

NRR-PMDAPEm Resource

From: Steve Weege <steveweege@gmail.com>
Sent: Wednesday, April 06, 2016 11:29 AM
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] March 2016 FPL Marine Turtle Removal Monthly Report
Attachments: March 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

March 2016

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for March 2016. This month, we captured twenty-seven (27) *Caretta caretta*, nineteen (19) *Chelonia mydas*, and one (1) *Lepidochelys kempii* in the intake canal of the St. Lucie power plant on Hutchinson Island. Three sea turtles were sent for rehabilitation and there were two mortalities recorded during the month of March. All of the strandings this month were non-causal. The Florida Fish and Wildlife Conservation Commission (FWC) was consulted for each stranding and the appropriate form was filed with the state through the Sea Turtle Stranding and Salvage Network.

Two loggerhead and one green turtle were sent to rehabilitation facilities for non-causal injuries this month. On March 5th, a severely emaciated subadult loggerhead turtle was retrieved from the tangle nets. The turtle was lethargic and had necrotic sores on its neck and plastron. After consultation with FWC, Inwater Research Group biologists (IRG) transported the turtle partway to SeaWorld Orlando for rehabilitation. On March 31st, a second subadult loggerhead was removed from atop the primary barrier net that was in poor condition. This animal was underweight and lethargic with heavy epibiont coverage (Debilitated Loggerhead Turtle Syndrome). The turtle was transported to the Loggerhead Marinelifelife Center in Juno Beach by the FWC stranding coordinator. Lastly, on March 13th, a juvenile green turtle was proactively removed from the intake canal that had an open wound in its plastron. In addition, there was a fishing hook fragment embedded above its left eye. IRG transported the turtle to the Loggerhead Marinelifelife Center for assessment by the staff veterinarian and subsequent rehabilitation. All of the aforementioned live strandings were considered non-causal.

There were two non-causal green mortalities recorded during the month of March. On March 6th, two moderately decomposed juvenile green turtles were recovered from the primary barrier net. The first was bloated with its scutes and scales sloughing off. It was believed to have been entrained postmortem as

evidenced by postmortem scrapes on the anterior carapace. The second turtle was in a similar state except that it didn't have any scrapes, wounds or other abnormalities. Both turtles were presumed to have been entrained postmortem and were too decomposed to necropsy. FWC was consulted each time; none of the green turtle mortalities this month were considered causal.

Net inspections were also performed during the month of March. On March 23rd, UESI performed the quarterly net inspections on the barrier nets within the intake canal system (specifically, the 5-inch, 8-inch A-1-A, and 10-inch U.I.D.S. nets). In addition, trash was removed from the primary 5-inch barrier net and rocks were filled in along the base of the net to close small gaps. No holes in the netting were uncovered during the quarterly net inspections.

Throughout the month, the permanent 5-inch barrier net experienced light loads of algae and jellyfish that entered into the intake canal system. Overall, the barrier net has performed as designed and no turtles have been observed beyond the 5-inch net.

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

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Files	Size	Date & Time
MESSAGE	4183	4/6/2016 11:29:14 AM
March 2016 Marine Turtle Captures.pdf		102727
Monthly Report Notes 2016.pdf	86427	
FPL St Lucie Capture Summary 2016.pdf		127258
Power Plant Causal Turtles.pdf	91041	

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

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
3/1/2016	<i>Chelonia mydas</i>	1	LLS316/LLS317	50.6	50.7	54.2	49.8	40.2	42.9	16.3	South net
3/2/2016	<i>Chelonia mydas</i>		LLS319/LLS320	30.7	31.2	32.8	27.3	25.0	24.6	3.2	Dip net
3/2/2016	<i>Chelonia mydas</i>		LLS321/LLS322	32.1	32.8	34.8	29.6	26.3	27.0	4.2	South net
3/2/2016	<i>Chelonia mydas</i>	2	LLS324	38.5	39.1	42.2	37.1	31.8	32.1	8.0	South net
3/3/2016	<i>Lepidochelys kempii</i>	3	LLS325/LLS326	55.2	55.4	58.3	68.0	59.6	43.3	26.3	South net
3/3/2016	<i>Caretta caretta</i>		LLS327/LLS328	69.7	71.1	75.6	72.9	61.2	56.2	48.0	North net
3/3/2016	<i>Chelonia mydas</i>		LLS329/LLS330	59.8	60.5	64.7	52.8	45.8	48.8	24.6	South net
3/4/2016	<i>Caretta caretta</i>		LLS331/LLS332	69.6	70.7	75.4	73.3	59.1	53.6	49.4	South net
3/5/2016	<i>Chelonia mydas</i>	4	LLS333	43.7	44.0	46.4	42.4	36.7	36.0	11.0	North net
3/5/2016	<i>Caretta caretta</i>		LLS334/LLS335	68.3	69.5	74.3	70.0	58.9	55.8	47.6	South net
3/5/2016	<i>Caretta caretta</i>	5	STW160305-01	63.5	65.3	69.4	64.3	51.0	46.9	27.0	South net
3/6/2016	<i>Chelonia mydas</i>	6	STW160306-01	27.7	28.4	31.0	26.3	23.4	23.7	3.2	Barrier net
3/6/2016	<i>Chelonia mydas</i>	7	STW160306-02	27.8	28.3	31.1	26.6	21.6	22.7	2.6	Barrier net
3/8/2016	<i>Chelonia mydas</i>	8	LLP238	47.4	47.5	49.0	43.4	36.9	39.5	12.0	Dip net
3/8/2016	<i>Caretta caretta</i>		LLS336/LLS337	56.2	57.2	61.8	56.8	48.6	43.1	28.1	North net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
3/8/2016	<i>Caretta caretta</i>		LLS338/LLS339	69.2	70.4	75.4	72.6	57.2	54.5	48.7	North net
3/9/2016	<i>Caretta caretta</i>		LLS340/LLS341	64.0	65.5	70.3	71.3	58.1	50.7	43.5	North net
3/9/2016	<i>Caretta caretta</i>		LLS343/LLS344	74.2	75.9	79.5	76.7	60.7	58.9	60.2	South net
3/10/2016	<i>Chelonia mydas</i>	9	LLS345/LLS346	44.1	45.0	47.3	38.3	34.7	35.4	9.8	South net
3/10/2016	<i>Chelonia mydas</i>	10	LLS347/LLS348	48.4	48.6	51.2	44.5	38.9	38.9	14.5	North net
3/11/2016	<i>Chelonia mydas</i>		LLS349/LLS350	44.6	44.7	47.8	40.3	35.3	34.8	11.2	South net
3/11/2016	<i>Chelonia mydas</i>	11	LLS351/LLS352	41.2	41.6	44.5	38.7	34.3	32.8	7.9	North net
3/11/2016	<i>Chelonia mydas</i>		LLS353/LLS355	40.8	41.5	44.5	36.6	31.7	33.7	8.4	North net
3/11/2016	<i>Caretta caretta</i>		LLS356/LLS357	70.3	71.1	76.1	73.0	59.9	55.6	54.9	North net
3/12/2016	<i>Caretta caretta</i>		LLS358/LLS359	71.5	73.0	77.1	73.1	59.3	54.7	47.4	North net
3/12/2016	<i>Caretta caretta</i>		LLS360/LLS361	62.0	63.4	68.3	68.8	56.7	49.7	38.9	North net
3/12/2016	<i>Chelonia mydas</i>		LLS362	27.1	27.6	28.7	24.5	22.5	22.4	2.5	Dip net
3/13/2016	<i>Chelonia mydas</i>	12	CRM160313-01	31.5	31.9	34.2	28.1	26.4	26.4	4.1	Dip net
3/14/2016	<i>Caretta caretta</i>	13	LLS363/LLS364	84.0	84.9	90.0	85.5	65.5	61.6	86.6	Hand capture
3/14/2016	<i>Caretta caretta</i>		LLS365/LLS366	70.0	71.8	77.1	69.9	56.6	55.4	47.8	Hand capture
3/14/2016	<i>Chelonia mydas</i>		LLS367/LLS368	61.1	61.7	65.9	55.4	47.7	48.4	28.7	Hand capture
3/14/2016	<i>Caretta caretta</i>		LLS369/LLS370	62.5	64.3	69.6	67.6	52.7	48.7	37.9	Hand capture
3/14/2016	<i>Caretta caretta</i>		LLS371/LLS372	55.1	56.0	61.9	61.5	49.7	43.2	25.8	Hand capture
3/14/2016	<i>Caretta caretta</i>		LLS373/LLS374	57.2	58.7	73.6	68.9	56.9	51.8	38.3	Hand capture
3/16/2016	<i>Caretta caretta</i>		LLS375/LLS376	68.0	69.2	73.7	72.7	57.9	53.5	46.8	North net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPLE (cm)	Weight (kg)	Method
3/17/2016	<i>Caretta caretta</i>		LLS377/LLS378	69.6	70.8	76.8	76.9	61.3	53.3	54.2	North net
3/19/2016	<i>Chelonia mydas</i>	14	LLS379/LLS380	45.9	46.0	48.7	42.1	35.4	36.2	11.5	North net
3/22/2016	<i>Chelonia mydas</i>	15	LLS381	39.2	39.8	43.0	38.5	32.7	32.4	8.6	North net
3/26/2016	<i>Caretta caretta</i>		LLS382/LLS383	60.5	61.5	67.1	65.2	54.1	48.3	38.3	North net
3/29/2016	<i>Caretta caretta</i>		LLS384/LLS385	64.4	66.4	71.0	66.0	54.2	49.1	36.3	North net
3/29/2016	<i>Caretta caretta</i>		LLS386/LLS387	64.0	65.4	69.0	71.0	56.6	50.8	48.6	North net
3/30/2016	<i>Caretta caretta</i>		LLS388/LLS389	69.4	70.5	74.9	72.2	61.3	57.0	55.1	North net
3/30/2016	<i>Caretta caretta</i>		LLS390/LLS391	67.3	68.7	74.6	70.1	56.7	53.5	44.3	North net
3/30/2016	<i>Caretta caretta</i>	16	LLS392/LLS393	95.0	96.5	103.0	93.3	78.2	74.1	130.5	South net
3/31/2016	<i>Caretta caretta</i>	17	LLS394/LLS395	74.1	78.3	83.5	81.0	62.8	60.0	70.5	South net
3/31/2016	<i>Caretta caretta</i>		LLS396/LLS397	61.9	63.1	67.5	68.2	52.5	47.9	34.5	North net
3/31/2016	<i>Caretta caretta</i>	18	STW160331-01	66.7	67.7	73.7	71.0	51.6	54.0	34.5	Barrier net

NOTES

1. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 2/6/06, 4/3/09, 7/28/09, 12/3/09, 2/11/10, 9/3/10, 5/18/11, 1/9/12, 10/31/12, 4/11/13, 7/29/13, 1/3/14, 7/7/14, 3/11/15, and 3/1/16.
2. PAPILOMAS (Balazs Tumor Score = 1 {light}, Total Tumor Score = 6).
3. STRANGE TAG (PIT tag in LFF). Inconel tags applied on this capture event (no tag scars present). Three large healed notches in left posterior carapace and one in right posterior carapace. Carapace somewhat deformed, bulging at the apex and slightly concave on the right side.
4. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 3/18/13, and 3/5/16. New Inconel tag inserted in left front flipper.
5. REHAB (NON-CAUSAL). Stranding# STW160305-01. Severely emaciated subadult loggerhead retrieved from the tangle nets. Turtle was lethargic and in poor condition. Skull exposed from large 3cm carbuncle on dorsal surface of head/neck. Necrotic sores along ventral side of marginals (bone visible). Turtle was transported halfway to SeaWorld Orlando by Inwater Research Group (IRG) biologists.
6. DEAD (NON-CAUSAL MORTALITY). Stranding# STW160306-01. Moderately decomposed juvenile green turtle recovered from the primary 5-inch barrier net. Bloated, scutes and scales sloughing off. Entrained postmortem as evidenced by postmortem scrapes in anterior carapace.
7. DEAD (NON-CAUSAL MORTALITY). Stranding# STW160306-02. Moderately decomposed juvenile green turtle recovered from the primary 5-inch barrier net. Bloated, scutes and scales sloughing off. No fresh scrapes. No wounds or abnormalities noted. Too decomposed to necropsy.
8. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 7/25/11, 10/21/15, 12/28/15, and 3/8/16. Slightly lethargic and covered with sediment.
9. PAPILOMAS (Balazs Tumor Score = 1 {light}, Total Tumor Score = 6). Large 2cm x 9cm notch in left posterior carapace (healed).
10. PAPILOMAS (Balazs Tumor Score = 1 {light}, Total Tumor Score = 9).
11. PAPILOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 17).
12. REHAB (NON-CAUSAL). Stranding# CRM160313-01. Piece of metal fish hook embedded above left eye. Open bleeding 5cm wound in left posterior plastron. IRG transported the turtle to the Loggerhead Marinelife Center (LMC) for assessment by the staff veterinarian and subsequent rehabilitation.
13. Adult male. Tail length = 440 mm. Sex determination based on tail length (even though SCL is not greater than 85cm).
14. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/21/11, 11/22/11, 5/18/13, 7/13/13 and 3/19/16.
15. PAPILOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 62). Only one Inconel tag inserted due to papillomas.
16. Adult female. Tail length = 210 mm.
17. Adult male. Tail length = 280 mm. Sex determination based on tail length (even though SCL is not greater than 85cm).
18. REHAB (NON-CAUSAL). Stranding# STW160331-01. Debilitated loggerhead turtle syndrome (underweight and lethargic). Moderate fresh scrape below right eye and minor healed flipper damage. The FWC stranding coordinator transported the turtle to the LMC rehab facility in Juno Beach.

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	
	Mar-16	Year to Date	Mar-16	Year to Date	Mar-16	Year to Date	Mar-16	Year to Date	Mar-16	Year to Date	Mar-16	Year to Date
Captures	27	98	19	91	0	1	0	1	1	5	47	196
Causal Mortalities	0	0	0	0	0	0	0	0	0	0	0	0
Non-Causal Mortalities	0	0	2	8	0	0	0	0	0	0	2	8
Causal Injuries	0	0	0	0	0	0	0	0	0	0	0	0
Sent to Rehab	2	7	1	5	0	1	0	0	0	2	3	15
Fresh Scrapes	Mar-16	Year to Date	Mar-16	Year to Date	Mar-16	Year to Date	Mar-16	Year to Date	Mar-16	Year to Date	Mar-16	Year to Date
None	4	12	6	19	0	0	0	0	0	0	10	31
Minor	22	78	12	61	0	1	0	0	1	5	35	145
Moderate	1	8	1	11	0	0	0	1	0	0	2	20
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with Mod/Sev Scrapes	3.7%	8.2%	5.3%	12.1%	N/A	0.0%	N/A	100.0%	0.0%	0.0%	4.3%	10.2%

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	275	98	4,750
	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	180	91	3,326
	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	5	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
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	196	8,158

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

** 2016 is a partial year.