monthly Report Notes 2016.pdf	57154	

FPL St Lucie Capture Summary 2016.pdf
Power Plant Causal Turtles.pdf

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**MARINE TURTLE REMOVALS
ST. LUCIE PLANT INTAKE CANAL
JULY 2016**

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
7/2/2016	<i>Caretta caretta</i>	1	MMA424/MMA425	91.9	93.0	100.9	94.0	69.4	73.9	113.3	South net
7/2/2016	<i>Caretta caretta</i>		MMA426/MMA427	80.8	82.2	89.4	82.3	60.9	61.5	79.6	Hand capture
7/2/2016	<i>Caretta caretta</i>		MMA428/MMA429	60.4	62.4	66.5	63.9	53.2	49.4	38.1	Hand capture
7/5/2016	<i>Caretta caretta</i>		MMA430/MMA431	80.9	82.4	88.4	80.4	63.4	61.7	76.0	Hand capture
7/5/2016	<i>Caretta caretta</i>		MMA432/MMA433	56.3	56.9	61.9	60.0	49.7	45.8	26.2	Hand capture
7/6/2016	<i>Caretta caretta</i>	2	MMA434/MMA435	86.5	87.2	92.1	84.7	70.1	65.5	80.6	Hand capture
7/6/2016	<i>Caretta caretta</i>	3	MMA436/MMA437	88.6	89.5	95.3	89.1	70.7	64.3	87.7	Hand capture
7/6/2016	<i>Caretta caretta</i>	4	MMA438/MMA440	85.3	87.5	92.8	85.2	65.7	64.1	81.8	Hand capture
7/6/2016	<i>Caretta caretta</i>	5	MMA441/MMA442	87.2	88.0	95.1	88.8	69.2	67.5	88.7	Hand capture
7/6/2016	<i>Chelonia mydas</i>	6	MMA443/MMA444	48.4	48.4	50.3	46.2	37.5	40.5	14.5	Hand capture
7/6/2016	<i>Caretta caretta</i>		MMA445/MMA446	81.7	83.4	89.5	81.3	65.8	63.7	82.2	Hand capture
7/7/2016	<i>Caretta caretta</i>	7	MMA447/MMA448	93.3	94.7	101.8	92.2	72.9	76.7	129.8	Hand capture
7/8/2016	<i>Caretta caretta</i>		MMA449/MMA450	66.1	67.6	72.3	70.9	58.1	53.7	44.7	Hand capture
7/11/2016	<i>Caretta caretta</i>	8	MMA460/MMA461	91.7	91.8	95.0	85.0	71.0	71.2	104.7	Hand capture
7/14/2016	<i>Caretta caretta</i>	9	MMA451/MMA452	87.9	90.0	96.2	85.1	66.8	67.4	80.3	Hand capture

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPLE (cm)	Weight (kg)	Method
7/14/2016	<i>Caretta caretta</i>	10	MMA453/MMA454	90.0	98.5	108.7	100.3	76.0	81.6	146.3	Hand capture
7/14/2016	<i>Caretta caretta</i>		MMA455/MMA456	82.2	83.4	90.5	81.6	63.5	62.2	74.9	Hand capture
7/15/2016	<i>Caretta caretta</i>		MMA457/MMA458	71.8	72.6	79.1	74.1	59.3	54.2	49.1	Hand capture
7/15/2016	<i>Caretta caretta</i>	11	MMA459/MMA462	85.1	86.6			62.8	66.5	78.8	Hand capture
7/16/2016	<i>Caretta caretta</i>		MMA463/MMA464	66.6	67.7	73.3	68.4	56.8	50.0	46.3	Hand capture
7/17/2016	<i>Caretta caretta</i>	12	MMA465/MMA466	85.7	87.1	93.2	82.8	65.7	67.5	88.7	South net
7/22/2016	<i>Caretta caretta</i>		MMA467/MMA468	81.9	83.1	88.3	82.0	63.9	65.0	74.6	South net
7/23/2016	<i>Caretta caretta</i>		MMA469/MMA470	62.6	64.1	68.7	66.2	54.3	50.9	38.1	South net
7/24/2016	<i>Caretta caretta</i>		MMA471/MMA472	65.4	66.6	70.1	68.8	55.7	52.1	40.8	Hand capture
7/24/2016	<i>Caretta caretta</i>	13	MMA473/MMA474	91.1	92.0	98.3	89.0	69.0	71.0	101.6	Hand capture
7/24/2016	<i>Caretta caretta</i>		MMA475/MMA476	80.8	81.9	89.5	84.8	66.0	62.9	81.5	Hand capture
7/24/2016	<i>Caretta caretta</i>		MMA477/MMA478	83.5	54.3	89.6	79.2	62.8	63.1	70.7	Hand capture
7/25/2016	<i>Caretta caretta</i>		MM481/MMA482	83.3	84.0	90.0	83.5	63.5	62.3	79.5	Hand capture
7/25/2016	<i>Caretta caretta</i>		MMA479/MMA480	59.1	60.8	64.2	60.1	49.9	48.7	30.3	Hand capture
7/25/2016	<i>Caretta caretta</i>	14	MMA483/MMA484	88.6	89.0	94.8	88.5	69.4	66.3	87.8	North net
7/26/2016	<i>Caretta caretta</i>		MMA485/MMA486	58.2	59.5	64.7	64.3	51.7	48.1	31.9	Hand capture
7/26/2016	<i>Caretta caretta</i>		MMA487/MMA488	66.1	67.2	72.2	68.4	55.2	52.0	43.9	Hand capture
7/26/2016	<i>Chelonia mydas</i>		MMA489/MMA490	84.1	84.7	91.0	85.8	70.1	70.8	85.0	Hand capture
7/27/2016	<i>Caretta caretta</i>	15	MMA492/MMA493	89.9	90.2	96.8	95.5	69.1	69.1	97.3	North net
7/27/2016	<i>Caretta caretta</i>	16	MMA494/MMA495	92.8	93.9	99.2	92.8	71.0	72.9	102.4	Hand capture

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSSL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
7/27/2016	<i>Caretta caretta</i>		MMA496/MMA497	83.7	83.9	94.6	85.9	67.4	65.1	84.6	Hand capture
7/27/2016	<i>Caretta caretta</i>	17	MMA498/MMA499	93.4	93.4	100.2	92.3	70.1	73.8	121.9	Hand capture
7/27/2016	<i>Caretta caretta</i>		MMA500/MMA501	62.1	62.7	68.3	63.1	51.6	47.9	32.5	Hand capture
7/27/2016	<i>Caretta caretta</i>		MMA502/MMA503	82.5	84.3	89.1	82.7	65.4	62.1	88.3	Hand capture
7/27/2016	<i>Eretmochelys imbricata</i>		MMA504/MMA505	52.2	55.4	60.4	50.8	39.2	41.0	18.2	Hand capture
7/28/2016	<i>Caretta caretta</i>	18	MMA506/MMA507	95.8	97.3	103.4	88.9	68.4	74.8	112.8	Hand capture
7/28/2016	<i>Caretta caretta</i>	19	MMA508/MMA509	94.7	96.4	103.2	93.2	70.8	76.0	121.8	Hand capture
7/29/2016	<i>Caretta caretta</i>		MMA510/MMA511	61.1	61.1	65.5	65.9	54.0	47.5	29.7	North net
7/30/2016	<i>Caretta caretta</i>	20	MMA512/MMA513	88.3	90.1	96.5	84.6	64.0	66.6	103.0	Hand capture
7/30/2016	<i>Chelonia mydas</i>	21	MMA514/MMA515	47.8	48.6	51.9	41.7	36.9	39.6	13.6	Hand capture
7/30/2016	<i>Chelonia mydas</i>		MMA516/MMA517	46.3	46.6	49.8	42.4	36.0	36.3	11.5	Hand capture

NOTES

1. Adult female. Tail length = 185 mm.
2. Adult female. Tail length = 205 mm. Moderate fresh scrape below left eye. Turtle missing 20% of left rear flipper (healed).
3. Adult male. Tail length = 410 mm. Soft concave plastron.
4. Adult female. Tail length = 175 mm.
5. Adult female. Tail length = 141 mm. Deep moderate fresh scrape on top of head.
6. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/16/10, 6/22/14, 8/29/14, 9/28/14, 3/2/15 and 7/6/16.
7. Adult female. Tail length = 220 mm. Large notch in trailing edge of left front flipper (possibly an old entanglement injury).
8. Adult female. Tail length = 240 mm.
9. Adult female. Tail length = 183 mm.
10. Adult female. Tail length = 230 mm. Missing 80% of left rear flipper. Carapace damage to posterior carapace - pygals missing and tail exposed. Moderate scrape over right eye.
11. Adult female. Tail length = 168 mm. No curved measurements taken. Moderate scrape in left front flipper.
12. Adult female. Tail length = 245 mm.
13. Adult female. Tail length = 237 mm. Moderate scrape on top of head.
14. Adult female. Tail length = 215 mm.
15. Adult female. Tail length = 185 mm.
16. Adult female. Tail length = 230 mm.
17. Adult female. Tail length = 262 mm. Turtle missing 40% of left front flipper.
18. Adult female. Tail length = 274 mm.
19. Adult female. Tail length = 270 mm.
20. Adult female. Tail length = 210 mm.
21. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/28/10, 1/12/13, 12/22/14 and 7/30/16. Moderate fresh scrapes in anterior carapace.

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	
	Jul-16	Year to Date	Jul-16	Year to Date	Jul-16	Year to Date	Jul-16	Year to Date	Jul-16	Year to Date	Jul-16	Year to Date
Captures	41	233	4	118	1	2	0	1	0	6	46	360
Causal Mortalities	0	0	0	0	0	0	0	0	0	0	0	0
Non-Causal Mortalities	0	0	0	8	0	0	0	0	0	0	0	8
Causal Injuries Sent to Rehab	0	10	0	5	0	1	0	0	0	2	0	18
Fresh Scrapes												
None	4	31	1	21	0	0	0	0	0	0	5	52
Minor	29	181	2	82	1	2	0	0	0	6	32	271
Moderate	8	21	1	15	0	0	0	1	0	0	9	37
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with Mod/Sev Scrapes	19.5%	9.0%	25.0%	12.7%	0.0%	0.0%	N/A	100.0%	N/A	0.0%	19.6%	10.3%

St Lucie Power Plant Causal Turtles		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	**2016	Injury / Mortality Totals by Species
Loggerhead	Total Captures	538	623	484	419	227	420	260	295	302	232	302	275	274	233	4,884
	Injuries	0	0	1	*3	0	1	1	0	0	1	1	0	0	0	5
	Mortalities	0	1	0	*21	0	0	0	1	0	0	0	0	0	0	2
Green	Total Captures	394	286	428	267	101	299	161	444	217	127	197	134	181	118	3,354
	Injuries	1	0	3	7	0	2	2	1	0	0	0	0	0	0	16
	Mortalities	1	1	1	1	1	2	0	3	1	2	2	0	4	0	19
Leatherback	Total Captures	4	2	0	1	1	0	1	2	0	2	2	0	2	1	18
	Injuries	0	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	0
Kemp's Ridley	Total Captures	2	1	3	3	0	2	0	7	0	0	0	2	7	6	33
	Injuries	0	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	0
Hawksbill	Total Captures	6	2	2	2	1	4	2	3	2	1	2	3	1	2	33
	Injuries	0	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	0
Injury & Mortality Yearly Totals		2	2	5	32	1	5	3	5	1	3	3	0	4	0	66
Total Captures per Year		944	914	917	692	330	725	424	751	521	362	503	414	465	360	8,322

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

** 2016 is a partial year.