

## Balsam, Briana

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**From:** David Singewald [dsingewald@att.net]  
**Sent:** Thursday, November 05, 2009 8:20 AM  
**To:** megan.koperski@myfwc.com  
**Cc:** david\_niebch@fpl.com; Logan, Dennis; ed\_hollowell@fpl.com; shelly.norton@noaa.gov; vince\_munne@fpl.com; bob.hoffman@noaa.gov; mbresette@inwater.org; jodie\_gless@fpl.com; dsingewald@att.net  
**Subject:** October 2009 Marine Turtle Intake Canal Captures  
**Attachments:** Notes09.xls; October09rep.rtf; St. Lucie caps 2009.xls

Dear Meghan,

Attached, please find the monthly summary of marine turtle removals for October 2009. In October, we captured fifteen (15) *Caretta caretta*, and four (4) *Chelonia mydas* at the intake canal of the St. Lucie power plant on Hutchinson Island. On October 13, a sub-adult loggerhead was captured and found to be lethargic and underweight. This event was considered not causal to power plant operation. All other turtles captured in October were released on the same day of capture.

Throughout the month of October the primary barrier net experienced mostly light loads of algae however, moderate to heavy loads of algae began entering into the canal on October 20 threatening the integrity of the net. On October 22 the primary barrier net failed due to system hardware breaking loose from the north concrete piling submerging the north half of the net 2'-5' underwater. The net was inspected the same day by "Underwater Engineering Services, Inc." (UESI) to look for turtles that may have been caught under the net and assess the cause of the failure. Inwater Research Group biologists increased turtle surveillance and capture efforts to include areas west of the primary net. On October 23, the primary net was lowered completely in order to safely inspect and begin removing algae. On October 25, UESI installed large float buoys onto the primary barrier net creating an effective temporary barrier. On October 28, a thorough inspection of the primary net was completed by Florida Power & Light Co. and UESI which included the concrete pilings, hardware, and cables. A permanent fix to the primary net is currently being worked out. Also, UESI started cleaning and repairing the floats on the 8" barrier net which performed as designed and effectively kept turtles from moving further down the canal. Two juvenile loggerheads were hand captured between the primary net and the 8" net on October 29th and 30th.

Tag numbers and morphometric data for all turtles are attached. Also attached is a spreadsheet of all captures, mortality's, injuries and causal events delineated by species and month/year to date for 2009. This spreadsheet also includes and tracks fresh scrapes occurring on captured turtles 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,

David A. Singewald  
Sr. Environmental Specialist  
Inwater Research Group, Inc.  
4160 NE Hylline Drive  
Jensen Beach, FL 34957  
772-465-6077

**MARINE TURTLE REMOVALS  
ST. LUCIE PLANT INTAKE CANAL  
OCTOBER 2009**

<b>Date</b>	<b>Species</b>	<b>Note</b>	<b>Tag #'s</b>	<b>SMCL (cm)</b>	<b>SSCL (cm)</b>	<b>CSCL (cm)</b>	<b>CMCW (cm)</b>	<b>SMCW (cm)</b>	<b>SMPL (cm)</b>	<b>Weight (kg)</b>	<b>Method</b>
10/1/2009	<i>Caretta caretta</i>		UUB651/UUB652	63.9	66.2	72.6	67.7	54.4	50.3	42.4	North net
10/1/2009	<i>Chelonia mydas</i>	1	YYB479	54.6	55.1	58.5	49.7	40.4	43.1	20.2	South net
10/1/2009	<i>Caretta caretta</i>	2	YYW342/YYW343	69.6	70.6	75.4	70.1	56.9	52.6	41.4	South net
10/3/2009	<i>Caretta caretta</i>		UUB653/UUB654	71.5	73.6	77.3	71.9	57.6	56.0	51.7	North net
10/6/2009	<i>Caretta caretta</i>		UUB655/UUB656	60.7	62.2	66.6	64.0	53.4	48.2	34.8	North net
10/13/2009	<i>Caretta caretta</i>	3		69.5	70.8	75.5	71.4	57.6	53.3	39.5	Hand capture
10/13/2009	<i>Caretta caretta</i>	4	UUB657	83.7	85.0	90.8	77.9	64.6	64.3	92.5	Hand capture
10/21/2009	<i>Chelonia mydas</i>			26.3	26.8	28.6	23.9	21.1	22.5	2.5	Hand capture
10/21/2009	<i>Caretta caretta</i>	5	UUB658	95.4	96.2	103.5	94.4	72.2	72.2	124.6	Barrier net
10/25/2009	<i>Chelonia mydas</i>	6	UUB660/UUB661	62.5	63.1	67.0	57.8	49.1	52.7	32.7	Hand capture
10/25/2009	<i>Caretta caretta</i>		UUB662/UUB663	75.5	76.6	83.2	79.5	62.4	59.6	66.8	Hand capture
10/25/2009	<i>Caretta caretta</i>		UUB664/UUB665	59.1	60.0	65.1	66.9	54.6	48.2	35.0	Hand capture
10/27/2009	<i>Chelonia mydas</i>	7		50.4	51.1	58.7	51.9	41.6	42.3	22.7	Hand capture
10/27/2009	<i>Caretta caretta</i>		UUB666/UUB667	60.5	61.7	65.9	63.6	52.6	49.6	37.1	Hand capture
10/27/2009	<i>Caretta caretta</i>	8	YYB108/YYB109	63.8	65.0	70.5	68.2	55.5	50.9	37.2	Hand capture
10/29/2009	<i>Caretta caretta</i>	9	UUB625/UUB670	65.8	67.0	72.3	69.5	56.2	52.9	41.2	Hand capture
10/29/2009	<i>Caretta caretta</i>		UUB668/UUB669	66.0	66.9	72.1	67.7	55.2	52.0	36.0	Between barrier nets

Date	Species	Note	Tag #'s	SMCL (cm)	SSCL (cm)	CSCl (cm)	CMCW (cm)	SMCW (cm)	SMPL (cm)	Weight (kg)	Method
10/29/2009	<i>Caretta caretta</i>		UUB671/UUB672	56.9	58.1	62.5	58.9	48.6	44.5	27.5	Hand capture
10/30/2009	<i>Caretta caretta</i>		UUB673/UUB674	68.8	69.7	76.0	71.1	55.4	52.1	38.2	Between barrier nets

## NOTES

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1. Recapture. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 8/7/05, 8/30/05, 8/6/06, 9/19/06, 8/29/07, 4/30/08 and 1/26/09.
2. Recapture. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 7/26/09.
3. Turtle found underweight and lethargic and missing approximately 40-50% of right front flipper (healed). Transported to Marinelife Center by FWCC personnel. Not causal to power plant operation.
4. Adult female. Tail length = 235 mm.
5. Adult female. Tail length = 231 mm.
6. 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, 1/28/08 and 12/31/08.
7. 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, 2/12/08 and 12/5/08.
8. 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 and 8/13/09.
9. Recapture. Turtle was removed from the intake canal, tagged and released at Hutchinson Island on 9/15/09.

*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*

	<b>Loggerheads</b> <i>(Caretta caretta)</i>		<b>Green turtles</b> <i>(Chelonia mydas)</i>		<b>Hawksbills</b> <i>(Eretmochelys imbricata)</i>		<b>Leatherbacks</b> <i>(Dermochelys coriacea)</i>		<b>Kemp's ridley</b> <i>(Lepidochelys kempii)</i>		<b>Overall Totals</b>	
	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>
<b>Captures</b>	<b>15</b>	223	<b>4</b>	123	<b>0</b>	2	<b>0</b>	1	<b>0</b>	0	<b>19</b>	<b>349</b>
<b>Causal Mortalities</b>	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	<b>0</b>
<b>Non-causal Mortalities</b>	<b>0</b>	1	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	<b>1</b>
<b>Causal Injuries</b>	<b>0</b>	1	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	<b>1</b>
<b>Sent to rehab</b>	<b>1</b>	13	<b>0</b>	4	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>1</b>	<b>17</b>
<b>Fresh Scrapes</b>	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>	<b>Oct-09</b>	<b>Year to Date</b>
<b>None</b>	<b>0</b>	21	<b>1</b>	7	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>1</b>	<b>28</b>
<b>Minor</b>	<b>12</b>	143	<b>1</b>	75	<b>0</b>	1	<b>0</b>	0	<b>0</b>	0	<b>13</b>	<b>219</b>
<b>Moderate</b>	<b>3</b>	56	<b>2</b>	38	<b>0</b>	1	<b>0</b>	1	<b>0</b>	0	<b>5</b>	<b>96</b>
<b>Severe</b>	<b>0</b>	3	<b>0</b>	3	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	<b>6</b>
<b>Percent with mod/sev scrapes</b>	20.0%	26.5%	50.0%	33.3%	#DIV/0!	50.0%	#DIV/0!	100.0%	#DIV/0!	#DIV/0!	26.3%	29.2%