Balsam, Briana

From: Michael Bresette@fpl.com

Sent: Wednesday, January 07, 2009 8:18 AM

To: Meghan.Koperski@MyFWC.com; Logan, Dennis; Ed_Hollowell@fpl.com;

Shelley.Norton@noaa.gov; Vince_Munne@fpl.com; Winifred.Perkins@fpl.com; Bob.Hoffman@noaa.gov; Stacy.Foster@fpl.com; David Niebch@fpl.com;

Jodie.Gless@fpl.com

Subject: December Sea Turtle captures

Attachments: December08.pdf; St. Lucie caps 2008.xls

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

Subject: Marine Turtle Removal Monthly Summary

December 2008

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for December 2008. In December, we captured forty eight (48) <u>Caretta caretta</u> and forty nine (49) <u>Chelonia mydas</u> at the intake canal of the St. Lucie power plant on South Hutchinson Island. On December 9, a juvenile green turtle was found dead at the top of the primary barrier net. This turtle was kept on ice and transported to Dr. Nancy Mettee for necropsy. After consultation with personnel from FWCC and after reviewing initial results from the gross necropsy it was likely that the turtle drowned and the incident was considered causal to power plant operation. Two other green turtles were sent to rehabilitation facilities during December for treatment of non causal injuries. One green turtle was found with a fishing hook embedded in its neck and the other had healing injuries consistent with a boat hit. All other turtles were released on the same day of capture.

Tag numbers and morphmetric data for all turtles are attached. Also, attached is a spreadsheet of all captures, mortalities, injuries and causal events delineated by species and month for 2008. This spreadsheet tracks fresh scrapes and will be helpful in determining the success of the intake pipe cleaning project. If you have any questions or comments about the enclosed data please contact me at your convenience.

Sincerely,

Michael J. Bresette Sr. Environmental Specialist Quantum Resources, Inc.

(See attached file: December08.pdf)(See attached file: St. Lucie caps 2008.xls)

MARINE TURTLE REMOVALS ST. LUCIE PLANT INTAKE CANAL DECEMBER 2008

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
12/1/2008	Caretta caretta	9	YYR452/YYR453	49 1	50 0	55 9	53.6	43 1	38 5	17 4	Hand capture
12/2/2008	Chelonia myda	S		26 6	26 8	28 6	23 7	20 5	21 5	2.3	Dip net
12/2/2008	Chelonia myda	s		29 4	29 9	31 8	27 8	24 2	25.3	3 5	Hand capture
12/2/2008	Caretta caretta	9	YYR454/YYR455	59 8	60.5	66 1	60.7	50 4	47.4	29 0	Hand capture
12/2/2008	Caretta caretta	}	YYR456/YYR457	70 5	72 1	75 6	71 0	61 1	55 6	45 4	South net
12/2/2008	Caretta caretta	9	YYR458/YYR459	62 6	63 4	69.0	64 1	53 7	48 7	36 3	Hand capture
12/2/2008	Caretta caretta	3	YYR460/YYR461	63.9	64.6	70 0	67 4	55.4	50.8	40 7	Hand capture
12/2/2008	Caretta caretta	;	YYR462/YYR463	72 0	73 7	78 9	75.3	58 9	57 0	47 8	Hand capture
12/3/2008	Chelonia myda	s		28 9	29 3	31 2	27 0	23 5	23 4	3.2	Hand capture
12/3/2008	Chelonia myda	s 1	TTJ832	50 8	51.2	54 5	48 6	40 8	41 8	18 1	Hand capture
12/4/2008	Chelonia myda	s		29 9	30 6	32 5	25.6	22 8	25.5	3 6	Dip net
12/4/2008	Caretta caretta	1	YYR464/YYR465	56 3	57 3	63 1	59 5	48 5	44 8	26 2	North net
12/5/2008	Chelonia myda:	s 2		62 2	62.3	66 7	59 3	47 8	52 7	32 4	Hand capture
12/5/2008	Chelonia myda:	s 3		60 3	61 5	67 6	60 0	50.6	49.8	35 0	Hand capture
12/5/2008	Chelonia myda:	s 4		47 8	48.1	55 2	48 6	39 2	40 1	19 0	Hand capture
12/5/2008	Chelonia myda:	s 5	YYR381	36 3	36 7	38 6	32 7	28 4	30 0	6 4	Hand capture
12/5/2008	Caretta caretta		YYR466/YYR467	68.9	70 0	75 3	71.3	58 3	54.0	50 3	Hand capture

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
12/5/2008	Chelonia myda	s 6	YYR468	54 0	54 4	57 6	52 2	44.1	44 6	22 2	Hand capture
12/5/2008	Caretta caretta	ì	YYR469/YYR470	74 1	75 5	83.8	76.2	56.2	57 1	53 8	Hand capture
12/5/2008	Caretta caretta	ì	YYR471/YYR472	55 0	61 5	67.7	72.7	58.0	53.6	48 7	Hand capture
12/5/2008	Caretta caretta	t	YYR473/YYR474	66 7	68 0	72 7	67 2	55 7	52.6	42 0	Hand capture
12/5/2008	Chelonia myda	s 7	YYR475/YYR476	55 3	56 0	59 6	52 6	44 8	44 6	22 1	Hand capture
12/5/2008	Chelonia myda	s	YYR477/YYR478	70.0	70.6	75 6	68 7	56 7	57 3	47.6	Hand capture
12/6/2008	Chelonia myda	s 8		31 4	31 5	33 6	29 5	25 7	25 6	4.2	Hand capture
12/8/2008	Caretta caretta	9	YYR076/YYR077	69 7	71 2	74 8	69.7	54.6	53 5	46 4	North net
12/9/2008	Chelonia myda	s 10		26 2	26 4	28.0	24.0	21 3	22.5	23	Barrier net
12/9/2008	Chelonia myda	s		28 2	28 6	30 0	25 5	23 1	23 3	3 0	South net
12/9/2008	Chelonia myda	s		31.8	32.8	35 6	30 2	25 6	27 6	48	Hand capture
12/9/2008	Chelonia myda	S		28.2	28.7	30 4	25 6	23 1	24 2	2.9	North net
12/10/2008	Chelonia myda	s		32 1	32 4	34.5	29 4	25.6	26 5	4 0	North net
12/10/2008	Chelonia myda:	s 11		54 5	54 6	59.2	52.0	42 4	45.0	22 3	North net
12/10/2008	Chelonia myda	s 12	YYR479/YYR480	81 2	81 8	87 3	76 4	62 8	68 5	75 4	North net
12/11/2008	Caretta caretta		YYR481/YYR482	73.2	76.1	82 0	73 6	55 4	54 9	54.6	North net
12/11/2008	Caretta caretta		YYR483/YYR484	66 1	66.8	73 2	66 8	55.2	53.1	44 2	North net
12/12/2008	Chelonia myda:	5		28 4	28 9	30.4	26.1	23 7	24.0	29	Hand capture
12/13/2008	Chelonia mydas	3 13	YYB196	47 6	48 1	50 7	44 6	37 3	39 2	14 5	North net
12/14/2008	Chelonia myda:	\$		33 5	33.9	36 4	30 1	27 1	27 5	4 4	Hand capture

Date	Species	Note	Tag #'s				CMCW				Method
12/14/2008	Chelonia myda:	s 14		(cm) 39.4	(cm) 39.7	(cm) 42 3	(cm) 36 0	(cm) 31 4	(cm) 32.3	(kg) 73	South net
12/15/2008	Chelonia myda	s		28.7	28.8	30 7	25 7	23 9	24.3	3 1	Hand capture
12/15/2008	Chelonia myda:	s		29.0	29.3	31 5	26 9	23 9	24.7	3 4	Hand capture
12/15/2008	Caretta caretta		YYR485/YYR486	59 3	60 9	66 4	65 2	52 5	48.3	35 7	North net
12/15/2008	Caretta caretta		YYR487/YYR488	57 2	58 0	64 5	61 7	51 8	45 7	31 3	South net
12/15/2008	Caretta caretta		YYR489/YYR490	59 3	60 4	64 7	64 5	52 7	48 3	31 7	North net
12/16/2008	Chelonia myda:	S		30 4	32 1	34 1	28.7	26 0	27 2	4 3	North net
12/16/2008	Chelonia myda:	s		32 7	32 9	35.4	28.0	25.0	27 6	4 1	Hand capture
12/16/2008	Chelonia myda:	s 15	YYB158	45 8	46 4	48.5	43 7	36 7	38 1	13.2	Hand capture
12/16/2008	Caretta caretta		YYR491/YYR492	54.8	55 9	60 2	59 8	47 6	42 6	24 7	Hand capture
12/16/2008	Caretta caretta		YYR493/YYR494	73.7	75.2	82 5	74 5	60 5	56.4	55.3	Hand capture
12/17/2008	Caretta caretta		YYR495/YYR496	67 3	68.0	74.1	71 2	56 1	50.4	35.9	North net
12/18/2008	Chelonia mydas	s 16		39 9	40 2	43 9	37 6	32 0	32.2	77	Hand capture
12/18/2008	Chelonia mydas	s 17	RRM837	48 3	48 3	51 7	47 7	38 9	39 4	14 8	South net
12/18/2008	Chelonia mydas	3	YYR497	53 7	53 8	57.5	49.8	42.2	44 5	20 9	South net
12/18/2008	Caretta caretta		YYR498/YYR499	67 1	68 6	75 0	73 3	57.2	54 5	49 4	South net
12/19/2008	Chelonia mydas	3		29.0	29.4	32 8	27 4	24 5	23 8	3 2	Hand capture
12/19/2008	Chelonia mydas	3		30 7	31 1	34 3	29 5	26 2	24.7	4.0	Hand capture
12/19/2008	Chelonia mydas	3		25 2	25 5	26.7	23 6	21 3	21 2	22	South net
12/19/2008	Chelonia mydas	3		27.5	27 9	30.8	24 3	21.8	23 3	28	Hand capture

Date	Species N	lote	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
12/19/2008	Chelonia mydas			31 9	32 2	34 1	30 2	26 3	27 2	4 1	Hand capture
12/19/2008	Caretta caretta	18	YYR383/YYR384	68 1	69 6	74 7	71.2	56 7	51.6	42.3	Hand capture
12/19/2008	Caretta caretta		YYW000/YYW001	64 1	65.0	71 4	67 2	54 6	49.9	37 7	Hand capture
12/19/2008	Caretta caretta		YYW002/YYW003	70.8	72.4	79 1	74 9	59 3	56 3	51 8	Hand capture
12/19/2008	Caretta caretta		YYW004/YYW005	64.9	66 2	72 0	68 1	53.6	50 4	41 4	South net
12/19/2008	Caretta caretta		YYW006/YYW007	65 6	67 0	72.9	67 3	56 5	52 2	38 3	Hand capture
12/20/2008	Chelonia mydas	:		28 9	29 2	30 8	25 5	23 5	23 8	3 0	Dip net
12/21/2008	Chelonia mydas	19		50 5	50 8	53 8	46.5	39 1	42.2	15.9	Hand capture
12/21/2008	Caretta caretta		YYW008/YYW009	62 5	63 5	68 7	66.1	54 0	49.8	38 7	North net
12/22/2008	Chelonia mydas	20		52 6	52 9	56 4	50 5	42 7	42 9	19 4	South net
12/23/2008	Caretta caretta		YYW010/YYW011	65 6	67 7	73 0	69 4	53 6	52 0	41 2	Hand capture
12/23/2008	Caretta caretta		YYW012/YYW013	70 3	72.0	78 6	69 6	56.5	54 0	40 4	Dip net
12/24/2008	Caretta caretta		YYW014/YYW015	64 0	64.9	70 8	67 7	53 5	51 7	38 3	South net
12/26/2008	Chelonia mydas	:		33 1	33.6	35 8	30 3	27 6	29 1	5 1	South net
12/26/2008	Caretta caretta		YYW016/YYW017	67 6	68.4	73.8	73 0	57 7	52.9	45.3	North net
12/26/2008	Caretta caretta		YYW018/YYW019	59 3	60 2	65.1	61.6	50 5	46.5	32 6	South net
12/26/2008	Caretta caretta		YYW020/YYW021	68 9	70 0	77.5	71.0	55 6	52.3	44 1	North net
12/26/2008	Caretta caretta		YYW022/YYW023	70 7	71 6	77.9	73.2	59 8	55.9	52 4	South net
12/27/2008	Caretta caretta		YYR500/YYW024	67 5	68 6	73.6	73.2	57 5	52 9	40 6	North net
12/27/2008	Caretta caretta		YYW025/YYW026	63.9	64.8	70.3	67.2	57 0	49 5	40 8	North net

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCL (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
12/28/2008	Chelonia myda	S		34 1	34 4	36.5	32 7	28.6	27.9	49	Hand capture
12/28/2008	Caretta caretta	1	YYW027/YYW028	69 5	70 9	76 9	75 9	62.1	55.7	55 4	Hand capture
12/28/2008	Caretta caretta	1	YYW029/YYW030	76 8	78 5	85.9	78 2	63.4	57.7	68 5	Hand capture
12/28/2008	Caretta caretta	1	YYW031/YYW032	64 7	65 7	71 1	71 0	58.1	52.5	41 2	Hand capture
12/28/2008	Caretta caretta	1	YYW033/YYW034	82 4	84 2	90.6	82 8	65.4	63.5	71.3	Hand capture
12/28/2008	Caretta caretta	1	YYW035/YYW036	64 1	65 9	71.1	73 6	59 8	51.9	40 9	Hand capture
12/29/2008	Chelonia myda	s 21		53 1	53.3	60 7	51 0	41 8	43 2	18.0	Hand capture
12/29/2008	Chelonia myda:	S		28 0	28.5	30 5	26 3	23 1	23 8	29	Hand capture
12/29/2008	Chelonia myda	s		35.2	35.4	37 5	33 6	29 4	29 7	60	Hand capture
12/29/2008	Caretta caretta	•	YYW037/YYW038	63.1	64.4	70 4	68 3	53 4	48 7	36 5	Hand capture
12/29/2008	Caretta caretta	١.	YYW039/YYW040	52 5	53 7	58 2	57 0	48 1	42 2	22 4	Hand capture
12/29/2008	Caretta caretta		YYW041/YYW042	52 0	54 7	60 0	58.9	48 7	42 3	25 2	Hand capture
12/29/2008	Caretta caretta		YYW043/YYW044	65 6	66 4	71 7	70 8	57 1	50 9	40 3	Hand capture
12/29/2008	Caretta caretta		YYW045/YYW046	78 2	79.5	88 0	82.0	67 6	63.0	82 5	Hand capture
12/30/2008	Caretta caretta		YYW047/YYW048	58 9	59 9	64 4	61 2	49.1	46.3	31.1	South net
12/31/2008	Chelonia myda:	s 22		58 8	59 1	62.9	54 6	46 6	49 3	26 1	Hand capture
12/31/2008	Chelonia myda:	s 23	YYR400	42 1	42.3	44 9	39 0	33 3	34 7	94	Hand capture
12/31/2008	Chelonia myda:	s 24	YYR417	47 1	47.2	50 4	44 5	37 5	39 0	13 4	Hand capture
12/31/2008	Chelonia myda:	s 25	YYW049	54 9	55 2	59 9	51.8	43 1	45 6	21 8	Hand capture
12/31/2008	Caretta caretta		YYW050/YYW051	60 4	61 5	67 0	64 8	51.8	46.6	32.0	Hand capture

- 1 Recapture. Turtle was removed from the intake canal tagged and released at Hutchinson Island on 11/28/01 12/9/01 3/1/06, 5/31/06, 7/18/06 8/3/06 9/9/06 12/14/06 2/21/07 6/4/08 and 11/2/08
- Recapture Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 5/23/98, 9/17/98, 3/6/99 8/4/99 10/28/99 1/5/00, 2/17/00 4/5/00, 7/7/00, 12/21/00, 4/5/01 5/14/01. 7/3/01 7/16/01, 1/29/02, 2/19/02 7/28/02 10/15/02 11/16/02 1/16/03 10/6/03 10/26/03 3/2/04, 5/17/04, 2/4/05 3/25/05 4/14/05 5/17/05, 6/7/05, 11/9/05 7/19/06, 9/5/06 11/8/06 11/24/07 1/14/08 4/20/08 6/28/2008 and 9/26/08
- 3. Recapture. Turtle was removed from the intake canal tagged and released at Hutchinson Island on 10/21/00 9/1/01, 3/28/03, 7/16/03 10/30/03 12/11/03 5/30/04 4/1/05 6/22/05 8/12/05 9/26/05, 2/12/06, 3/13/06 5/1/06 8/14/06 and 4/22/08.
- Recapture Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 6/13/02, 9/23/04 11/2/04 4/18/05, 7/2/05 8/16/05, 9/25/05, 1/18/06, 3/13/06, 7/23/06 8/14/06 9/10/06 10/22/06, 11/6/07 and 2/12/08
- Recapture. Turtle was removed from the intake canal tagged and released at Hutchinson Island on 10/3/08
- 6 Recapture Turtle was removed from the intake canal tagged and released at Hutchinson Island on 2/24/06 and 10/6/07
- 7. PAPILLOMAS Tumor score = 22 Turtle was released at Hutchinson Island the same day
- Recapture Turtle was removed from the intake canal tagged and released at Hutchinson Island on 7/9/08
- 9 Recapture. Turtle was removed from the intake canal tagged and released at Hutchinson Island on 6/28/08
- 10 Turtle found dead at surface of primary barrier net No wounds or abnormalities. Possible drowning Transported to Marinelife Center for necropsy on to confirm if causal to power plant operation.
- 11. Recapture Turtle was removed from the intake canal tagged and released at Hutchinson Island on 6/28/98 10/12/98 2/26/99, 5/11/99, 9/16/99 12/13/99. 1/14/00 1/24/00 3/20/00 4/17/00 6/7/00, 9/15/00, 12/10/00 8/9/01 4/13/02 1/11/03 8/15/03, 10/2/03 3/3/04, 5/23/04 4/30/05 5/29/05 6/30/05 10/5/05 11/4/05 2/2/06 8/18/06 and 9/17/08.
- 12 Satellite tag applied on 12/11/08 by Dean Bagley of UCF Marine Turtle Research Group.
- 13. Recapture Turtle was removed from the intake canal tagged and released at Hutchinson Island on 10/7/04 11/3/04 11/23/04 1/24/06, 1/4/08, 2/18/08 and 10/4/08.
- 14. Recapture. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 12/4/05
- 75 Recapture Turtle was removed from the intake canal tagged and released at Hutchinson Island on 7/19/06 8/14/06 9/13/06 11/7/06, 10/13/07, 10/29/07 2/3/08 4/29/08 6/20/08 and 10/15/08.
- 16. PAPILLOMAS Tumor score = 86 Turtle was released at Hutchinson Island the same day
- 17. 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 and 11/26/08.
- 18 Recapture Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 10/4/08.
- 19. Recapture. Turtle was removed from the intake canal tagged and released at Hutchinson Island on 12/3/02 11/22/03 and 11/8/05 Fishing hook was found embedded approximately 1 inch into the soft tissue of the neck Possible papilloma on ventral right front flipper FWC personnel picked-up turtle and transported it to Marathon Turtle Hospital Not causal to power plant operation
- 20. Recapture. Turtle was removed from the intake canal tagged and released at Hutchinson Island on 10/28/04 5/20/05 5/28/05 7/20/05 8/2/05 8/12/05, 9/12/05, 4/16/06 6/24/06 8/14/06 2/2/07 3/10/08 and 9/7/08.

- 21. Large healing cracks in carapace penetrating deep into body cavity possibly caused by boat impact. Two small fibropapilloma-like tumors near tail. Turtle held overnight for transport to rehabilitation facility on 12/30/08 Not causal to power plant operation.
- 22. Recapture Turtle was removed from the intake canal tagged and released at Hutchinson Island on 2/20/98. 7/19/04, 10/16/04 6/25/05, 7/19/05, 8/15/05 3/15/06 8/14/06 and 1/28/08.
- 23. Recapture Turtle was removed from the intake canal tagged and released at Hutchinson Island on 10/10/03, 12/15/04 8/12/05 6/12/06 7/31/06 1/4/07, 9/5/07 10/17/07 11/14/07, 2/26/08 4/23/08 and 10/13/08
- 24. Recapture Turtle was removed from the intake canal tagged and released at Hutchinson Island on 12/8/99 11/29/01, 5/20/05, 6/6/05, 5/7/06 9/26/06 12/27/06, 4/26/07 and 10/25/08.
- 25. Recapture Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 9/6/02 7/7/03 6/1/07 and 11/30/07.

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		Loggerheads Green turtles		Hawk (Eretmo			erbacks ochelys	Kemp's	•		
	(Caretta	caretta)	(Chelonic	a mydas)	imbrio	-	`	acea)	(Lepido kem		Overall	Totals
	Dec-08	Year to Date	Dec-08	Year to Date	Dec-08	Year to Date	Dec-08	Year to Date	Dec-08	Year to Date	Dec-08	Year to Date
Captures	48	420	49	299	0	4	0	0	0	2	97	725
Causal Mortalities	0	0	1	2	0	0	0	0	0	0	1	2
Non-causal Mortalities	0	2	0	2	0	0	0	0	0	0	0	4
Causal Injuries	0	1	0	2	0	0	0	0	0	0	0	3
Sent to rehab	0	17	2	4	0	0	0	0	0	0	2	21
Fresh		Year to		Year to		Year to		Year to		Year to		Year to
Scrapes	Dec-08	Date	Dec-08	Date	Dec-08	Date	Dec-08	Date	Dec-08	Date	Dec-08	Date
None	5	40	7	47	0	3	0	0	0	1	12	91
Minor	30	223	27	161	0	1	0	0	0	0	57	385
Moderate	13	141	15	84	0	0	0	0	0	1	28	226
Severe	0	5	0	5	0	0	0	0	0	0	0	10
Percent with												
mod/sev scrapes	27.1%	34.8%	30.6%	29.8%	#DIV/0!	0.0%	#DIV/0!	#DIV/0!	#DIV/0!	50.0%	28.9%	32.6%