

From: Steve Weege <sweege@inwater.org>
Sent: Friday, January 6, 2023 10:32 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; Annessia Michaels; Ryan Welsh
Subject: [External_Sender] December 2022 FPL Marine Turtle Removal Monthly Report
Attachments: December 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
December 2022**

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for December 2022. This month we captured seven *Caretta caretta* and 59 *Chelonia mydas* in the intake canal of the St. Lucie power plant on Hutchinson Island. Three sea turtles were sent for rehabilitation (non-causal) and there were no mortalities recorded this 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.

Three sea turtles were sent to rehab for non-causal injuries this month. On December 12th, a lethargic juvenile green turtle was dip-netted near the barrier net. On December 18th, another juvenile green turtle was proactively captured that had numerous healing wounds on its head and flippers (possibly from embedded barnacles). On December 20th, an adult male loggerhead was captured in the tangle nets with a severe laceration through its right front flipper; the distal third of its flipper was almost completely detached. This animal also had an old healed boat strike injury to its posteriormost carapace (prop scar visible through the last vertebral scute). All turtles this month were transported to the Loggerhead Marinelife Center in Juno Beach for rehab. Furthermore, because these injuries/illnesses were unrelated to the power plant, they were classified as non-causal strandings.

The primary 5-inch barrier net encountered only negligible amounts of algae in December. However, two turtles were discovered beyond the barrier net this month. Both turtles were in good condition and released following a routine workup. Even still, Inwater Research Group biologists increased capture efforts following the discovery that some turtles had progressed beyond the primary barrier net.

Moreover, nearly half (30 out of 66 turtles) were proactively removed from the intake canal this month. On December 9th, Underwater Engineering Services (UESI) divers performed the quarterly net inspections on the first two barrier nets (the 5-inch and 8-inch A-1-A) as well as the semiannual inspection of the UIDS net; the barrier nets were found to be in good working condition. Again, on the 28th, UESI divers inspected the 5-inch barrier net and no holes or damage were uncovered. Therefore, the two turtles that were recovered from the intake wells are believed to have passed through the primary barrier net after it was damaged by Hurricane Nicole.

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

Steve Weege

Sr. Environmental Specialist

Inwater Research Group, Inc.

4160 NE Hyline Dr.

Jensen Beach, FL 34957

sweege@inwater.org

(772) 349-7252

Hearing Identifier: NRR_DRMA
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Sent Date: 1/6/2023 10:31:58 AM
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From: Steve Weege

Created By: sweege@inwater.org

Recipients:

"Eldridge, Jodie" <Jodie.Eldridge@nexteraenergy.com>
Tracking Status: None
"Marine Turtle Permits" <MTP@myfwc.com>
Tracking Status: None
"Michael Bresette" <mbresette@inwater.org>
Tracking Status: None
"EndangeredSpecies Resource" <EndangeredSpecies.Resource@nrc.gov>
Tracking Status: None
"SCO@dep.state.fl.us" <SCO@dep.state.fl.us>
Tracking Status: None
"Vince Munne" <Vince.Munne@fpl.com>
Tracking Status: None
"Eaton, Kristin" <Kristin.Eaton@fpl.com>
Tracking Status: None
"William Nurnberger" <William.Nurnberger@fpl.com>
Tracking Status: None
"Audra Livergood - NOAA Federal" <audra.livergood@noaa.gov>
Tracking Status: None
"Cody Mott" <cmott@inwater.org>
Tracking Status: None
"Jguertin" <jguertin@inwater.org>
Tracking Status: None
"Robert.Craven@fpl.com" <Robert.Craven@fpl.com>
Tracking Status: None
"Damon Hobson" <Damon.Hobson@fpl.com>
Tracking Status: None
"Andrew.McHenry@fpl.com" <Andrew.McHenry@fpl.com>
Tracking Status: None
"Falkiewicz, Timothy" <Timothy.Falkiewicz@fpl.com>
Tracking Status: None
"Annessia Michaels" <AMichaels@inwater.org>
Tracking Status: None
"Ryan Welsh" <rwelsh@inwater.org>
Tracking Status: None
"Koperski, Meghan" <Meghan.Koperski@myfwc.com>
Tracking Status: None

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Files	Size	Date & Time
MESSAGE	3404	1/6/2023 10:32:49 AM

December 2022 Marine Turtle Captures.pdf		96895
Monthly Report Notes 2022.pdf	69428	
FPL St. Lucie Capture Summary 2022.pdf		86714

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**MARINE TURTLE REMOVALS
ST. LUCIE PLANT INTAKE CANAL
DECEMBER 2022**

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
12/1/2022	<i>Chelonia mydas</i>		IRG0524/IRG0526	29.3	30.0	31.0	26.1	23.6	24.6	3.1	South net
12/2/2022	<i>Chelonia mydas</i>	1	FFM082/FFM083	50.9	51.6	54.0	50.2	41.6	42.0	18.4	South net
12/3/2022	<i>Chelonia mydas</i>		FFM084/FFM085	31.6	32.1	33.8	27.2	23.7	26.5	4.2	Dip net
12/4/2022	<i>Chelonia mydas</i>		FFM086/FFM087	33.8	33.9	35.7	32.6	28.0	28.2	4.8	Dip net
12/5/2022	<i>Chelonia mydas</i>		FFM089/FFM090	31.1	31.5	33.1	28.5	24.8	25.7	3.8	North net
12/5/2022	<i>Chelonia mydas</i>		IRG0527/IRG0528	29.3	29.8	31.3	26.9	24.0	24.4	3.1	Dip net
12/6/2022	<i>Chelonia mydas</i>		FFM091/FFM092	30.5	30.6	32.0	28.0	24.9	24.8	3.2	South net
12/7/2022	<i>Chelonia mydas</i>		FFM093/FFM094	40.4	40.5	41.5	35.8	30.7	32.7	7.7	South net
12/7/2022	<i>Chelonia mydas</i>		FFM095/FFM096	56.4	56.5	59.7	53.3	45.3	46.5	23.2	South net
12/8/2022	<i>Chelonia mydas</i>		FFM097/FFM098	30.0	30.6	32.2	28.2	24.9	24.5	3.1	South net
12/12/2022	<i>Chelonia mydas</i>	2	4A591B0149	68.4	68.6	73.8	64.9	53.2	54.4	44.0	South net
12/12/2022	<i>Chelonia mydas</i>		FFM099/FFM100	31.8	32.0	32.7	27.1	25.3	27.0	3.7	North net
12/12/2022	<i>Chelonia mydas</i>	3	HWB221212-001	43.7	44.1	46.1	40.9	35.3	35.9	9.7	Dip net
12/13/2022	<i>Caretta caretta</i>		-/FFM303	62.2	62.3	69.7	65.6	51.3	47.5	34.0	North net
12/13/2022	<i>Chelonia mydas</i>	4	FFM301/FFM302	62.5	63.3	66.0	58.5	51.2	51.9	33.6	South net
12/14/2022	<i>Chelonia mydas</i>	5	982000402162928	51.9	52.1	56.1	48.4	40.6	40.7	17.1	South net
12/14/2022	<i>Chelonia mydas</i>		FFM304/FFM305	44.5	45.0	47.5	40.5	35.9	35.0	9.9	South net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
12/14/2022	<i>Chelonia mydas</i>		IRG0529/IRG0530	28.8	29.1	30.5	26.7	24.4	24.9	3.0	Dip net
12/15/2022	<i>Chelonia mydas</i>	6	FFM306/FFM307	39.1	39.8	41.9	35.7	31.7	33.3	8.4	Dip net
12/15/2022	<i>Chelonia mydas</i>		IRG0531/IRG0532	29.3	29.4	31.1	26.4	23.2	25.1	3.1	Dip net
12/16/2022	<i>Caretta caretta</i>		FFM308/FFM309	63.7	64.2	68.7	65.4	53.5	48.9	39.2	North net
12/17/2022	<i>Caretta caretta</i>	7	FFM310/FFM311	85.5	86.8	93.1	90.3	70.5	66.1	105.2	North net
12/17/2022	<i>Chelonia mydas</i>	8	FFM312/FFM313	36.3	36.6	39.1	33.3	27.8	28.5	5.9	North net
12/17/2022	<i>Chelonia mydas</i>	9	KKY061/-	58.0	58.4	61.4	58.5	46.2	47.9	24.4	North net
12/18/2022	<i>Chelonia mydas</i>		-/FFM314	31.4	31.9	33.5	29.4	25.9	26.0	4.2	Dip net
12/18/2022	<i>Chelonia mydas</i>	10	FFM315/FFM316	69.1	69.5	73.2	68.1	54.6	55.8	47.9	South net
12/18/2022	<i>Chelonia mydas</i>		FFM317/FFM318	30.7	31.4	33.1	29.2	25.8	25.7	3.8	South net
12/18/2022	<i>Chelonia mydas</i>		FFM319/FFM320	78.3	79.2	84.9	79.5	62.3	67.2	68.3	North net
12/18/2022	<i>Chelonia mydas</i>	11	HWB221218-001	30.9	31.3	32.7	27.8	25.0	25.5	3.5	Dip net
12/18/2022	<i>Chelonia mydas</i>		IRG0533/IRG0534	28.8	29.4	30.1	25.7	23.2	24.1	2.7	Dip net
12/18/2022	<i>Chelonia mydas</i>		IRG0536/IRG0537	25.8	25.9	27.9	23.6	20.9	21.7	2.6	Dip net
12/18/2022	<i>Chelonia mydas</i>		IRG0538/IRG0540	27.6	27.7	29.3	25.6	22.1	22.4	2.5	Dip net
12/18/2022	<i>Chelonia mydas</i>	12	IRG0541/IRG0542	27.2	27.9	29.2	24.1	21.9	23.2	2.5	Intake well
12/19/2022	<i>Chelonia mydas</i>		FFM321/FFM322	29.4	30.0	31.7	27.6	25.0	24.8	3.2	Dip net
12/19/2022	<i>Chelonia mydas</i>		FFM323/FFM324	30.8	31.0	33.3	29.1	24.9	25.2	4.4	Dip net
12/19/2022	<i>Chelonia mydas</i>		IRG0543/IRG0545	28.0	28.7	30.2	26.4	23.4	24.0	3.2	Dip net
12/19/2022	<i>Chelonia mydas</i>		IRG0546/IRG0547	25.2	25.4	26.7	23.2	20.9	20.9	1.8	Dip net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
12/19/2022	<i>Chelonia mydas</i>		IRG0548/IRG0549	28.3	28.5	30.6	26.7	23.5	23.4	3.1	Dip net
12/20/2022	<i>Caretta caretta</i>	13	HWB221220-001	84.5	85.2	91.5	89.1	67.3	66.7	100.3	North net
12/20/2022	<i>Chelonia mydas</i>		IRG0550/IRG0551	25.5	25.6	26.6	22.6	20.1	21.0	2.0	Dip net
12/20/2022	<i>Chelonia mydas</i>		IRG0552/IRG0553	26.1	26.2	27.2	23.0	20.8	22.3	2.1	Dip net
12/21/2022	<i>Chelonia mydas</i>		FFM325/FFM326	39.7	39.9	41.4	34.8	31.2	32.0	7.6	South net
12/22/2022	<i>Chelonia mydas</i>	14	982000402163339	53.7	54.3	57.5	52.6	42.4	44.7	21.3	South net
12/22/2022	<i>Caretta caretta</i>		FFM327/FFM328	63.1	64.1	66.6	66.9	56.0	50.8	36.1	North net
12/22/2022	<i>Chelonia mydas</i>		IRG0554/IRG0555	26.1	26.2	27.3	22.7	19.5	21.7	2.0	Dip net
12/23/2022	<i>Chelonia mydas</i>		FFM329/FFM330	39.6	39.7	42.0	35.1	30.5	33.2	8.1	Dip net
12/23/2022	<i>Chelonia mydas</i>		IRG0556/IRG0557	29.5	29.8	31.5	27.5	23.9	24.8	3.3	Dip net
12/23/2022	<i>Chelonia mydas</i>		IRG0558/IRG0559	28.1	28.3	29.2	27.0	23.5	22.5	2.9	Dip net
12/25/2022	<i>Chelonia mydas</i>		FFM331/-	46.4	46.8	50.0	44.5	37.3	38.7	14.0	Dip net
12/26/2022	<i>Chelonia mydas</i>		FFM332/FFM333	30.6	31.0	33.0	28.7	25.3	26.1	4.0	Dip net
12/26/2022	<i>Caretta caretta</i>		FFM334/FFM335	58.9	61.0	65.4	60.8	50.0	47.6	32.0	South net
12/26/2022	<i>Chelonia mydas</i>		FFM336/FFM337	32.8	33.3	35.4	29.6	26.6	26.5	4.9	Dip net
12/27/2022	<i>Chelonia mydas</i>		FFM338/FFM339	31.5	32.4	35.1	28.7	25.0	26.5	4.2	South net
12/27/2022	<i>Caretta caretta</i>	15	FFM340/FFM341	97.8	99.7	105.3	97.9	79.6	71.2	117.2	South net
12/28/2022	<i>Chelonia mydas</i>	16	IRG0560/IRG0561	26.8	27.4	28.6	25.2	22.9	22.7	2.3	Intake well
12/29/2022	<i>Chelonia mydas</i>		FFM342/FFM343	32.6	32.6	34.4	30.5	27.2	26.8	4.2	Dip net
12/29/2022	<i>Chelonia mydas</i>		FFM344/FFM345	31.9	32.0	33.4	27.3	23.8	25.8	3.7	South net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCl (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
12/29/2022	<i>Chelonia mydas</i>		FFM346/FFM347	50.7	51.6	54.0	48.1	42.9	43.3	16.9	South net
12/29/2022	<i>Chelonia mydas</i>	17	FFM348/FFM349	60.6	61.2	63.8	53.5	46.3	50.5	27.7	North net
12/29/2022	<i>Chelonia mydas</i>		IRG0562/IRG0563	27.9	28.1	29.7	25.3	22.6	23.7	2.8	Dip net
12/30/2022	<i>Chelonia mydas</i>		FFM350/FFM351	32.2	32.6	33.9	29.2	26.2	26.1	4.1	South net
12/30/2022	<i>Chelonia mydas</i>		FFM352/FFM353	30.4	31.1	32.7	28.7	25.9	26.3	3.6	Dip net
12/30/2022	<i>Chelonia mydas</i>		FFM354/FFM355	30.7	31.0	32.6	27.7	24.9	25.8	3.6	Dip net
12/30/2022	<i>Chelonia mydas</i>	18	IRG0541/IRG0542	27.3	27.8	29.3	24.1	21.8	23.0	2.5	South net
12/31/2022	<i>Chelonia mydas</i>	19	FFM037/FFM038	51.0	51.6	53.5	47.5	40.3	41.6	15.8	South net
12/31/2022	<i>Chelonia mydas</i>	20	FFM356/FFM357	56.6	57.1	59.5	54.5	46.7	46.5	23.1	South net

NOTES

1. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 12/13/20 and 12/2/22. New Inconel tags applied on this capture event.
2. 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, 4/18/19, 10/4/19, 11/30/20, 1/23/21, 12/12/22. Multiple tag scars on both front flippers (no new Inconel tags applied).
3. REHAB (NON-CAUSAL). Stranding# HWB221212-001. Lethargic juvenile green turtle dip netted near the barrier net. Metal detector scan was inconclusive (possible ingested hooks). Ecological Associates Inc. biologist transported the turtle to rehab at the Loggerhead Marinelife Center (LMC) in Juno Beach. Update 12/14/22: No evidence of hook ingestion and floating has resolved. Turtle now eating on its own.
4. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 2/1/19, 4/5/19, 12/13/22. New Inconel tags inserted on this capture event.
5. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/27/18, 4/19/19, 6/3/19, 9/14/19, 10/8/19, 12/2/19, 1/3/20, 8/16/20, 1/23/21, 1/6/22, 12/14/22. Multiple tag scars (no new Inconel tags inserted).
6. STRANGE TAG (PIT tag), stranded cold and lethargic 2/20/16 in Flagler County and went to Volusia Marine Science Center for rehab (released 5/12/16). Inconel tags placed on this capture event (12/15/22). Large depression in costal scutes on right side, mid-carapace.
7. Adult female loggerhead. Tail length = 285 mm.
8. PAPHILOMAS (Balazs Tumor Score = 1 {light}, Total Tumor Score = 1). One papilloma tumor on left eye.
9. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/12/20, 12/16/21, 12/17/22.
10. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 9/22/10, 10/13/11, 12/18/22.
11. REHAB (NON-CAUSAL). Stranding# HWB221218-001. Turtle had numerous healing wounds on head and flippers (possibly from embedded barnacles). Inwater Research Group biologists (IRG) transported partway to LMC in Juno Beach for rehab.
12. Turtle recovered from the intake wells overnight. It was alive and in good condition. Turtle was held until morning and released following a routine workup.
13. REHAB (NON-CAUSAL). Stranding# HWB221220-001. Adult male loggerhead (tail length = 455 mm) with a severe laceration through its right front flipper (distal third of flipper almost completely detached). Old healed boat strike injury in posteriormost carapace (prop scar through last vertebral scute). IRG transported the turtle to LMC in Juno Beach for rehab.
14. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 7/19/18, 12/10/18, 3/31/19, 12/9/19, 1/7/20, 2/15/20, 5/5/20, 8/11/20, 10/25/20, 1/13/21, 4/22/21, 1/5/22, 3/17/22, 10/6/22, 12/22/22. No new Inconel tags inserted due to multiple tag scars.
15. Adult male loggerhead. Tail length = 445 mm.
16. Turtle recovered from the intake wells overnight. It was alive and in good condition, although underweight. Turtle was held until morning and released following a routine workup.
17. PAPHILOMAS (Balazs Tumor Score = 1 {light}, Total Tumor Score = 1).
18. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 12/18/22, 12/30/22.
19. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 2/1/22, 11/14/22, 12/31/22.
20. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/25/20 and 12/31/22. New Inconel tags inserted on this capture event.

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	
	Dec-22	Year to Date	Dec-22	Year to Date	Dec-22	Year to Date	Dec-22	Year to Date	Dec-22	Year to Date	Dec-22	Year to Date
Captures	7	145	59	187	0	0	0	1	0	1	66	334
Causal Mortalities	0	0	0	1	0	0	0	0	0	1	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	1	4	2	4	0	0	0	0	0	0	3	8
Fresh Scrapes												
None	0	20	9	30	0	0	0	0	0	0	9	50
Minor	7	118	50	156	0	0	0	0	0	1	57	275
Moderate	0	7	0	1	0	0	0	1	0	0	0	9
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with mod/sev scrapes	0.0%	4.8%	0.0%	0.5%	N/A	N/A	N/A	100.0%	N/A	0.0%	0.0%	2.7%