

NRR-PMDAPEm Resource

From: Steve Weege <steveweege@gmail.com>
Sent: Monday, July 11, 2016 4:15 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
Subject: [External_Sender] June 2016 FPL Marine Turtle Removal Monthly Report
Attachments: June 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

June 2016

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for June 2016. This month, we captured thirty-four (34) *Caretta caretta* and eight (8) *Chelonia mydas* in the intake canal of the St. Lucie power plant on Hutchinson Island. There were no mortalities or sea turtles sent for rehabilitation in June.

The permanent 5-inch barrier net encountered severe loads of comb jellies and filamentous algae during the month of June. Unlike the small gelatinous comb jellies, or ctenophores, filamentous algae can interfere with the operation of the power plant by restricting access to sufficient quantities of clean cooling water. As such, Inwater Research Group biologists performed around-the-clock monitoring of the intake canal and barrier net system during the end of the month when the influx of algae was the heaviest. Overall, the barrier net has performed as designed and no turtles have been observed beyond the 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

Inwater Research Group, Inc.

4160 NE Hyline Dr.

Jensen Beach, FL 34957

sweege@inwater.org

(772) 349-7252

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Created By: steveweege@gmail.com

Recipients:

"Ed Hollowell" <Ed.Hollowell@fpl.com>
Tracking Status: None
"Jodie Gless" <Jodie_Gless@fpl.com>
Tracking Status: None
"John Jones" <John.Jones@fpl.com>
Tracking Status: None
"Ken Frehafer" <Ken_Frehafer@fpl.com>
Tracking Status: None
"Marine Turtle Permit" <MTP@myfwc.com>
Tracking Status: None
"Michael Bresette" <mbresette@inwater.org>
Tracking Status: None
"EndangeredSpecies Resource" <EndangeredSpecies.Resource@nrc.gov>
Tracking Status: None
"SCO@dep.state.fl.us" <SCO@dep.state.fl.us>
Tracking Status: None
"Vince Munne" <Vince.Munne@fpl.com>
Tracking Status: None
"Cody Mott" <cmott@inwater.org>
Tracking Status: None
"Jeff Guertin" <jguertin@gmail.com>
Tracking Status: None
"Ryan Welsh" <rwelsh@inwater.org>
Tracking Status: None
"debbie.spring@noaa.gov" <debbie.spring@noaa.gov>
Tracking Status: None
"Kristin.Eaton@fpl.com" <Kristin.Eaton@fpl.com>
Tracking Status: None
"Jonathan Gorham" <jgorham@inwater.org>
Tracking Status: None
"Meghan Koperski" <Meghan.Koperski@myfwc.com>
Tracking Status: None

Post Office: mail.gmail.com

Files	Size	Date & Time
MESSAGE	1964	7/11/2016 4:15:07 PM
June 2016 Marine Turtle Captures.pdf		77184
Monthly Report Notes 2016.pdf	55384	
FPL St Lucie Capture Summary 2016.pdf		78222
Power Plant Causal Turtles.pdf	87725	

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

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
6/1/2016	<i>Caretta caretta</i>	1	LLS549/LLS550	83.7	86.4	92.7	80.8	40.0	65.5	77.7	North net
6/2/2016	<i>Chelonia mydas</i>	2	4A591B0149	52.5	52.7	56.6	49.5	41.4	42.7	19.6	Hand capture
6/2/2016	<i>Caretta caretta</i>	3	EEL596/EEL597	98.8	100.2	109.5	94.9	72.1	74.8	146.1	Hand capture
6/2/2016	<i>Caretta caretta</i>	4	LLS551/LLS552	98.4	100.5	109.5	97.8	73.4	75.2	135.0	North net
6/2/2016	<i>Caretta caretta</i>	5	LLS553/LLS554	67.8	69.2	73.1	69.9	54.8	50.5	41.2	Hand capture
6/2/2016	<i>Caretta caretta</i>	6	LLS555/LLS556	90.5	92.8	99.1	91.1	72.9	70.4	107.1	Hand capture
6/2/2016	<i>Caretta caretta</i>		LLS557/LLS558	62.5	63.7	69.1	69.5	58.3	51.7	48.1	Hand capture
6/5/2016	<i>Caretta caretta</i>	7	LLS559/LLS560	95.8	96.5	101.5	94.9	74.3	70.5	123.8	Hand capture
6/5/2016	<i>Caretta caretta</i>	8	LLS561/LLS562	87.3	88.4	95.0	84.0	63.5	66.5	103.8	Hand capture
6/5/2016	<i>Caretta caretta</i>		LLS563/LLS564	80.9	82.2	87.7	80.2	63.5	61.9	77.6	Hand capture
6/5/2016	<i>Caretta caretta</i>		LLS565/LLS566	65.9	66.8	71.6	70.5	55.0	51.4	38.4	Hand capture
6/8/2016	<i>Caretta caretta</i>	9	LLS567/LLS568	84.8	85.4	94.0	87.1	70.4	65.8	102.9	Hand capture
6/8/2016	<i>Caretta caretta</i>	10	LLS570/LLS571	93.8	93.8	99.5	89.2	71.8	73.0	115.4	Hand capture
6/8/2016	<i>Caretta caretta</i>	11	LLS572/LLS573	95.0	95.2	102.1	94.4	70.5	72.4	122.1	South net
6/10/2016	<i>Caretta caretta</i>		LLS574/LLS575	77.6	79.6	84.1	75.2	59.7	58.0	66.6	North net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
6/12/2016	<i>Caretta caretta</i>	12	LLS577/LLS578	73.3	74.9	80.1	76.5	62.5	56.0	55.0	North net
6/13/2016	<i>Chelonia mydas</i>	13	LLA141/LLS303	49.8	50.4	53.9	46.5	38.8	41.5	17.2	Hand capture
6/13/2016	<i>Caretta caretta</i>	14	LLS579/LLS580	89.7	89.9	94.5	89.5	70.2	66.9	97.2	Hand capture
6/14/2016	<i>Caretta caretta</i>	15	LLS581/LLS582	93.5	94.9	99.0	90.5	73.7	75.9	123.5	Hand capture
6/14/2016	<i>Caretta caretta</i>		LLS583/LLS584	70.1	71.1	76.0	77.6	61.8	56.6	54.7	Hand capture
6/16/2016	<i>Chelonia mydas</i>	16	LLS445	42.8	43.1	45.7	41.5	34.1	35.0	10.0	Hand capture
6/16/2016	<i>Caretta caretta</i>	17	LLS587/LLS588	65.7	67.9	72.7	68.5	54.7	51.9	41.4	Hand capture
6/17/2016	<i>Caretta caretta</i>	18	LLS589/LLS590	88.2	90.0	96.4	88.1	67.2	70.2	110.9	Hand capture
6/21/2016	<i>Caretta caretta</i>	19	LLS591/LLS592	91.7	93.5	98.9	89.6	68.5	70.4	113.4	North net
6/22/2016	<i>Chelonia mydas</i>	20	LLS593/LLS594	89.1	89.9	94.0	93.0	72.4	73.1	101.5	North net
6/22/2016	<i>Caretta caretta</i>	21	LLS595/LLS596	86.2	87.2	91.6	84.0	65.9	66.5	87.0	North net
6/22/2016	<i>Caretta caretta</i>	22	LLS597/LLS598	85.3	86.7	92.3	85.4	66.8	65.0	88.7	North net
6/23/2016	<i>Caretta caretta</i>	23	LLS599/LLS600	94.0	94.6	103.8	97.0	74.1	73.9	109.9	North net
6/23/2016	<i>Caretta caretta</i>		MMA401/MMA402	51.8	52.5	56.9	55.9	46.5	41.1	21.2	North net
6/24/2016	<i>Chelonia mydas</i>		MMA403	28.8	29.1	30.0	25.6	23.2	24.0	2.9	Barrier net
6/25/2016	<i>Caretta caretta</i>	24	LLS421/LLS422	62.8	64.3	69.1	67.8	54.5	50.4	35.5	Hand capture
6/25/2016	<i>Caretta caretta</i>	25	MMA404/MMA405	95.3	95.9	104.6	91.1	70.2	74.4	107.1	South net
6/25/2016	<i>Caretta caretta</i>		MMA406/MMA407	82.8	83.5	90.8	80.9	63.5	64.3	82.5	Hand capture
6/26/2016	<i>Caretta caretta</i>	26	MMA408/MMA409	89.1	90.5	96.0	91.5	70.0	68.2		Hand capture
6/26/2016	<i>Caretta caretta</i>		MMA410/MMA411	81.5	81.7	87.0	82.9	63.0	63.6	80.6	Hand capture

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCl (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
6/27/2016	<i>Chelonia mydas</i>	27	LLA141/LLS303	49.7	50.6	53.6	46.3	38.5	41.5	16.8	North net
6/28/2016	<i>Caretta caretta</i>		MMA412/MMA413	72.6	73.9	80.8	78.1	57.1	56.7	61.2	South net
6/29/2016	<i>Caretta caretta</i>	28	MMA414/MMA415	83.8	86.2	89.6	79.7	66.9	64.3	79.8	North net
6/29/2016	<i>Caretta caretta</i>		MMA416/MMA417	68.8	70.3	74.1	74.8	59.1	54.3	56.0	Hand capture
6/29/2016	<i>Caretta caretta</i>		MMA418/MMA419	80.1	82.7	87.4	81.4	62.9	62.1	72.0	Hand capture
6/30/2016	<i>Chelonia mydas</i>	29	MMA420/MMA421	89.9	90.2	93.8	87.1	72.4	71.6	88.0	Hand capture
6/30/2016	<i>Chelonia mydas</i>		MMA422/MMA423	41.4	42.5	44.6	40.1	33.7	35.3	8.7	North net

NOTES

1. Adult female. Tail length = 155 mm.
2. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/29/08, 1/17/14, 5/7/14, 1/27/15, 3/1/15, 12/23/15, 1/30/16 and 6/2/16. Multiple tag scars present - no new Inconel tags applied.
3. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 6/29/13 and 6/2/16. Adult female. Tail length = 280 mm.
4. Adult female. Tail length = 260 mm. Moderate deep fresh scrapes on top of head and anterior carapace.
5. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/6/14, 3/2/15 and 6/2/16. Held for FPL Turtle Excluder Device testing (turtle #1 was kept four days).
6. Adult female. Tail length = 201 mm. TAG RETURN (6/11/16), nesting 1 mile south of Sebastien Inlet.
7. Adult male. Tail length = 415 mm.
8. Adult female. Tail length = 235 mm.
9. Adult female. Tail length = 176 mm.
10. Adult female. Tail length = 225 mm.
11. Adult female. Tail length = 250 mm.
12. Held for FPL Turtle Excluder Device testing (turtle #2 was kept four days).
13. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 2/9/10, 4/3/13, 6/5/13, 12/2/13, 9/28/14, 11/4/15, 2/25/16 and 6/13/16.
14. Adult female. Tail length = 210 mm.
15. Adult female. Tail length = 240 mm. Old healed flipper damage and mating scars on neck.
16. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/24/12, 1/30/13, 5/8/13, 6/5/13, 6/15/13, 3/8/15, 3/28/15. 4/19/16 and 6/16/16.
17. Held for FPL Turtle Excluder Device testing (turtle #3 was kept four days).
18. Adult female. Tail length = 230 mm.
19. Adult female. Tail length = 240 mm.
20. Adult male. Tail length = 328 mm.
21. Adult female. Tail length = 245 mm.
22. Adult female. Tail length = 195 mm.
23. Adult female. Tail length = 210 mm.
24. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/9/16 and 6/25/16. Carbuncle on neck.
25. Adult female. Tail length = 212 mm.
26. Adult female. Tail length = 180 mm.
27. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 2/9/10, 4/3/13, 6/5/13, 12/2/13, 9/28/14, 11/4/15, 2/25/16, 6/13/16 and 6/27/16.
28. Adult female. Tail length = 219 mm.
29. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/18/13 and 6/30/16. Adult male. Tail length = 387 mm. Soft plastron.

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>Ereimochelys imbricata</i>)		Leatherbacks (<i>Dermochelys coriacea</i>)		Kemp's ridley (<i>Lepidochelys kempii</i>)		Overall Totals	
	Jun-16	Year to Date	Jun-16	Year to Date	Jun-16	Year to Date	Jun-16	Year to Date	Jun-16	Year to Date	Jun-16	Year to Date
Captures	34	192	8	114	0	1	0	1	0	6	42	314
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	0	0	0	0	0	0	0	0	0	0	0	0
Sent to Rehab	0	10	0	5	0	1	0	0	0	2	0	18
Fresh Scrapes												
None	6	27	0	20	0	0	0	0	0	0	6	47
Minor	27	152	8	80	0	1	0	0	0	6	35	239
Moderate	1	13	0	14	0	0	0	1	0	0	1	28
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with Mod/Sev Scrapes	2.9%	6.8%	0.0%	12.3%	N/A	0.0%	N/A	100.0%	N/A	0.0%	2.4%	8.9%

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	192	4,843
	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	114	3,350
	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	1	32
	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	314	8,276

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

** 2016 is a partial year.