

From: Steve Weege <sweege@inwater.org>
Sent: Wednesday, December 14, 2022 8:26 AM
To: Koperski, Meghan
Cc: Eldridge, Jodie; Marine Turtle Permits; Michael Bresette; EndangeredSpecies Resource; SCO@dep.state.fl.us; Vince Munne; Eaton, Kristin; William Nurnberger; Audra Livergood - NOAA Federal; Cody Mott; Jguertin; Robert.Craven@fpl.com; Damon Hobson; Andrew.McHenry@fpl.com; Falkiewicz, Timothy
Subject: [External_Sender] November 2022 FPL Marine Turtle Removal Monthly Report
Attachments: November 2022 Marine Turtle Captures.pdf; Monthly Report Notes 2022.pdf; FPL St. Lucie Capture Summary 2022.pdf

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

**Subject: Marine Turtle Removal Monthly Summary
November 2022**

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for November 2022. This month we captured 11 *Caretta caretta* and 64 *Chelonia mydas* in the intake canal of the St. Lucie power plant on Hutchinson Island. There was one causal mortality and no sea turtles were sent for rehabilitation this past month. As with all sea turtle strandings at the St. Lucie Plant, the Florida Fish and Wildlife Conservation Commission (FWC) was consulted and stranding forms were filed with the state through the Sea Turtle Stranding and Salvage Network.

Hurricane Nicole caused damage to the permanent 5-inch barrier net. Several shackles failed on the north and south ends of the barrier net resulting in gaps that were large enough for small juvenile green turtles to pass through. Underwater Engineering Services divers promptly inspected and repaired the net following the storm. Even still, six turtles were recovered beyond the 5-inch primary barrier net this month (five were released in good condition and one was recovered postmortem).

On November 20th, a severely decomposed juvenile green turtle was recovered from the power plant intake wells. The turtle was missing its head, front flippers, and most of its rear flippers from advanced decomposition. It was taken to Dr. Nancy Mettee, DVM for necropsy and causality determination in accordance with stranding protocols. The mortality was deemed causal based on the circumstances surrounding the turtle's death and subsequent discovery.

The primary 5-inch barrier net encountered light-to-moderate amounts of algae in November. Underwater Engineering Services (UESI) divers inspected and cleaned the 5-inch barrier net as needed. In addition, Inwater Research Group biologists increased capture efforts following the discovery that some turtles had progressed beyond the primary barrier net. Moreover, nearly half (36 out of 75 turtles) were proactively removed from the intake canal this month.

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 2022. 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

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From: Steve Weege

Created By: sweege@inwater.org

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Files	Size	Date & Time
MESSAGE	2847	12/14/2022 8:26:58 AM
November 2022 Marine Turtle Captures.pdf		271754
Monthly Report Notes 2022.pdf	188780	
FPL St. Lucie Capture Summary 2022.pdf		253466

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MARINE TURTLE REMOVALS ST. LUCIE PLANT INTAKE CANAL NOVEMBER 2022

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
11/2/2022	<i>Chelonia mydas</i>		IRG0456/IRG0457	25.9	26.6	28.3	24.4	21.6	22.1	2.6	Dip net
11/6/2022	<i>Caretta caretta</i>		FFM005/FFM006	54.4	56.1	60.8	62.5	50.8	45.2	28.4	North net
11/7/2022	<i>Caretta caretta</i>		FFM007/FFM008	68.9	69.7	75.5	70.3	56.8	54.0	51.5	South net
11/8/2022	<i>Chelonia mydas</i>		FFM009/FFM010	75.6	75.7	79.6	72.0	58.7	62.4	56.5	North net
11/11/2022	<i>Chelonia mydas</i>		FFM011/FFM012	39.1	39.2	41.1	35.6	31.7	32.7	8.0	Barrier net
11/12/2022	<i>Caretta caretta</i>	1	FFE439/FFE440	68.2	70.4	72.2	67.6	56.5	53.1	46.2	North net
11/12/2022	<i>Chelonia mydas</i>		FFM013/FFM014	56.2	56.5	59.5	52.4	44.1	46.1	23.6	Hand capture
11/12/2022	<i>Chelonia mydas</i>		FFM015/FFM016	65.2	65.6	69.4	63.0	53.2	53.3	37.6	Hand capture
11/12/2022	<i>Chelonia mydas</i>		FFM018/FFM017	31.4	31.8	33.8	29.7	26.8	26.6	3.9	Dip net
11/12/2022	<i>Chelonia mydas</i>		FFM019/FFM020	40.4	41.5	43.6	39.0	35.0	34.0	9.5	Dip net
11/12/2022	<i>Chelonia mydas</i>		FFM021/FFM022	29.6	30.4	32.0	28.2	24.9	24.8	3.4	Dip net
11/12/2022	<i>Chelonia mydas</i>		FFM023/FFM024	29.9	30.3	32.6	28.1	25.0	25.3	3.7	Dip net
11/12/2022	<i>Chelonia mydas</i>		IRG0458/IRG0459	26.5	26.9	27.9	23.9	21.5	22.3	2.4	Dip net
11/12/2022	<i>Chelonia mydas</i>		IRG0460/IRG0462	26.7	27.0	28.6	24.7	21.7	22.5	2.7	Dip net
11/12/2022	<i>Chelonia mydas</i>		IRG0463/IRG0464	27.3	27.7	29.0	23.7	21.0	22.2	2.3	Dip net
11/12/2022	<i>Chelonia mydas</i>		IRG0465/IRG0467	26.4	27.2	28.6	25.1	22.0	22.4	2.4	Dip net
11/12/2022	<i>Chelonia mydas</i>		IRG0468/IRG0469	26.9	27.4	28.9	25.5	22.7	23.0	2.7	Dip net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
11/13/2022	<i>Chelonia mydas</i>	2	FFE635/FFE636	44.2	44.6	46.5	41.4	35.2	36.6	11.2	Dip net
11/13/2022	<i>Chelonia mydas</i>		FFM025/FFM026	33.2	33.3	34.8	29.0	25.6	27.3	4.2	Dip net
11/13/2022	<i>Chelonia mydas</i>		FFM028	35.6	36.1	38.0	32.0	27.0	28.8	5.5	Dip net
11/13/2022	<i>Caretta caretta</i>	3	FFM029/FFM030	90.8	91.4	96.8	89.7	72.8	64.7	102.5	North net
11/13/2022	<i>Chelonia mydas</i>		FFM031/FFM032	31.5	31.7	33.2	29.0	24.7	26.2	3.8	Dip net
11/13/2022	<i>Chelonia mydas</i>		IRG0470/IRG0471	28.5	28.6	30.0	25.4	22.2	23.5	2.8	Dip net
11/13/2022	<i>Chelonia mydas</i>		IRG0472/IRG0473	28.4	28.7	30.4	28.0	23.8	23.8	3.0	Dip net
11/13/2022	<i>Chelonia mydas</i>		IRG0474/IRG0475	27.5	29.8	31.2	26.4	23.8	25.2	3.6	Dip net
11/13/2022	<i>Chelonia mydas</i>		IRG0476/IRG0477	27.5	27.8	29.2	24.1	21.5	22.5	2.5	Dip net
11/13/2022	<i>Chelonia mydas</i>		IRG0478/IRG0479	29.5	29.6	31.5	28.9	24.8	25.0	3.3	Dip net
11/13/2022	<i>Chelonia mydas</i>		IRG0480/IRG0481	27.0	27.3	28.1	24.2	21.9	22.2	2.5	Dip net
11/13/2022	<i>Chelonia mydas</i>		IRG0482/IRG0483	28.7	29.0	30.0	25.5	23.1	24.4	3.3	Dip net
11/13/2022	<i>Chelonia mydas</i>		IRG0485/IRG0484	28.0	28.5	29.5	24.5	22.6	23.5	2.7	North net
11/14/2022	<i>Chelonia mydas</i>		FFM033/FFM034	68.3	69.5	73.5	66.1	49.3	56.4	38.1	North net
11/14/2022	<i>Caretta caretta</i>		FFM035/FFM036	69.4	71.0	74.5	82.5	62.0	57.0	60.2	North net
11/14/2022	<i>Chelonia mydas</i>	4	FFM037/FFM038	50.3	50.6	53.5	47.1	39.9	40.7	16.1	North net
11/14/2022	<i>Chelonia mydas</i>	5	IRG0486/IRG0487	24.2	24.5	26.3	22.6	20.0	21.4	1.9	Intake well
11/15/2022	<i>Chelonia mydas</i>	6	IRG0488/IRG0489	22.0	22.1	23.0	19.9	18.4	18.4	1.2	Intake well
11/16/2022	<i>Chelonia mydas</i>	7	FFE635/FFE636	44.2	44.8	48.7	40.9	35.3	36.7	11.5	Dip net
11/16/2022	<i>Chelonia mydas</i>		IRG0490/IRG091	27.5	27.7	29.2	25.4	22.2	23.7	2.4	Dip net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
11/16/2022	<i>Chelonia mydas</i>	8	IRG0492/IRG0493	25.4	25.9	27.5	23.2	20.5	21.4	2.4	Intake well
11/16/2022	<i>Chelonia mydas</i>		IRG0494/IRG0495	28.5	28.6	29.8	25.6	22.7	23.9	2.9	Dip net
11/17/2022	<i>Caretta caretta</i>	9	FFM039/FFM040	80.7	82.3	89.5	80.4	61.3	59.4	80.3	North net
11/17/2022	<i>Chelonia mydas</i>		IRG0496/IRG0497	28.0	28.3	30.0	26.6	23.4	23.0	2.8	Dip net
11/18/2022	<i>Chelonia mydas</i>		FFM041/FFM042	31.4	31.7	33.4	27.5	24.5	25.5	3.6	South net
11/18/2022	<i>Chelonia mydas</i>		FFM043/FFM044	45.8	47.3	49.6	42.7	37.3	38.4	12.0	North net
11/19/2022	<i>Chelonia mydas</i>		FFM045/FFM046	53.4	53.6	56.5	49.2	41.3	44.0	19.2	North net
11/19/2022	<i>Chelonia mydas</i>		FFM047/FFM048	71.6	72.2	76.9	71.6	53.6	58.4	52.4	South net
11/19/2022	<i>Caretta caretta</i>		FFM049/FFM050	60.4	61.7	66.5	60.8	50.3	47.7	30.3	South net
11/19/2022	<i>Chelonia mydas</i>		IRG0498/IRG0499	26.3	26.8	28.1	25.4	22.0	22.4	2.4	Dip net
11/19/2022	<i>Chelonia mydas</i>		IRG0500/IRG0501	29.0	29.7	31.5	26.9	24.5	25.2	3.3	Dip net
11/19/2022	<i>Chelonia mydas</i>		IRG0502/IRG0503	25.1	25.3	26.9	22.1	19.9	20.9	1.8	Dip net
11/20/2022	<i>Chelonia mydas</i>	10	AMM221120-001	26.0	26.1	27.5	23.3	21.0	21.2		Intake well
11/20/2022	<i>Chelonia mydas</i>	11	FFM051/FFM052	45.7	46.0	48.0	42.0	35.7	37.7	11.6	South net
11/20/2022	<i>Chelonia mydas</i>		IRG0504/IRG0505	28.3	29.3	31.0	26.5	23.5	24.1	3.1	Dip net
11/20/2022	<i>Chelonia mydas</i>		IRG0506/IRG0507	25.7	25.8	27.8	23.2	20.4	21.3	1.9	South net
11/21/2022	<i>Caretta caretta</i>		FFM053/FFM054	61.9	63.2	68.4	66.5	51.5	49.9	37.4	South net
11/21/2022	<i>Chelonia mydas</i>		FFM055/FFM056	31.1	31.3	32.7	28.5	25.0	26.2	4.1	South net
11/22/2022	<i>Chelonia mydas</i>		FFM057/FFM058	33.5	33.9	36.2	30.3	26.5	27.7	4.7	Dip net
11/22/2022	<i>Chelonia mydas</i>		FFM059/FFM061	61.2	62.0	65.7	59.0	49.0	50.7	31.0	North net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCl (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
11/23/2022	<i>Chelonia mydas</i>		FFM062/FFM063	30.3	30.5	32.9	28.6	24.8	24.9	3.7	South net
11/23/2022	<i>Chelonia mydas</i>		FFM064/FFM065	30.9	31.0	32.9	29.0	24.9	25.6	4.1	South net
11/23/2022	<i>Chelonia mydas</i>		IRG0508/IRG0509	28.3	28.8	30.2	25.1	22.0	22.6	2.7	South net
11/23/2022	<i>Chelonia mydas</i>		IRG0510/IRG0511	28.0	28.6	30.3	27.0	23.1	23.0	2.7	South net
11/26/2022	<i>Chelonia mydas</i>		FFM066/FFM067	33.3	33.5	35.9	30.1	26.5	28.0	4.9	North net
11/26/2022	<i>Caretta caretta</i>		FFM068/FFM069	64.4	65.6	69.0	69.2	56.6	52.4	44.5	South net
11/26/2022	<i>Chelonia mydas</i>		FFM070/FFM071	40.0	40.2	42.3	35.7	30.6	31.0	7.1	South net
11/26/2022	<i>Chelonia mydas</i>		FFM072/FFM073	51.5	52.0	54.5	46.5	39.4	42.9	17.7	South net
11/26/2022	<i>Chelonia mydas</i>	12	IRG0512/IRG0513	25.9	26.3	27.3	23.2	20.5	21.3	2.4	Intake well
11/27/2022	<i>Caretta caretta</i>		FFM074/FFM075	53.4	54.1	59.3	55.6	46.9	42.9	26.5	South net
11/27/2022	<i>Chelonia mydas</i>	13	IRG0514/IRG0515	27.3	27.6	28.9	24.8	22.9	22.9	2.7	Intake well
11/28/2022	<i>Caretta caretta</i>		FFM076/FFM077	68.2	69.6	76.2	68.3	54.5	53.4	39.2	North net
11/29/2022	<i>Chelonia mydas</i>		FFM078/FFM079	36.1	36.4	38.6	34.2	28.8	29.2	6.2	South net
11/29/2022	<i>Chelonia mydas</i>		IRG0516/IRG0517	27.4	28.0	30.0	25.5	23.0	23.4	3.1	Dip net
11/29/2022	<i>Chelonia mydas</i>		IRG0518/IRG0519	27.9	28.1	28.3	23.6	22.0	23.5	2.4	Dip net
11/29/2022	<i>Chelonia mydas</i>		IRG0520/IRG0521	29.0	29.3	30.9	26.2	23.4	24.5	3.3	Dip net
11/30/2022	<i>Chelonia mydas</i>		FFM080/FFM081	29.7	30.4	31.5	27.0	23.5	24.9	3.3	Dip net
11/30/2022	<i>Chelonia mydas</i>		IRG0522/IRG0523	29.7	29.8	30.9	28.0	25.3	24.9	3.6	South net

NOTES

1. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/19/21, 5/23/22, 10/22/22, and 11/12/22. PAPILLOMAS (Balazs Tumor Score = 1 {light}, Total Tumor Score = 8). Longer tail, possible future male.
2. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/20/22 and 11/13/22.
3. Adult male loggerhead. Tail length = 405 mm. Healed 11cm crack across both marginal scutes.
4. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 2/1/22 and 11/14/22. New Inconel tags inserted on this capture event.
5. Turtle recovered from intake wells alive and in good body condition. Turtle has supernumerary scutes.
6. Turtle recovered from intake wells alive and in good body condition.
7. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/20/22, 11/13/22, and 11/16/22.
8. Turtle recovered from intake wells alive and in good body condition.
9. Adult male loggerhead. Tail length = 320 mm. Sex determination based on tail length.
10. DEAD (CAUSAL MORTALITY). Stranding# AMM221120-001. Severely decomposed juvenile green turtle recovered from the intake wells. Turtle missing head, front flippers, and 50% of both rear flippers from advanced decomposition. Turtle was taken to Dr. Nancy Mettee, DVM for necropsy and causality determination in accordance with protocol. The mortality was deemed causal based on the circumstances surrounding the turtle's death and subsequent discovery.
11. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 1/20/18 and 11/20/22.
12. Turtle recovered from intake wells alive and in good body condition.
13. Turtle recovered from intake wells alive and in good body condition.

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	
	Nov-22	Year to Date	Nov-22	Year to Date	Nov-22	Year to Date	Nov-22	Year to Date	Nov-22	Year to Date	Nov-22	Year to Date
Captures	11	138	64	128	0	0	0	1	0	1	75	268
Causal Mortalities	0	0	1	1	0	0	0	0	0	1	1	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	0	3	0	2	0	0	0	0	0	0	0	5
Fresh Scrapes	Nov-22	Year to Date	Nov-22	Year to Date	Nov-22	Year to Date	Nov-22	Year to Date	Nov-22	Year to Date	Nov-22	Year to Date
None	1	20	9	21	0	0	0	0	0	0	10	41
Minor	10	111	54	106	0	0	0	0	0	1	64	218
Moderate	0	7	1	1	0	0	0	1	0	0	1	9
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with mod/sev scrapes	0.0%	5.1%	1.6%	0.8%	N/A	N/A	N/A	100.0%	N/A	0.0%	1.3%	3.4%