

NRR-PMDAPEm Resource

From: Steve Weege <steveeweeg@gmail.com>
Sent: Wednesday, November 02, 2016 2:34 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] October 2016 FPL Marine Turtle Removal Monthly Report
Attachments: October 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 October 2016

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for October 2016. This month, we captured fourteen (14) *Caretta caretta*, sixteen (16) *Chelonia mydas* and one (1) *Eretmochelys imbricata* in the intake canal of the St. Lucie power plant on Hutchinson Island. Three sea turtles were sent for rehabilitation and there was one mortality recorded during the month of October. 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.

There were three loggerhead sea turtles that were sent for rehabilitation for non-causal injuries this month. On October 11th, an adult female loggerhead was recovered from the intake canal with an old deep wound in the anterior carapace (necrotic tissue and dead bone present). On October 13th, an emaciated and lethargic subadult loggerhead was captured with Debilitated Loggerhead Turtle Syndrome. On October 23rd, another emaciated subadult loggerhead in poor condition was recovered from the tangle nets. Each time, FWC was consulted and Inwater Research Group biologists transported the turtles to the Loggerhead Marinelife Center in Juno Beach for rehabilitation. All live strandings this month were considered non-causal.

There was one causal mortality during the month of October. On October 9th, an adult female loggerhead was hand captured immediately after entrainment into the intake canal that was extremely lethargic. It had apparent old boat strike injuries consisting of a partially healed wound on the left side of the head and an old impact wound/crack in the posterior carapace. The turtle was also missing 90% of the left front flipper and 50% of the right front flipper (both partially healed). The turtle later died en route to rehab at LMC and was subsequently transferred to FWC so that a necropsy could be performed. Originally designated as non-causal, this turtle was determined to have drowned. According to the necropsy, the cause of death was forced submergence and the causality status was changed to causal.

Throughout the month, the permanent 5-inch barrier net experienced light-to-moderate loads of jellyfish and only negligible amounts of algae. A scheduled short-term power plant outage began towards the end of

September. Consequently, flow rates in the canal system have abated considerably. In addition, baseline water levels in the intake canal have risen due to the reduced flow rates, as some of the circulation pumps were powered down for the outage. Even still, the new 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 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

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Subject: [External_Sender] October 2016 FPL Marine Turtle Removal Monthly Report
Sent Date: 11/2/2016 2:33:44 PM
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Files	Size	Date & Time
MESSAGE	3724	11/2/2016 2:33:50 PM
October 2016 Marine Turtle Captures.pdf		78033
Monthly Report Notes 2016.pdf	59629	

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

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MARINE TURTLE REMOVALS ST. LUCIE PLANT INTAKE CANAL OCTOBER 2016

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
10/3/2016	<i>Caretta caretta</i>		MMA622/MMA623	62.5	63.8	67.1	67.9	54.7	50.2	35.3	South net
10/9/2016	<i>Caretta caretta</i>	1	CRM161009-01	94.5	95.6	101.3	91.0	70.2			Hand capture
10/10/2016	<i>Chelonia mydas</i>		MMA624/MMA625	69.8	70.0	74.4	63.2	53.6	57.2	42.2	South net
10/10/2016	<i>Caretta caretta</i>		MMA626/MMA627	62.5	63.4	68.0	63.2	51.7	49.2	33.3	South net
10/11/2016	<i>Caretta caretta</i>	2	STW161011-01	88.1	89.4	92.9	87.7	73.8			South net
10/13/2016	<i>Chelonia mydas</i>		MMA628/MMA629	44.7	45.5	47.0	40.4	35.1	37.1	10.9	North net
10/13/2016	<i>Caretta caretta</i>	3	STW161013-01	60.9	61.7	65.5	63.7	53.5	49.2	28.6	South net
10/14/2016	<i>Caretta caretta</i>		MMA630/MMA631	61.6	63.0	66.5	64.1	52.7	49.0	33.9	South net
10/14/2016	<i>Chelonia mydas</i>		MMA632	27.2	27.6	28.1	23.6	22.2	23.4	2.7	North net
10/14/2016	<i>Chelonia mydas</i>		MMA633/MMA634	45.9	46.5	48.1	41.5	36.7	37.7	11.6	South net
10/15/2016	<i>Chelonia mydas</i>		MMA635/MMA636	42.8	42.9	45.1	39.3	33.4	33.1	10.2	South net
10/15/2016	<i>Chelonia mydas</i>		MMA637/MMA638	49.7	49.8	52.5	45.5	38.3	40.2	15.5	South net
10/15/2016	<i>Caretta caretta</i>		MMA639/MMA640	60.4	61.5	64.8	61.9	51.2	46.8	26.7	North net
10/16/2016	<i>Chelonia mydas</i>		982000364968109	23.5	23.6	24.2	20.6	18.9	19.1	1.5	Dip net
10/16/2016	<i>Caretta caretta</i>		MMA641/MMA642	80.3	82.0	87.9	82.8	69.0	63.4	74.1	South net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
10/17/2016	<i>Chelonia mydas</i>		MMA643/MMA644	30.2	31.0	31.9	29.6	26.9	25.2	4.0	North net
10/17/2016	<i>Caretta caretta</i>		MMA645/MMA646	66.2	67.6	71.5	68.1	54.9	51.3	41.8	South net
10/19/2016	<i>Eretmochelys imbricata</i>		MMA647/MMA648	48.3	51.3	54.0	45.5	37.3	38.8	14.6	South net
10/19/2016	<i>Caretta caretta</i>		MMA649/MMA650	59.5	61.2	64.9	64.3	52.8	47.8	36.0	North net
10/21/2016	<i>Chelonia mydas</i>		MMA651/MMA652	51.5	52.0	54.0	47.5	40.2	43.5	16.6	North net
10/22/2016	<i>Chelonia mydas</i>		982000365093638	29.1	29.3	30.3	24.3	22.6	23.8	2.9	South net
10/22/2016	<i>Chelonia mydas</i>		MMA653/MMA654	45.0	45.5	47.5	42.0	36.9	37.7	10.9	North net
10/22/2016	<i>Chelonia mydas</i>		MMA655/MMA656	50.6	51.4	53.6	49.2	40.9	42.2	17.0	South net
10/23/2016	<i>Caretta caretta</i>	4	CRM161023-01	61.7	62.3	66.6	64.3	52.6	47.5	29.3	North net
10/23/2016	<i>Chelonia mydas</i>		MMA657/MMA658	40.0	40.4	41.8	35.0	31.3	32.4	7.0	North net
10/23/2016	<i>Chelonia mydas</i>		MMA659/MMA660	46.9	46.9	48.5	41.6	36.1	37.7	11.8	South net
10/23/2016	<i>Chelonia mydas</i>		MMA661/MMA662	68.5	69.4	73.5	63.9	52.6	55.8	39.1	South net
10/25/2016	<i>Caretta caretta</i>	5	LLP245/MMA665	59.1	59.8	62.5	63.3	50.0	44.5	27.8	North net
10/25/2016	<i>Caretta caretta</i>		MMA663/MMA664	65.5	66.4	71.4	67.5	57.0	50.2	41.7	South net
10/28/2016	<i>Caretta caretta</i>		MMA666/MMA667	59.7	61.6	69.3	70.2	55.0	50.6	38.9	North net
10/30/2016	<i>Chelonia mydas</i>	6	MMA668/MMA669	56.3	56.5	59.0	47.5	38.7	45.8	20.7	South net

NOTES

1. Adult female. REHAB (CAUSAL MORTALITY). Stranding# CRM161009-01. Adult female loggerhead with old boat strike injuries. Partially healed wound on left side of head and old impact wound/crack in the left posterior carapace. Turtle missing 90% of left front flipper and 50% of right front flipper (both partially healed). Turtle was very lethargic. Ventral measurements were not taken due to the condition of the animal. The turtle later died en route to rehab at Loggerhead Marinelife Center (LMC). Later transferred to the Florida Fish & Wildlife Conservation Commission (FWC) and a necropsy was performed. Originally designated as non-causal, this turtle was determined to have drowned. According to the necropsy the cause of death was forced submergence and the causality status was changed.
2. Adult female. REHAB (NON-CAUSAL). Stranding# STW161011-01. Adult female loggerhead with old 5cm x 14cm wound in left anterior carapace (deep with necrotic tissue and dead bone). No ventral measurements or weight due to injuries. After consultation with FWC, Inwater Research Group biologists transported the turtle to the Loggerhead Marinelife Center in Juno Beach for rehab.
3. REHAB (NON-CAUSAL). Stranding# STW161013-01. Emaciated and lethargic subadult loggerhead. After consultation with FWC, Inwater Research Group biologists transported the turtle to LMC for rehab. Update 10/20/16: "Reilly" is chronically debilitated, anemic and slightly hypoglycemic; Antibiotics, iron supplementation, parenteral nutrition, and fluid treatments have been initiated.
4. REHAB (NON-CAUSAL). Stranding# CRM161023-01. Emaciated subadult loggerhead in poor condition recovered from the tangle nets. Heavy epibiont load; Debilitated Loggerhead Turtle Syndrome. After consultation with FWC, Inwater Research Group biologists transported the turtle to LMC for rehabilitation.
5. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/15/15 and 10/25/16. Possible shark bite to right posterior carapace (10% missing, healed). Turtle also missing 75% of right rear flipper (healed). "Auntie Roe" was a successfully released rehab turtle originally sent to LMC on 10/15/15. Satellite tag applied by rehab center was missing on this capture event.
6. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/29/09, 7/24/09, 11/18/11, 4/11/13, 2/9/15, 7/2/15 and 10/30/16. New Inconel tags inserted on this capture event. Turtle missing entire right rear flipper (healed); Flipper was lost after 7/2/15.

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	
	Oct-16	Year to Date	Oct-16	Year to Date	Oct-16	Year to Date	Oct-16	Year to Date	Oct-16	Year to Date	Oct-16	Year to Date
Captures	14	297	16	146	1	4	0	1	0	6	31	454
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	1	1	0	0	0	0	0	0	0	0	1	1
Sent to Rehab	4	15	0	6	0	1	0	0	0	2	4	24
Fresh Scrapes	Oct-16	Year to Date	Oct-16	Year to Date	Oct-16	Year to Date	Oct-16	Year to Date	Oct-16	Year to Date	Oct-16	Year to Date
None	2	40	5	28	1	1	0	0	0	0	8	69
Minor	12	233	11	101	0	3	0	0	0	6	23	343
Moderate	0	24	0	17	0	0	0	1	0	0	0	42
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with Mod/Sev Scrapes	0.0%	8.1%	0.0%	11.6%	0.0%	0.0%	N/A	100.0%	N/A	0.0%	0.0%	9.3%

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	297	4,948
	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	1	3
Green	Total Captures	394	286	428	267	101	299	161	444	217	127	197	134	181	146	3,382
	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	4	35
	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	1	67
Total Captures per Year		944	914	917	692	330	725	424	751	521	362	503	414	465	454	8,416

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

** 2016 is a partial year.