

NRR-DRMAPEm Resource

From: Steve Weege <sweege@inwater.org>
Sent: Thursday, May 23, 2019 9:26 AM
To: Koperski, Meghan
Cc: Ed Hollowell; Jodie_Gless@fpl.com; Ken_Frehafer@fpl.com; MTP@myfwc.com; Michael Bresette; EndangeredSpecies Resource; SCO@dep.state.fl.us; Vince Munne; Cody Mott; Jeff Guertin; Ryan Welsh; Eaton, Kristin; Jonathon Gorham; William.Nurnberger@fpl.com; audra.livergood@noaa.gov; Ryan Chabot; Sciscente, Richard
Subject: [External_Sender] April 2019 FPL Marine Turtle Removal Monthly Report
Attachments: April 2019 Marine Turtle Captures.pdf; Monthly Report Notes 2019.pdf; FPL St. Lucie Capture Summary 2019.pdf

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

**Subject: Marine Turtle Removal Monthly Summary
April 2019**

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for April 2019. This month we captured 29 *Caretta caretta*, 26 *Chelonia mydas*, and five *Lepidochelys kempii* in the intake canal of the St. Lucie power plant on Hutchinson Island. Two sea turtles were sent for rehabilitation (both non-causal) and there were no mortalities during the month of April. 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.

Two turtles were sent to rehabilitation facilities for non-causal injuries this month. On the morning of April 8th, an underweight and lethargic juvenile loggerhead was found atop the 5-inch barrier net. The turtle was picked up by the FWC stranding coordinator and taken for rehab at the Gumbo Limbo Nature Center in Boca Raton. On April 14th, an emaciated adult male loggerhead was removed from the tangle nets. The turtle was active but had a very poor body condition. The plastron was sunken in and the heartbeat visible. Inwater Research Group biologists transported the turtle to the Loggerhead Marinelifelife Center in Juno Beach for rehab. Both turtles were considered non-causal. The primary 5-inch barrier net encountered moderate-to-severe loads of algae during the month. Underwater Engineering Services, Inc. (UESI) periodically inspected the barrier net and removed accumulated algae and debris as needed. UESI also finished retensioning the primary barrier net in order to improve its performance. The Saint Lucie Power Plant is currently experiencing outage conditions for generator maintenance and repairs (the outage is expected to last up to 45 days). Lastly, Ballard Marine Construction began dredging the intake canal east of the primary 5-inch barrier net. Even still, the primary 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 2019. 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

Inwater Research Group, Inc.

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From: Steve Weege

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Files	Size	Date & Time
MESSAGE	2898	5/23/2019 9:26:43 AM

April 2019 Marine Turtle Captures.pdf	98421
Monthly Report Notes 2019.pdf	74945
FPL St. Lucie Capture Summary 2019.pdf	87716

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**MARINE TURTLE REMOVALS
ST. LUCIE PLANT INTAKE CANAL
APRIL 2019**

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
4/1/2019	<i>Chelonia mydas</i>	1	982000402163276	55.4	55.4	58.3	49.0	42.3	44.7	20.7	North net
4/1/2019	<i>Caretta caretta</i>	2	KKG313/KKG314	94.5	96.3	101.0	85.9	73.0	68.9	113.4	North net
4/1/2019	<i>Caretta caretta</i>		KKG315/KKG316	65.1	67.2	72.9	68.4	58.6	49.9	44.3	North net
4/2/2019	<i>Caretta caretta</i>		KKG317/KKG318	71.8	73.1	76.2	72.4	58.4	56.6	47.7	North net
4/3/2019	<i>Caretta caretta</i>		KKG319/KKG320	58.9	60.8	65.7	64.9	49.4	54.2	34.2	South net
4/3/2019	<i>Lepidochelys kempii</i>		KKG321/KKG322	58.6	59.0	62.3	67.3	59.8	41.2	24.0	North net
4/3/2019	<i>Chelonia mydas</i>	3	KKG323/KKG324	95.4	95.6	99.1	91.9	74.1	77.2	119.5	North net
4/3/2019	<i>Chelonia mydas</i>		KKG326/KKG327	41.4	41.9	44.7	40.1	34.5	34.9	9.4	South net
4/3/2019	<i>Chelonia mydas</i>	4	MMY144/KKG325	48.0	48.2	51.6	44.3	36.5	38.8	14.5	North net
4/4/2019	<i>Chelonia mydas</i>		KKG328/KKG329	56.4	56.7	59.3	51.6	43.4	45.1	23.8	North net
4/5/2019	<i>Chelonia mydas</i>	5	KKG141/KKG3321	48.2	48.7	52.5	44.6	39.5	40.0	14.9	North net
4/5/2019	<i>Caretta caretta</i>	6	KKG330/KKG331	93.3	93.7	101.1	93.9	73.3	74.7	135.1	South net
4/5/2019	<i>Caretta caretta</i>	7	MMY164/MMY165	67.1	68.0	72.2	64.8	54.6	52.1	38.9	South net
4/6/2019	<i>Caretta caretta</i>	8	KKG176/KKG177	67.1	68.3	74.2	68.5	57.1	50.8	44.9	South net
4/6/2019	<i>Chelonia mydas</i>		KKG333/KKG334	47.2	47.9	50.1	40.6	35.7	39.5	12.5	South net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
4/6/2019	<i>Chelonia mydas</i>		KKG335	28.5	29.0	30.6	26.9	23.1	24.1	2.8	South net
4/7/2019	<i>Caretta caretta</i>		KKG336/KKG337	65.8	67.4	71.7	69.7	55.9	51.1	39.5	North net
4/8/2019	<i>Caretta caretta</i>	9	KKG338/KKG339	97.4	98.4	107.9	98.4	73.6	76.6	162.0	Hand capture
4/8/2019	<i>Caretta caretta</i>	10	RMC190408-01	57.2	57.9	72.6	67.8	56.9	51.1	37.3	Barrier net
4/10/2019	<i>Chelonia mydas</i>	11	KKG340/KKG341	91.5	91.5	96.0	88.0	73.0	72.6	109.5	South net
4/10/2019	<i>Caretta caretta</i>		KKG342/KKG343	69.3	70.9	75.2	72.4	59.5	54.7	48.6	South net
4/12/2019	<i>Caretta caretta</i>		KKG344/KKG345	61.2	62.3	65.2	65.1	54.0	51.3	39.1	South net
4/13/2019	<i>Chelonia mydas</i>	12	KKG346/KKG347	54.8	54.9	57.5	50.4	42.2	46.2	22.7	Dip net
4/14/2019	<i>Caretta caretta</i>	13	JRG190414-01	96.0	98.1	103.4	95.2	69.4	69.1	97.7	South net
4/14/2019	<i>Lepidochelys kempii</i>		KKG348/KKG349	48.9	49.4	50.6	52.9	48.0	36.5	15.4	South net
4/14/2019	<i>Caretta caretta</i>		KKG350/KKG351	67.6	69.1	74.1	69.2	58.9	52.0	47.1	North net
4/15/2019	<i>Lepidochelys kempii</i>		KKG352/KKG353	54.9	55.5	58.4	62.5	56.7	42.6	24.0	North net
4/15/2019	<i>Caretta caretta</i>		KKG354/KKG355	83.6	84.5	89.3	83.0	62.5	60.6	68.9	North net
4/15/2019	<i>Chelonia mydas</i>	14	MML491	64.2	64.8	67.3	58.6	48.9	49.9	31.5	South net
4/17/2019	<i>Chelonia mydas</i>	15	KKG356/KKG357	88.5	88.9	94.4	88.1	71.3	72.9	104.1	South net
4/17/2019	<i>Chelonia mydas</i>	16	KKG358/KKG359	55.9	56.4	58.7	53.1	44.2	37.8	21.5	South net
4/17/2019	<i>Caretta caretta</i>		KKG360/KKG361	66.9	67.9	72.6	72.3	56.7	50.5	45.7	North net
4/17/2019	<i>Caretta caretta</i>		KKG362/KKG363	68.5	70.5	76.6	72.6	59.8	52.8	48.3	South net
4/18/2019	<i>Chelonia mydas</i>	17	KKG364/KKG365	63.8	64.6	68.0	58.2	48.5	50.8	31.7	Dip net
4/18/2019	<i>Caretta caretta</i>		KKG366/KKG367	79.8	81.6	84.8	77.4	65.1	63.2	75.8	South net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPLE (cm)	Weight (kg)	Method
4/18/2019	<i>Caretta caretta</i>	18	KKG368/KKG369	96.4	96.7	104.1	91.8	72.6	75.1	142.0	South net
4/18/2019	<i>Chelonia mydas</i>	19	KKG370/KKG371	59.3	59.6	63.4	56.2	46.3	47.5	26.6	North net
4/18/2019	<i>Caretta caretta</i>		KKG372/KKG373	65.2	66.6	71.2	68.9	56.1	50.8	42.0	North net
4/18/2019	<i>Caretta caretta</i>		KKG374/KKG375	69.2	70.5	77.5	70.1	57.6	53.3	47.5	North net
4/18/2019	<i>Chelonia mydas</i>		KKG376/KKG377	50.4	51.1	53.7	46.5	40.1	41.4	15.0	South net
4/18/2019	<i>Chelonia mydas</i>	20	MMX174	59.3	59.6	64.0	55.6	46.1	48.2	27.0	South net
4/19/2019	<i>Chelonia mydas</i>	21	MMY154/KKG378	43.1	43.6	46.6	39.6	33.6	33.9	9.9	North net
4/20/2019	<i>Chelonia mydas</i>	22	KKG379/KKG380	47.0	47.1	50.7	47.7	37.5	40.4	14.9	South net
4/20/2019	<i>Caretta caretta</i>	23	KKG381/KKG382	90.0	92.5	99.2	86.7	67.6	64.1	107.4	South net
4/20/2019	<i>Caretta caretta</i>	24	KKG383/KKG384	95.8	98.5	106.5	98.1	77.4	74.5	145.4	South net
4/20/2019	<i>Chelonia mydas</i>	25	MMX063	66.6	66.8	72.1	63.2	51.9	54.3	37.0	South net
4/21/2019	<i>Caretta caretta</i>	26	KKG385	74.1	76.2	81.1	75.8	60.4	56.7	56.6	South net
4/22/2019	<i>Lepidochelys kempii</i>	27	KKG348/KKG349	48.7	49.0	50.7	52.7	47.9	36.4	15.0	South net
4/22/2019	<i>Chelonia mydas</i>		KKG386/KKG387	42.2	42.3	43.6	40.1	34.3	35.0	9.5	South net
4/23/2019	<i>Chelonia mydas</i>	28	KKG388	56.9	57.6	61.6	54.8	43.8	47.0	25.0	Dip net
4/24/2019	<i>Caretta caretta</i>	29	KKG389/KKG390	90.0	90.1	94.5	87.5	68.5	69.1	109.0	South net
4/24/2019	<i>Caretta caretta</i>	30	KKG391/KKG392	91.7	93.0	102.1	95.9	73.0	72.5	143.5	South net
4/24/2019	<i>Chelonia mydas</i>	31	MMX319	65.2	65.6	68.2	61.4	48.9	53.8	35.0	South net
4/25/2019	<i>Caretta caretta</i>	32	MML350/KKG393	64.5	65.8	69.9	66.1	53.8	49.1	37.1	South net
4/26/2019	<i>Chelonia mydas</i>		KKG394/KKG395	61.3	61.5	64.0	56.9	47.5	48.1	27.4	South net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSSL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
4/26/2019	<i>Chelonia mydas</i>	33	KKG396/KKG397	54.4	54.9	57.9	49.6	42.0	46.0	22.8	South net
4/27/2019	<i>Chelonia mydas</i>	34	433B572979	60.3	60.9	64.2	60.0	49.9	49.7	30.4	South net
4/27/2019	<i>Caretta caretta</i>	35	MMX223/KKG398	73.7	75.7	81.5	74.1	58.6	54.5	41.4	South net
4/29/2019	<i>Lepidochelys kempii</i>	36	KKG399/KKG400	63.4	64.0	67.3	68.5	60.7	49.3	37.2	South net
4/30/2019	<i>Caretta caretta</i>		KKL0501/KKL0502	82.1	83.5	88.3	83.0	65.0	63.2	87.3	South net

NOTES

1. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/24/18, 6/11/18, and 4/1/19. PAPILLOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 9). Tumors at both tag tear-out locations.
2. Adult male loggerhead. Tail length = 425 mm.
3. Adult male green turtle. Tail length = 420 mm.
4. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/21/18, 12/17/18, and 4/3/19.
5. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 2/1/19 and 4/5/19.
6. Adult female loggerhead. Tail length = 269 mm. Mating scars on left side of neck and left axilla. Moderate fresh scrape - deep cut over right eye (orbit okay).
7. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/10/18, 1/6/19, and 4/5/19.
8. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 2/4/19 and 4/6/19.
9. Adult female loggerhead. Tail length = 235 mm. Two healed cracks in posterior carapace.
10. REHAB (NON-CAUSAL). Stranding# RMC190408-01. Underweight and lethargic juvenile loggerhead found at top of 5-inch barrier net in the morning. The turtle was picked up by the FWC stranding coordinator and transported to Gumbo Limbo Nature Center, Boca Raton for rehab.
11. Adult male green turtle. Tail length = 411 mm.
12. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 7/25/11, 10/21/15, 12/28/15, 3/8/16, 2/2/17, 4/10/18, and 4/13/19.
13. Adult male loggerhead. Tail length = 495 mm. REHAB (NON-CAUSAL). Stranding# JRG190414-01. Emaciated adult male loggerhead removed from the tangle nets. Turtle was active but had a very poor body condition. The plastron was sunken in and the heartbeat visible. Inwater Research Group biologists transported the turtle to the Loggerhead Marinelife Center in Juno Beach for rehab.
14. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/20/11, 7/28/14, 5/19/15, 9/23/17, and 4/15/19.
15. Adult male green turtle. Tail length = 371 mm.
16. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 3/19/08, 6/28/13, 5/25/14, 2/12/16, 6/1/17, 9/19/17, 10/16/17, 1/21/18, and 4/17/19.
17. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/15/08, 3/23/10, 10/29/11, 12/27/11, 12/17/12, 1/22/14, 1/13/15, 5/5/16, 8/9/16, 7/26/17, and 4/18/19.
18. Adult female loggerhead. Tail length = 297 mm.
19. PAPILLOMAS (Balazs Tumor Score = 1 {light}, Total Tumor Score = 2).
20. 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, 6/2/16, 1/5/17, 6/1/17, 9/27/17, 1/2/18, 7/3/18, 8/28/18, and 4/18/19.
21. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/27/18 and 4/19/19.
22. PAPILLOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 10). Paps are smooth (possibly regressing).
23. Adult male loggerhead. Tail length = 450 mm.
24. Adult female loggerhead. Tail length = 211 mm.
25. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/17/08, 11/26/11, 10/8/13, 10/25/17, 12/13/17, 1/21/18, and 4/20/19. PAPILLOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 10). Paps in both front flipper tagging sites.
26. 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, 5/7/18, and 4/21/19.
27. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/14/19 and 4/22/19.
 28. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/28/10, 1/12/13, 12/22/14, 7/30/16, 10/21/17, 1/9/18, and 4/23/19.
 29. Adult female loggerhead. Tail length = 220 mm.
 30. Adult female loggerhead. Tail length = 224 mm.
 31. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/13/04, 4/11/08, 5/5/08, 9/25/08, 10/12/08, 7/12/10, 12/6/10, 9/10/11, 11/1/11, 1/9/12, 5/10/13, 9/5/13, 4/10/17, 1/20/18, and 4/24/19.
 32. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 6/19/17 and 4/25/19.
 33. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 12/4/08, 8/18/09, 9/15/09, 6/20/12, 10/3/12, 12/6/12, 3/22/13, 7/11/13, 9/3/14, 12/29/14, 1/14/16, 4/26/16, 6/17/17, 10/10/17, 1/29/18, and 4/26/19.
 34. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 9/6/08, 12/6/11, 4/12/13, 7/16/13, 1/24/16, 6/1/17, 10/2/17, 3/16/19, and 4/27/19. PAPANOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 69).
 35. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/6/14, 3/2/15, 6/2/16, 10/4/17, 1/10/18, and 4/27/19. Relatively long tail (possibly a maturing male).
 36. Adult female Kemp's ridley. Tail length = 210 mm. Healing shark bite wound in left front flipper.

SMCL = Straight Minimum Carapace Length
SMCL = Straight Standard Carapace Length
CSCCL = 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	
	Apr-19	Year to Date	Apr-19	Year to Date	Apr-19	Year to Date	Apr-19	Year to Date	Apr-19	Year to Date	Apr-19	Year to Date
Captures	29	101	26	69	0	0	0	0	5	12	60	182
Causal Mortalities	0	0	0	2	0	0	0	0	0	0	0	2
Non-Causal Mortalities	0	0	0	0	0	0	0	0	0	0	0	0
Causal Injuries	0	0	0	0	0	0	0	0	0	0	0	0
Sent to rehab	2	6	0	2	0	0	0	0	0	1	2	9
Fresh Scrapes	Apr-19	Year to Date	Apr-19	Year to Date	Apr-19	Year to Date	Apr-19	Year to Date	Apr-19	Year to Date	Apr-19	Year to Date
None	3	18	2	8	0	0	0	0	0	1	5	27
Minor	25	82	21	57	0	0	0	0	5	11	51	150
Moderate	1	1	3	4	0	0	0	0	0	0	4	5
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with mod/sev scrapes	3.4%	1.0%	11.5%	5.8%	N/A	N/A	N/A	N/A	0.0%	0.0%	6.7%	2.7%