

NRR-DMPSPeM Resource

From: Steve Weege <steveeweeg@gmail.com>
Sent: Tuesday, December 19, 2017 11:08 AM
To: EndangeredSpecies Resource; Grange, Briana
Subject: [External_Sender] Re: November 2017 FPL Marine Turtle Removal Monthly Report
Attachments: November Sea Turtle Monthly Report.pdf

Dear Briana,

I just received your message. Here is the entire monthly report as a single pdf file. Please let me know if you need anything else.

Sincerely,
Steve

Steve Weege
Sr. Envir. Specialist
Inwater Research Group, Inc.
4160 NE Hyline Drive
Jensen Beach, FL 34957
(772) 349-7252

On Wed, Dec 13, 2017 at 8:08 AM, EndangeredSpecies Resource <EndangeredSpecies.Resource@nrc.gov> wrote:

Hi Steve,

Would you be able to resend this report to me? The NRC mail system removed all of the attachments. This isn't usually a problem, so I am hoping it's an anomaly. Thanks!

Briana

Briana A. Grange

Aquatic Biologist

Division of Materials and License Renewal

Office of Nuclear Reactor Regulation

U.S. Nuclear Regulatory Commission

[301-415-1042](tel:301-415-1042)

briana.grange@nrc.gov

From: Steve Weege [mailto:steveewege@gmail.com]
Sent: Friday, December 01, 2017 10:37 AM
To: Meghan Koperski <[Meghan.Koperski@myfwc.com](mailto: Meghan.Koperski@myfwc.com)>
Cc: Ed Hollowell <[Ed.Hollowell@fpl.com](mailto: Ed.Hollowell@fpl.com)>; Jodie Gless <[Jodie_Gless@fpl.com](mailto: Jodie_Gless@fpl.com)>; Ken Frehafer <[Ken_Frehafer@fpl.com](mailto: Ken_Frehafer@fpl.com)>; Marine Turtle Permit <[MTP@myfwc.com](mailto: MTP@myfwc.com)>; Michael Bresette <[mbresette@inwater.org](mailto: mbresette@inwater.org)>; EndangeredSpecies Resource <[EndangeredSpecies.Resource@nrc.gov](mailto: EndangeredSpecies.Resource@nrc.gov)>; [SCO@dep.state.fl.us](mailto: SCO@dep.state.fl.us); Vince Munne <[Vince.Munne@fpl.com](mailto: Vince.Munne@fpl.com)>; Cody Mott <[cmott@inwater.org](mailto: cmott@inwater.org)>; Jeff Guertin <[jguertin@gmail.com](mailto: jguertin@gmail.com)>; Ryan Welsh <[rwelsh@inwater.org](mailto: rwelsh@inwater.org)>; [debbie.spring@noaa.gov](mailto: debbie.spring@noaa.gov); Eaton, Kristin <[Kristin.Eaton@fpl.com](mailto: Kristin.Eaton@fpl.com)>; Jonathan Gorham <[jgorham@inwater.org](mailto: jgorham@inwater.org)>; [William.Nurnberger@fpl.com](mailto: William.Nurnberger@fpl.com); Audra Livergood - NOAA Federal <[audra.livergood@noaa.gov](mailto: audra.livergood@noaa.gov)>
Subject: [External_Sender] November 2017 FPL Marine Turtle Removal Monthly Report

Mrs. Meghan Koperski

Tequesta Field Laboratory

[19100 SE Federal Highway](#)

[Tequesta, FL 33469](#)

Subject: Marine Turtle Removal Monthly Summary

November 2017

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for November 2017. This month, we captured 12 *Caretta caretta* and 22 *Chelonia mydas* in the intake canal of the St. Lucie power plant on Hutchinson Island. There were no mortalities or sea turtles sent for rehabilitation in November. However, one smalltooth sawfish was entrained into the intake canal this month which resulted in the power plant exceeding the take limit established by the most recent Biological Opinion as set forth by the National Marine Fisheries Service (NMFS).

On November 2nd, a smalltooth sawfish (*Pristis pectinata*) became entangled in the turtle capture nets at the St. Lucie Power Plant intake canal. Additional resources from IRG, FPL, and Harbor Branch Oceanographic Institute (HBOI) were called in to assist with the removal. Removal was completed according to the Smalltooth Sawfish Handling, Transportation, and Release Protocols (FPL 2007) and recent smalltooth sawfish on-site training (2016). The smalltooth sawfish was an adult female with a total length of 372 cm and an estimated weight of 200 kg. The animal was in good condition with only minor fresh scrapes. Tissue samples were collected and tags applied by HBOI biologists under NMFS permit 21043. It was successfully released into the ocean adjacent to the intake canal beach access. Thereafter, IRG biologists monitored the three-mile stretch of beach near the release site for any possible delayed impacts on the captured smalltooth sawfish for seven days. The incidental take limit established by the 2016 Biological Opinion set forth by NMFS is one non-lethal capture (take) of U.S. Distinct Population Segment smalltooth sawfish every five years. Therefore, as this is the second smalltooth sawfish encountered in the intake canal this year, FPL has exceeded its take limit and must reinitiate a section 7 consultation with NMFS.

The permanent 5-inch barrier net encountered light loads of algae during the month of November. Underwater Engineering Services continued to inspect the A-1-A barrier net weekly and removed accumulated algae and debris as needed. Furthermore, IRG inspected the entire length of the intake canal (up to the security barrier) at least twice daily for turtles that may have made it past the primary or secondary barrier nets. The area between the 5-inch and 8-inch barrier nets was also monitored periodically with a small john boat. No turtles were encountered west of the primary barrier net in November.

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 2017. In addition, this spreadsheet tracks fresh scrapes incurred on captured turtles for the current month, as well as the entire year. An additional Excel spreadsheet tracks all causal injuries and mortalities incurred by sea turtles at the St. Lucie Plant since 2004.

Please feel free to contact me with any questions.

Sincerely,

Steve

Steve Weege

Sr. Environmental Specialist

Inwater Research Group, Inc.

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Email Number: 127

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Subject: [External_Sender] Re: November 2017 FPL Marine Turtle Removal Monthly Report
Sent Date: 12/19/2017 11:07:53 AM
Received Date: 12/19/2017 11:09:10 AM
From: Steve Weege

Created By: steveweege@gmail.com

Recipients:
"EndangeredSpecies Resource" <EndangeredSpecies.Resource@nrc.gov>
Tracking Status: None
"Grange, Briana" <Briana.Grange@nrc.gov>
Tracking Status: None

Post Office: mail.gmail.com

Files	Size	Date & Time
MESSAGE	6634	12/19/2017 11:09:10 AM
November Sea Turtle Monthly Report.pdf		287520

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

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

**Subject: Marine Turtle Removal Monthly Summary
November 2017**

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Steve

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MARINE TURTLE REMOVALS ST. LUCIE PLANT INTAKE CANAL NOVEMBER 2017

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
11/4/2017	<i>Caretta caretta</i>		MMX083/MMX084	70.9	72.2	77.5	75.0	59.4	57.1	51.3	South net
11/5/2017	<i>Caretta caretta</i>	1	MMA860/MMA861	63.6	64.7	69.2	67.1	54.4	49.6	39.7	South net
11/5/2017	<i>Chelonia mydas</i>	2	MMX085/MMX086	99.3	99.7	107.8	99.6	82.2	80.5	136.8	South net
11/5/2017	<i>Chelonia mydas</i>	3	MMX087/MMX088	50.0	50.1	52.5	45.0	38.1	41.4	15.1	North net
11/5/2017	<i>Caretta caretta</i>		MMX089/MMX090	65.2	66.9	72.4	74.8	59.8	53.4	45.9	South net
11/6/2017	<i>Chelonia mydas</i>	4	MML362/MML363	57.5	57.7	61.0	55.6	44.7	48.1	23.9	North net
11/7/2017	<i>Caretta caretta</i>	5	422E742232	77.2	77.7	81.2	76.5	60.2	54.7	67.6	South net
11/8/2017	<i>Chelonia mydas</i>	6	4A6B646A72	54.7	55.0	59.0	53.7	43.3	47.1	21.8	South net
11/10/2017	<i>Chelonia mydas</i>	7	45430D265B	58.5	58.6	61.4	50.4	41.8	48.0	23.7	South net
11/10/2017	<i>Chelonia mydas</i>	8	MMX091/MMX092	91.6	92.1	96.5	88.8	68.0	72.6	103.1	South net
11/13/2017	<i>Chelonia mydas</i>		MMX093/MMX094	67.7	68.4	73.2	66.5	55.9	56.0	42.9	North net
11/13/2017	<i>Chelonia mydas</i>		MMX095	27.4	27.6	29.2	25.1	23.1	22.7	3.0	Barrier net
11/14/2017	<i>Chelonia mydas</i>	9	44577D0830	62.5	62.6	67.3	63.4	49.4	50.5	32.6	North net
11/14/2017	<i>Chelonia mydas</i>		MMX096/MMX097	45.7	46.3	48.0	42.3	36.9	37.5	12.2	North net
11/16/2017	<i>Chelonia mydas</i>	10	MMX098/MMX099	53.0	54.6	59.0	55.3	46.1	48.0	23.9	North net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCl (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
11/18/2017	<i>Chelonia mydas</i>	11	MMA594/MMX100	49.7	50.4	53.5	45.2	38.9	39.6	14.8	South net
11/18/2017	<i>Chelonia mydas</i>		MMX101/MMX102	62.5	63.0	66.7	57.9	49.2	52.5	34.4	South net
11/19/2017	<i>Caretta caretta</i>	12	MMX103/MMX104	88.4	88.9	94.4	89.9	63.4	68.1	97.0	North net
11/19/2017	<i>Chelonia mydas</i>	13	MMX105/MMX106	59.5	59.7	63.2	57.8	45.9	48.9	27.2	South net
11/19/2017	<i>Caretta caretta</i>		MMX107/MMX108	69.0	70.6	76.0	68.9	54.7	51.8	43.5	North net
11/20/2017	<i>Chelonia mydas</i>	14	MMA866/MMA867	55.5	55.6	59.2	55.7	43.8	45.0	23.4	South net
11/22/2017	<i>Caretta caretta</i>		MMX109/MMX110	70.5	72.4	77.0	70.8	59.2	56.5	49.3	North net
11/22/2017	<i>Caretta caretta</i>		MMX111/MMX112	73.6	74.8	79.9	76.7	61.7	55.5	61.0	North net
11/22/2017	<i>Chelonia mydas</i>		MMX113/MMX114	59.9	60.1	63.3	60.0	52.2	53.0	36.6	North net
11/25/2017	<i>Caretta caretta</i>		MMX115/MMX116	67.4	68.5	73.6	68.4	56.0	52.9	45.6	North net
11/25/2017	<i>Chelonia mydas</i>		MMX117/MMX118	56.1	56.2	59.2	56.6	45.7	45.6	24.5	South net
11/28/2017	<i>Caretta caretta</i>		MMX119/MMX120	56.3	56.9	62.9	61.4	48.6	45.1	31.7	North net
11/28/2017	<i>Chelonia mydas</i>		MMX121/MMX122	61.3	61.9	65.3	55.6	47.5	50.8	28.5	South net
11/29/2017	<i>Chelonia mydas</i>	15	MMX087/MMX088	50.1	50.2	52.5	45.7	38.2	41.4	14.3	North net
11/29/2017	<i>Caretta caretta</i>		MMX123/MMX124	57.8	59.1	63.4	62.0	50.0	46.5	30.8	North net
11/30/2017	<i>Chelonia mydas</i>	16	LLP424/MMA835	45.8	46.1	47.6	43.1	36.4	37.5	11.6	South net
11/30/2017	<i>Caretta caretta</i>		MMX125/MMX126	65.5	67.1	72.3	71.0	58.0	52.6	45.0	South net
11/30/2017	<i>Chelonia mydas</i>		MMX127	31.6	32.0	32.8	28.0	26.1	27.2	4.1	North net
11/30/2017	<i>Chelonia mydas</i>		MMX128/MMX129	49.1	50.0	52.5	45.0	37.5	39.2	15.2	North net

NOTES

1. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/30/2017 and 11/5/17.
2. Adult female. Tail length = 240 mm.
3. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/12/11, 2/22/15, and 11/5/17.
4. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 4/10/12, 12/18/12, 3/29/13, 12/13/13, 9/7/14, 7/25/15, 2/23/16, 6/27/17, 10/22/17, and 11/6/17.
5. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/30/89, 9/6/90, 10/11/90, 10/15/90, 2/23/91, 8/10/92, 8/27/92, 9/21/92, 1/6/93, 6/8/93, 12/29/93, 3/22/94, 10/31/94, 3/17/95, 4/20/95, 2/7/96, 4/7/96, 7/11/96, 7/23/96, 7/29/96, 9/22/96, 10/9/96, 6/13/97, 5/15/98, 4/15/00, 6/13/00, 9/8/00, 11/19/00, 11/15/01, 9/16/02, 4/30/03, 11/24/03, 3/31/04, 9/15/04, 10/25/04, 8/10/05, 8/16/06, 4/30/08, 9/26/08, 8/19/09, 12/28/12, 4/17/13, 9/2/14, 10/7/17, and 11/7/17. Adult male. Tail length = 240 mm. Sex determination based on tail length.
6. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 2/6/06, 4/3/09, 7/28/09, 12/3/09, 2/11/10, 9/3/10, 5/18/11, 1/9/12, 10/31/12, 4/11/13, 7/29/13, 1/3/14, 7/7/14, 3/11/15, 3/1/16, 4/29/16, 6/8/17, 10/26/17, and 11/8/17. PAPILLOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 4). Large papilloma tumor in each tag scar.
7. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/29/09, 7/24/09, 11/18/11, 4/11/13, 2/9/15, 7/2/15, 10/30/16, 9/21/17, 10/11/17, and 11/10/17. Moderate fresh scrapes behind right eye and around nares. Turtle missing 95% of right rear flipper (healed). Old compression injury or congenital deformity to carapace (margins compressed inward along both sides, mid-carapace).
8. Adult female. Tail length = 263 mm.
9. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 3/1/04, 11/3/04, 11/21/04, 7/8/05, 8/12/05, 9/13/05, 4/24/06, 9/29/06, 11/19/06, 12/4/06, 12/9/07, 2/10/08, 4/3/08, 9/14/08, 11/26/08, 12/18/08, 12/14/09, 1/11/10, 9/21/10, 7/25/11, 10/13/11, 7/12/12, 12/16/12, 8/19/13, 2/12/14, 5/7/14, 1/4/16, 4/26/16, 10/23/17, and 11/14/17.
10. PAPILLOMAS (Balazs Tumor Score = 2 {moderate}, Total Tumor Score = 33). Turtle missing 5% from posterior carapace and 90% of right rear flipper. Carapace and flipper damage are old/healed.
11. 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, and 11/18/17. New Inconel tag inserted on this capture event.
12. Adult female. Tail length = 270 mm. Longitudinal 27 cm crack through middle of posterior end of carapace and another 17 cm crack through the 4th and 5th right costal scutes.
13. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 12/23/09, 3/23/10, 9/22/10, 1/31/11, 10/13/11, 11/17/11, 12/20/12, 3/27/15, 8/3/15, 1/9/16, 2/26/16, and 11/19/17. New Inconel tags inserted on this capture event.
14. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 8/5/08, 5/10/11, 6/13/11, 7/25/11, 7/7/12, 2/5/13, 3/20/13, 5/7/14, 1/3/15, 4/16/15, 6/15/15, 5/30/17, 7/24/17, 10/21/17, and 11/20/17.
15. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 11/12/11, 2/22/15, 11/5/17, and 11/29/17.
16. RECAPTURE. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 9/26/10, 1/17/16, 5/24/17.

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-17	Year to Date	Nov-17	Year to Date	Nov-17	Year to Date	Nov-17	Year to Date	Nov-17	Year to Date	Nov-17	Year to Date
Captures	12	234	22	168	0	1	0	0	0	0	34	403
Causal Mortalities	0	1	0	3	0	0	0	0	0	0	0	4
Non-Causal Mortalities	0	1	0	2	0	0	0	0	0	0	0	3
Causal Injuries	0	0	0	1	0	0	0	0	0	0	0	1
Sent to Rehab	0	13	0	3	0	0	0	0	0	0	0	16
Fresh Scrapes	Nov-17	Year to Date	Nov-17	Year to Date	Nov-17	Year to Date	Nov-17	Year to Date	Nov-17	Year to Date	Nov-17	Year to Date
None	1	28	2	25	0	0	0	0	0	0	3	53
Minor	11	196	18	131	0	1	0	0	0	0	29	328
Moderate	0	10	2	12	0	0	0	0	0	0	2	22
Severe	0	0	0	0	0	0	0	0	0	0	0	0
Percent with Mod/Sev Scrapes	0.0%	4.3%	9.1%	7.1%	N/A	0.0%	N/A	N/A	N/A	N/A	5.9%	5.5%

St Lucie Power Plant Causal Turtles		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2017	Injury / Mortality Totals by Species
Loggerhead	Total Captures	623	484	419	227	420	260	295	302	232	302	275	274	316	234	4,663
	Injuries	0	1	*3	0	1	1	0	0	1	1	0	0	0	0	8
	Mortalities	1	0	*21	0	0	0	1	0	0	0	0	0	1	1	25
Green	Total Captures	286	428	267	101	299	161	444	217	127	197	134	181	159	168	3,169
	Injuries	0	3	7	0	2	2	1	0	0	0	0	0	0	1	16
	Mortalities	1	1	1	1	2	0	3	1	2	2	0	4	0	3	21
Leatherback	Total Captures	2	0	1	1	0	1	2	0	2	2	0	2	1	0	14
	Injuries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mortalities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kemp's Ridley	Total Captures	1	3	3	0	2	0	7	0	0	0	2	7	6	0	31
	Injuries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mortalities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawksbill	Total Captures	2	2	2	1	4	2	3	2	1	2	3	1	4	1	30
	Injuries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mortalities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Injury & Mortality Yearly Totals		2	5	32	1	5	3	5	1	3	3	0	4	1	5	70
Total Captures per Year		914	917	692	330	725	424	751	521	362	503	414	465	486	403	7,907

* The loggerhead causal injuries and mortalities in 2006 were all hatchlings.

**2017 is a partial year.