

NRR-DMPSPeM Resource

From: Steve Weege <steveweege@gmail.com>
Sent: Wednesday, June 6, 2018 8:25 AM
To: Meghan Koperski
Cc: Ed Hollowell; Jodie Gless; 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; Eaton, Kristin; Jonathan Gorham; William.Nurnberger@fpl.com; Audra Livergood - NOAA Federal; Ryan Chabot
Subject: [External_Sender] May 2018 FPL Marine Turtle Removal Monthly Report
Attachments: May 2018 Marine Turtle Captures.pdf; Monthly Report Notes 2018.pdf; FPL St. Lucie Capture Summary 2018.pdf

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

**Subject: Marine Turtle Removal Monthly Summary
May 2018**

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for May 2018. This month we captured 15 *Caretta caretta* and seven *Chelonia mydas* in the intake canal of the St. Lucie power plant on Hutchinson Island. Two sea turtles were sent for rehabilitation (all non-causal) and there were two mortalities (one causal and one non-causal) during the month of May. 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 strandings forms were filed with the state through the Sea Turtle Stranding and Salvage Network. The lethal capture of six turtles this calendar year resulted in the power plant exceeding the take limit of five green turtle causal mortalities as established by the 2016 Biological Opinion as set forth by the National Marine Fisheries Service (NMFS).

According to the 2016 Biological Opinion, exceeding any one of the capture, causal non-lethal, or causal lethal take limits requires reinitiation of consultation. FPL and the NRC have already reinitiated a section 7 consultation with NMFS regarding the take of green turtles.

There were two juvenile green turtle mortalities this month. On May 7th, a severely decomposed green turtle was found atop the 5-inch barrier net during the morning survey. The turtle was missing its head and most of its flippers. Its scutes were also sloughing off. Consequently, it was too decomposed to necropsy. After consulting FWC, this turtle was regarded as non-causal. On May 29th, a fresh dead green turtle was found atop the 5-inch barrier net in the morning. It had red tinted fluid draining from its mouth. The turtle was not tangled in the barrier net, it did not have any external injuries, and its weight was normal. Believed to have drowned during entrainment, it was presumed to be causal pending necropsy. According to the veterinarian's necropsy report the turtle was in good condition, had eaten recently, and there were no signs of significant trauma or disease. Therefore, based on the postmortem examination the cause of death was likely forced submergence/drowning and the findings were thereby consistent with a causal mortality. Two subadult loggerheads were sent to rehabilitation facilities for non-causal injuries this month. On May 4th, a loggerhead with extensive soft tissue injuries was removed from the primary barrier net. Its injuries were relatively recent and consistent with a shark attack. Inwater Research Group (IRG) personnel transported the turtle partway to rehab at the Gumbo Limbo Nature Center in Boca Raton. On May 10th, an emaciated and lethargic loggerhead was recovered from the tangle nets. The turtle was a probable boat strike victim. It was missing approximately 15% from its posterior carapace, part of both rear flippers, and had healed lacerations in its tail and flippers. Its injuries were old and almost entirely healed. However, the animal was in poor condition and after consultation with FWC it was transported by Ecological Associated to the Loggerhead Marinelifelife Center in Juno Beach for rehabilitation.

On May 8th, Underwater Engineering Services performed the quarterly net inspections on the first two barrier nets within the intake canal system (the 5-inch and 8-inch A-1-A). The 10-inch U.I.D.S. net will now be inspected semiannually and was not included in the inspections for this month. One small single-strand hole was found and repaired in the 5-inch barrier net. No other holes were found during the quarterly net inspections.

The primary 5-inch barrier net encountered moderate-to-severe loads of sargassum algae during the month of May. IRG biologists performed around-the-clock monitoring of the intake canal and barrier net system either as warranted by sufficiently high debris intrusion levels or whenever directed by FPL oversight personnel. Furthermore, Underwater Engineering Services inspected the 5-inch and A-1-A barrier nets from the 5th until the 16th of the month and removed accumulated algae and debris as needed. 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 2018. In addition, this spreadsheet tracks fresh scrapes incurred on captured turtles for the current month, as well as the entire year.

Please feel free to contact me with any questions.

Sincerely,

Steve

Steve Weege

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May 2018 Marine Turtle Captures.pdf		78110
Monthly Report Notes 2018.pdf	61132	
FPL St. Lucie Capture Summary 2018.pdf		76718

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**MARINE TURTLE REMOVALS
ST. LUCIE PLANT INTAKE CANAL
MAY 2018**

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
5/1/2018	<i>Chelonia mydas</i>	1	MMY145/MMY146	55.3	55.9	58.5	51.1	43.4	46.0	21.0	South net
5/2/2018	<i>Chelonia mydas</i>	2	MMX100/MMY161	51.2	51.6	54.6	46.1	39.9	40.9	15.7	South net
5/4/2018	<i>Caretta caretta</i>	3	STW180504-01	81.6	82.4	88.5	85.5	67.5	63.9	77.8	Barrier net
5/7/2018	<i>Chelonia mydas</i>	4	CRM180507-01	46.0	46.8	49.9	42.6	37.5	36.3		Barrier net
5/7/2018	<i>Caretta caretta</i>	5	MMA864/MMA865	73.0	75.2	79.9	79.5	75.5	56.6	51.3	South net
5/10/2018	<i>Caretta caretta</i>	6	MMY162/MMY163	93.2	95.6	101.3	90.9	70.9	71.1	111.0	South net
5/10/2018	<i>Caretta caretta</i>		MMY164/MMY165	65.9	67.2	71.7	65.7	54.4	52.1	39.7	South net
5/10/2018	<i>Caretta caretta</i>	7	STW180510-01		72.7	78.9	80.0	64.6	55.1	54.9	North net
5/11/2018	<i>Chelonia mydas</i>		MMY166/MMY167	57.0	57.2	60.9	53.0	43.9	45.4	22.3	South net
5/17/2018	<i>Caretta caretta</i>		MMY168/MMY169	58.0	59.0	63.9	61.8	50.6	46.2	30.0	North net
5/18/2018	<i>Caretta caretta</i>	8	MMY170/MMY171	81.1	83.1	89.2	78.5	61.0	60.9	63.4	Hand capture
5/19/2018	<i>Caretta caretta</i>	9	MMY172/MMY173	89.5	90.5	97.5	92.9	71.7	68.2	116.0	South net
5/20/2018	<i>Caretta caretta</i>	10	MMY174/MMY175	63.4	65.0	71.8	67.6	52.0	48.2	34.6	North net
5/20/2018	<i>Caretta caretta</i>		MMY176/MMY177	60.0	60.8	65.2	61.4	51.3	50.1	32.6	North net
5/20/2018	<i>Chelonia mydas</i>	11	MMY178/MMY179	52.6	53.1	57.1	47.9	39.4	41.3	11.5	South net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCl (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
5/22/2018	<i>Caretta caretta</i>		MMY180/MMY181	78.9	79.9	84.7	78.2	64.4	62.5	72.9	South net
5/23/2018	<i>Caretta caretta</i>	12	MMY182/MMY183	84.9	86.3	89.9	80.5	62.9	64.5	88.8	South net
5/24/2018	<i>Chelonia mydas</i>	13	MMY141/MMY142	33.7	34.0	35.6	30.0	26.3	27.9	4.8	South net
5/24/2018	<i>Caretta caretta</i>		MMY184/MMY185	81.9	83.4	91.3	79.8	62.6	62.0	83.4	South net
5/27/2018	<i>Caretta caretta</i>	14	MMY186/MMY187	88.7	91.2	97.8	84.5	64.2	67.9	99.7	North net
5/29/2018	<i>Chelonia mydas</i>	15	STW180529-01	29.3	29.8	31.5	28.1	24.8	25.1	3.6	Barrier net
5/31/2018	<i>Caretta caretta</i>		MMY188/MMY189	60.4	61.8	66.2	59.6	47.5	46.4	29.0	North net

NOTES

1. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/23/18, and 5/1/18.
2. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 7/30/16, 9/17/16, 1/7/17, 10/23/17, 11/18/17, and 5/2/18.
3. REHAB (NON-CAUSAL). Stranding # STW180504-01. Extensive soft tissue damage from recent injury. Wounds appear to be consistent with a shark attack. Deep lacerations in two flippers with bone exposed. Turtle missing 30% of left rear flipper. Moderate deep fresh scrapes on top of head and above nares. Inwater Research Group personnel transported the turtle partway to rehab at the Gumbo Limbo Nature Center, Boca Raton.
4. DEAD (NON-CAUSAL MORTALITY). Stranding# CRM180507-01. Severely decomposed juvenile green turtle found atop 5-inch barrier net in the morning. Turtle missing head, rear flippers, left front flipper, and part of right front flipper. Scutes sloughing off. Too decomposed to necropsy. Approximately 15 kg.
5. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 8/18/07, 8/21/07, 8/24/07, 9/2/07, 9/10/07, 10/25/07, 12/17/07, 1/25/08, 4/6/08, 4/30/08, 7/13/08, 8/24/08, 9/13/08, 10/6/08, 10/18/08, 4/17/09, 6/17/09, 8/13/09, 10/27/09, 6/11/10, 9/15/10, 9/15/11, 10/21/11, 11/30/11, 7/7/12, 3/20/13, 11/4/15, 2/27/16, 1/6/17, 5/30/17, 9/24/17, 2/9/18, and 5/7/18.
6. Adult female. Tail length = 221 mm.
7. REHAB (NON-CAUSAL). Stranding# STW180510-01. Emaciated and lethargic large subadult loggerhead. Possible boat strike victim. Turtle missing approximately 15% from right posterior carapace and 25% from each rear flipper. Minimum lengths could not be accurately taken due to injuries. Scarring and healed lacerations in tail and three flippers. Injuries are old and almost entirely healed. Ecological Associates personnel picked up and transported the turtle to the Loggerhead Marinelifelife Center in Juno Beach for rehabilitation.
8. STRANGE TAG (PIT tag), information request forwarded to the Archie Carr Center for Sea Turtle Research at the University of Florida. New Inconel tags inserted on this capture event.
9. Adult female. Tail length = 242 mm. Recent hooking injury in left axilla.
10. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 8/3/14 and 5/20/18.
11. PAPILOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 15). Deep moderate fresh scrape above right eye and multiple deep scrapes in anterior carapace. Turtle was active and released.
12. Adult female. Tail length = 230 mm.
13. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/19/18 and 5/24/18.
14. Adult female. Tail length = 230 mm.
15. DEAD (CAUSAL MORTALITY). Stranding# STW180529-01. Fresh dead juvenile green turtle found atop 5-inch barrier net in the morning. Skin sloughing and red tinted fluid draining from mouth. The turtle was not tangled in the barrier net, it did not have any external injuries, and its weight was normal. Believed to have drowned during entrainment it was presumed to be causal pending necropsy. Held on ice for Dr. Nancy Mettee, DVM. According to the necropsy report the cause of death was forced submergence and the mortality was determined to be causal.

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	
	May-18	Year to Date	May-18	Year to Date	May-18	Year to Date	May-18	Year to Date	May-18	Year to Date	May-18	Year to Date
Captures	15	90	7	220	0	0	0	0	0	10	22	320
Causal Mortalities	0	0	1	6	0	0	0	0	0	0	1	6
Non-causal Mortalities	0	0	1	3	0	0	0	0	0	0	1	3
Causal Injuries	0	0	0	0	0	0	0	0	0	0	0	0
Sent to rehab	2	7	0	5	0	0	0	0	0	0	2	12
Fresh Scrapes	May-18	Year to Date	May-18	Year to Date	May-18	Year to Date	May-18	Year to Date	May-18	Year to Date	May-18	Year to Date
None	2	9	3	131	0	0	0	0	0	0	5	140
Minor	11	78	3	84	0	0	0	0	0	10	14	172
Moderate	2	3	1	5	0	0	0	0	0	0	3	8
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with mod/sev scrapes	13.3%	3.3%	14.3%	2.3%	N/A	N/A	N/A	N/A	N/A	0.0%	13.6%	2.5%