

NRR-DMPSPEm Resource

From: Steve Weege <steveeweeg@gmail.com>
Sent: Wednesday, March 14, 2018 12:44 PM
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] February 2018 FPL Marine Turtle Removal Monthly Report
Attachments: February 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
February 2018**

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for February 2018. This month we captured 20 *Caretta caretta*, 19 *Chelonia mydas*, and one *Lepidochelys kempii* in the intake canal of the St. Lucie power plant on Hutchinson Island. Three sea turtles were sent for rehabilitation (all non-causal) and there was one causal mortality during the month of February. 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.

Three juvenile green turtles were sent to rehabilitation facilities for non-causal injuries this month. On February 3rd, a green turtle was dip-netted with an open, partially healed hooking wound in its right front flipper. Inwater Research Group biologists transported the turtle partway to the Gumbo Limbo Nature Center (GLNC) for rehabilitation. On February 4th, a green turtle was hand-captured in the intake canal with severe fibropapillomatosis. It had numerous large tumors coming out of its plastron. FWC transported it to the Turtle Hospital in Marathon. A second green turtle, this one with moderate papillomas, was dip-netted on the same day. However, this turtle was actually sent to rehab for a boat strike injury; it had a propeller slice through the carapace and plastron that left behind open wounds. This turtle was captured at 7:30 PM and held overnight. The next day, it was transported by a GLNC volunteer to their rehab facility in Boca Raton. All three rehab turtles were considered non-causal.

There was one causal mortality this month. On February 10th, a moderately decomposed juvenile green turtle was found at the top of the 8-inch A1A barrier net during the morning inspection. The turtle was very bloated and its scutes were sloughing off. Consequently, it was too decomposed to necropsy. However, the turtle was a recapture and it was previously released on January 3rd, 2018 in good health. Moreover, the consensus is that turtles are most likely alive at the time when they pass through the 5-inch barrier net; therefore, decomposed turtles recovered beyond the primary barrier net are generally regarded as causal.

Underwater Engineering Services (UESI) completed the installation of the new 5-inch barrier net on February 9th. Even still, IRG continued 24-hour surveillance of the intake canal until February 15th and attempted to proactively remove as many turtles as possible. Of the 40 turtles captured this month, 23 were proactively removed. In addition, IRG continued to inspect the entire length of the intake canal (up to the security barrier) for turtles that may have made it past the primary or secondary barrier nets. On February 22nd, UESI adjusted the secondary 8-inch barrier net in order to improve the net's slope and minimize the billow formed by the action of the current. Furthermore, a concerted effort was made to monitor the area between the 5-inch and 8-inch barrier nets; UESI performed periodic dive inspections while IRG monitored topside with a small john boat, frequently checking the surface of the secondary A-1-A barrier net.

The primary 5-inch barrier net encountered negligible amounts of algae and jellyfish during the month. Only one turtle was recovered between the first two barrier nets in February and no turtles were observed west of the secondary 8-inch barrier net or intake wells.

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

Sr. Environmental Specialist

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Hearing Identifier: NRR_DMPS
Email Number: 246

Mail Envelope Properties (CAJrYmh8dy0njX1nqG3zxv3=H1qCdD09LuNJ6dx_XNyyVGDe3eQ)

Subject: [External_Sender] February 2018 FPL Marine Turtle Removal Monthly Report
Sent Date: 3/14/2018 12:44:25 PM
Received Date: 3/14/2018 12:44:33 PM
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Files	Size	Date & Time
MESSAGE	4412	3/14/2018 12:44:33 PM

February 2018 Marine Turtle Captures.pdf		83280
Monthly Report Notes 2018.pdf	61108	
FPL St. Lucie Capture Summary 2018.pdf		76220

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MARINE TURTLE REMOVALS ST. LUCIE PLANT INTAKE CANAL FEBRUARY 2018

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
2/1/2018	<i>Caretta caretta</i>		MMX492/MMX493	69.9	70.7	73.9	68.8	57.8	55.3	46.2	Dip net
2/1/2018	<i>Chelonia mydas</i>		MMX494/MMX495	74.2	74.3	78.4	71.6	56.0	64.2	58.0	Dip net
2/1/2018	<i>Chelonia mydas</i>		MMX496/MMX497	37.4	37.7	39.6	32.9	29.2	31.4	6.6	Dip net
2/2/2018	<i>Caretta caretta</i>		MMX498/MMX500	66.2	67.7	70.7	65.8	53.1	53.0	38.9	Hand capture
2/2/2018	<i>Caretta caretta</i>		MMY000/MMY001	64.3	65.5	70.2	69.6	55.9	52.7	46.0	Dip net
2/3/2018	<i>Chelonia mydas</i>	1	STW180203-01	28.8	29.3	31.2	28.5	25.6	24.0	3.2	Dip net
2/4/2018	<i>Chelonia mydas</i>		MMY002	28.1	28.8	30.4	25.4	21.7	23.9	3.0	Barrier net
2/4/2018	<i>Caretta caretta</i>		MMY003/MMY004	66.4	67.5	72.3	67.9	57.8	52.4	46.9	North net
2/4/2018	<i>Chelonia mydas</i>		MMY005/MMY006	30.5	30.8	32.4	27.5	23.2	23.8	3.5	Dip net
2/4/2018	<i>Chelonia mydas</i>	2	MMY007/MMY008	41.2	41.8	46.7	39.2	33.1	36.3	9.8	Dip net
2/4/2018	<i>Chelonia mydas</i>		MMY009/MMY010	55.7	56.4	60.2	56.2	45.2	47.2	23.7	Dip net
2/4/2018	<i>Chelonia mydas</i>	3	STW180204-01	43.0	43.5	46.4	38.7	33.3	35.9	9.0	Hand capture
2/5/2018	<i>Chelonia mydas</i>		MMY011/MMY012	50.7	51.8	54.3	47.7	41.7	43.0	16.6	South net
2/6/2018	<i>Caretta caretta</i>		MMY013/MMY014	56.6	57.3	61.6	56.8	48.1	45.5	27.5	Dip net
2/6/2018	<i>Chelonia mydas</i>		MMY015/MMY016	31.1	31.4	32.8	29.5	24.5	26.1	4.3	Hand capture

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
2/6/2018	<i>Caretta caretta</i>		MMY017/MMY018	61.2	62.2	68.4	65.4	52.3	48.3	35.7	South net
2/7/2018	<i>Caretta caretta</i>		MMY019/MMY020	66.5	68.3	73.7	67.5	56.2	52.8	44.7	South net
2/7/2018	<i>Caretta caretta</i>		MMY021/MMY022	66.4	67.8	74.2	70.5	54.2	50.7	37.7	Dip net
2/8/2018	<i>Caretta caretta</i>		MMY023/MMY024	80.4	83.1	90.6	83.3	60.3	61.8	74.7	Dip net
2/8/2018	<i>Chelonia mydas</i>		MMY025/MMY028	55.6	56.2	58.4	50.9	44.7	47.9	21.1	Dip net
2/8/2018	<i>Chelonia mydas</i>		MMY026/MMY027	40.2	40.9	43.7	36.5	32.3	33.6	7.8	Dip net
2/9/2018	<i>Caretta caretta</i>	4	MMA864/MMA865	73.8	75.8	80.2	75.6	60.5	57.3	54.3	North net
2/9/2018	<i>Caretta caretta</i>		MMY029/MMY030	58.6	59.6	63.2	60.6	48.0	46.7	29.2	Dip net
2/9/2018	<i>Caretta caretta</i>		MMY031/MMY032	72.0	73.8	81.6	75.0	57.5	54.5	51.5	Dip net
2/9/2018	<i>Chelonia mydas</i>		MMY033/MMY034	30.4	31.2	32.6	27.8	24.7	26.0	4.0	Hand capture
2/9/2018	<i>Caretta caretta</i>		MMY035/MMY036	73.0	74.1	80.6	75.5	59.5	57.9	56.2	Dip net
2/9/2018	<i>Chelonia mydas</i>		MMY037	27.4	27.5	28.8	23.4	21.2	23.4	2.9	Dip net
2/10/2018	<i>Chelonia mydas</i>	5	MMX179/MMX180	43.6	43.8	47.8	43.1	34.2	35.7	8.6	Between barrier nets
2/12/2018	<i>Caretta caretta</i>		MMY038/MMY039	58.3	59.4	64.2	59.8	49.5	45.8	30.2	South net
2/12/2018	<i>Caretta caretta</i>		MMY040/MMY041	56.7	58.4	63.1	63.2	49.7	45.2	30.7	South net
2/15/2018	<i>Chelonia mydas</i>	6	MMY043	36.0	36.6	38.4	33.0	28.3	29.6	5.6	Dip net
2/16/2018	<i>Chelonia mydas</i>		MMY044/MMY045	61.8	62.6	66.3	57.1	47.7	52.0	30.6	South net
2/18/2018	<i>Caretta caretta</i>		MMY046/MMY047	62.0	63.3	67.9	66.6	52.1	47.4	34.9	North net
2/19/2018	<i>Caretta caretta</i>	7	EEX174/EEX175	44.8	45.7	50.3	42.2	35.8	33.9	11.2	North net
2/21/2018	<i>Chelonia mydas</i>		MMY048/MMY049	39.0	39.3	41.4	37.0	31.9	32.1	7.7	North net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCl (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
2/21/2018	<i>Lepidochelys kempii</i>		MMY050/MMY051	51.4	51.9	55.3	57.4	52.8	40.4	18.8	South net
2/22/2018	<i>Chelonia mydas</i>		MMY052	27.9	28.3	30.5	26.5	23.8	23.8	3.4	Dip net
2/23/2018	<i>Caretta caretta</i>		MMY053/MMY054	64.1	65.4	70.3	66.9	53.8	49.5	42.2	North net
2/24/2018	<i>Caretta caretta</i>		MMY055/MMY056	66.2	67.6	72.9	66.9	54.4	48.3	39.9	North net
2/28/2018	<i>Caretta caretta</i>		MMY057/MMY058	56.0	57.8	62.3	60.3	50.6	45.6	29.4	North net

NOTES

1. REHAB (NON-CAUSAL). Stranding# STW180203-01. Juvenile green turtle dip-netted with open, partially healed hooking wound in right axilla. Inwater Research Group (IRG) biologists transported the turtle partway to the Gumbo Limbo Nature Center (GLNC) for rehab.
2. REHAB (NON-CAUSAL). Stranding# STW180204-02. PAPILLOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 71). Juvenile green dip-netted in the intake canal with papillomas and a boat strike injury; propeller cut through carapace and plastron. Open wound in posterior carapace and plastron. Captured at 7:30 PM and held overnight. Transported the next day by a GLNC volunteer for rehab at their facility.
3. REHAB (NON-CAUSAL). Stranding# STW180204-01. PAPILLOMAS (Balazs Tumor Score = 3 {heavy}, Total Tumor Score = 32). Juvenile green turtle hand-captured in the intake canal with heavy papillomatosis. Numerous large tumors on plastron. The turtle was picked up and transported by FWC to the Turtle Hospital, Marathon.
4. 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, and 2/9/18.
5. DEAD (CAUSAL MORTALITY). STSSN# JRG180210-01. RECAPTURE, from 1/3/18. Moderately decomposed juvenile green found at top of 8-inch A1A net during morning net inspection. The turtle was very bloated and the scutes were sloughing off. This turtle was a recapture and was previously released in good health. It likely became entrained into the canal, swam through the large gaps that were present during the 5-inch net replacement, and subsequently died between the two barrier nets.
6. PAPILLOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 14).
7. STRANGE TAG (PIT & Inconel tags). Turtle appears to have an old hooking injury in lower left mandible. Plastron oddly concave, possibly congenital. Likely a turtle from rehab (very light coloration). According to the Archie Carr Center for Sea Turtle Research, this was an education turtle that was reared in Dr. Wyneken's lab (FAU) for the John D. MacArthur Beach State Park in Palm Beach County. It was given to the park on 11/13/15 and released from captivity on 1/25/18. The park keeps a display turtle that they release after two years. "Kai" developed the concavity in her plastron while at the park, but their veterinarian said it wasn't causing any complications for the turtle's health.

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	
	Feb-18	Year to Date	Feb-18	Year to Date	Feb-18	Year to Date	Feb-18	Year to Date	Feb-18	Year to Date	Feb-18	Year to Date
Captures	20	61	19	161	0	0	0	0	1	10	40	232
Causal Mortalities	0	0	1	5	0	0	0	0	0	0	1	5
Non-causal Mortalities	0	0	0	1	0	0	0	0	0	0	0	1
Causal Injuries	0	0	0	0	0	0	0	0	0	0	0	0
Sent to rehab	0	3	3	5	0	0	0	0	0	0	3	8
Fresh Scrapes	Feb-18	Year to Date	Feb-18	Year to Date	Feb-18	Year to Date	Feb-18	Year to Date	Feb-18	Year to Date	Feb-18	Year to Date
None	1	7	1	125	0	0	0	0	0	0	2	132
Minor	19	54	18	33	0	0	0	0	1	10	38	97
Moderate	0	0	0	3	0	0	0	0	0	0	0	3
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with mod/sev scrapes	0.0%	0.0%	0.0%	1.9%	N/A	N/A	N/A	N/A	0.0%	0.0%	0.0%	1.3%