

**From:** [Calleson, Teresa](#)  
**To:** [Shelby Loos](#)  
**Subject:** RE: MSTm2119 Update  
**Date:** Tuesday, October 12, 2021 2:03:00 PM  
**Attachments:** [image001.png](#) <---- Seaquarium Logo from signature block

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Sounds good, Shelby – and thanks for the update (and for taking her)! I know she was a late arrival.

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**From:** Shelby Loos <SLoos@msq.cc>  
**Sent:** Tuesday, October 12, 2021 12:47 PM  
**To:** Calleson, Teresa <teresa\_calleson@fws.gov>  
**Subject:** [EXTERNAL] MSTm2119 Update

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Hi Terri!

I just wanted to touch base on MSTm2119. I've been discussing her case with Dr. DiRocco and the plan is to sedate her tomorrow for radiographs to confirm the suspicion of pneumothorax and then proceed directly into tapping the air from her chest (I've done this procedure many times in the past with Maya). She's not eating yet so has been getting tubed, her hydration status is good, I'm hoping with some relief tomorrow after tapping she'll want to start eating.

Please let me know if you have any questions, thank you!!

Shelby

**Shelby Loos, DVM**  
Veterinarian



4400 Rickenbacker Causeway  
Miami, FL 33149  
Cell: 321-693-3692  
Office: 305-365-2527  
Email: [sloos@msq.cc](mailto:sloos@msq.cc)



1. **Introduction**

The purpose of this document is to provide a comprehensive overview of the project's objectives, scope, and deliverables. This document is intended for the project team and stakeholders.

2. **Objectives**

The primary objectives of this project are to:

- Develop a robust software solution that meets the requirements of the client.
- Ensure the solution is scalable and secure.
- Deliver the project on time and within budget.

3. **Scope**

The scope of the project includes the design, development, testing, and deployment of the software solution. It also includes the provision of training and support to the end users.

4. **Deliverables**

The key deliverables of the project are:

- A detailed project plan.
- A functional software solution.
- Comprehensive test results.
- Final project report.

5. **Conclusion**

This document outlines the project's goals and the path forward. It is essential for all team members to understand their roles and responsibilities in achieving the project's success.

**From:** [deWit, Martine](#)  
**To:** [Calleson, Teresa](#)  
**Subject:** [EXTERNAL] MSTm carcass  
**Date:** Wednesday, November 17, 2021 8:15:28 AM

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Hey Terri, that Flamingo rescue was found dead at MSQ yesterday 8am. They could not do the necropsy, and asked for a teaching session by Amber but we could not accommodate that. So SW staff went all the way over to pick it up yesterday, and it is coming to MMPL this morning. Wanted to check how we should handle MSQ carcasses for now, this one is going to make it to MMPL but is there any direction from the Service for this transition period at MSQ? Thanks!  
Best of luck with your dad today! Martine

**From:** [Bassett, Brandon](#)  
**To:** [deWit, Martine](#); [Calleson, Teresa](#); [Garrett, Andy](#)  
**Subject:** [EXTERNAL] RE: dead manatee MSQ  
**Date:** Friday, November 19, 2021 8:17:29 AM  
**Attachments:** [MSTm2119 draft.pdf](#)

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Here you go!

-----Original Message-----

From: deWit, Martine <Martine.deWit@MyFWC.com>  
Sent: Thursday, November 18, 2021 5:13 PM  
To: Teresa Calleson <teresa\_calleson@fws.gov>; Garrett, Andy <Andrew.Garrett@MyFWC.com>  
Cc: Bassett, Brandon <Brandon.Bassett@MyFWC.com>  
Subject: RE: dead manatee MSQ

Sure, Brandon can prepare one for you.

-----Original Message-----

From: Calleson, Teresa <teresa\_calleson@fws.gov>  
Sent: Thursday, November 18, 2021 4:17 PM  
To: deWit, Martine <Martine.deWit@MyFWC.com>; Garrett, Andy <Andrew.Garrett@MyFWC.com>  
Subject: RE: dead manatee MSQ

[EXTERNAL SENDER] Use Caution opening links or attachments

Martine,

May I please receive a copy of the draft necropsy report for this animal?

Terri Calleson  
Florida Manatee Recovery Lead  
U.S. Fish and Wildlife Service  
7915 Baymeadows Way, Suite 200  
Jacksonville, Florida 32256-7517  
904-731-3286 (office)  
Email: [Teresa\\_Calleson@fws.gov](mailto:Teresa_Calleson@fws.gov)  
<http://www.fws.gov/northflorida>

-----Original Message-----

From: deWit, Martine <Martine.deWit@MyFWC.com>  
Sent: Thursday, November 18, 2021 3:34 PM  
To: Garrett, Andy <Andrew.Garrett@MyFWC.com>; Calleson, Teresa <teresa\_calleson@fws.gov>  
Subject: [EXTERNAL] FW: [Internet Sender] dead manatee MSQ

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-----Original Message-----

From: Shelby Loos <SLoos@msq.cc>  
Sent: Thursday, November 18, 2021 3:22 PM  
To: deWit, Martine <Martine.deWit@MyFWC.com>  
Subject: RE: [Internet Sender] dead manatee

[EXTERNAL SENDER] Use Caution opening links or attachments

Thank you Martine. Yes, I am still consulting with Stacy on everything, so I will follow up with her and let her know the findings so we can re-evaluate a plan for the next manatee that comes in but doesn't start eating. And I will certainly reach out to Andy and Terri regarding the false bottom floor because that would increase our ability to provide appropriate care for more animals significantly.

Thanks again for your help, I greatly appreciate it.

Shelby

-----Original Message-----

From: deWit, Martine [<mailto:Martine.deWit@MyFWC.com>]  
Sent: Thursday, November 18, 2021 11:04 AM  
To: Shelby Loos  
Subject: RE: [Internet Sender] dead manatee

It was probably a combination of it all. That hemidiaphragm was severely distended, so I suspect there were respiratory/cardiovascular complications from that, and then that heart condition did not help either. 3 L once a day does not sound a lot for a manatee in that condition, is Stacy Dirocco still advising you guys and can you check with her for second opinion? Capacity for only once a day could also be a concern for when the UME cases start to pick up in your region, those animals need more support than that. One thought, there are a lot requests being put forward to increase capacity, if there is a need for a false bottom floor your facility should make that request known with Andy and Terri. Thank you!

-----Original Message-----

From: Shelby Loos <SLoos@msq.cc>  
Sent: Thursday, November 18, 2021 9:02 AM  
To: deWit, Martine <Martine.deWit@MyFWC.com>  
Subject: RE: [Internet Sender] dead manatee

[EXTERNAL SENDER] Use Caution opening links or attachments

Thanks Martine,

She had been getting 3 L of gruel per day (combo spinach, monkey chow, lettuce, hydralyte) and we were still noting gas and at least a small amount of feces being passed throughout her stay. I know you won't know for sure until it is read, but is it possible that the heart contributed to her passing or was it she simply wasn't getting enough food? Obviously the latter is very concerning because with our current pool set up without a false bottom and staffing constraints we wouldn't be able to provide more than once daily tubing.

Thanks for all of your help,

Shelby

-----Original Message-----

From: deWit, Martine [<mailto:Martine.deWit@MyFWC.com>]  
Sent: Thursday, November 18, 2021 8:30 AM

To: Shelby Loos  
Cc: Bassett, Brandon; Pajor, Bert  
Subject: RE: [Internet Sender] dead manatee

Hi Shelby, the manatee still had a significant pneumothorax from a small lung tear, and was emaciated with an empty GI tract. I was in meetings all day so was not at the necropsy, I am including Brandon here if you have any specific questions. One thing that I did look at was a crazy lesion of the heart, severe annular calcification of the mitral valve, I assume that was pre-existing. We threw that in formalin and I will update you once that has been read, will be sometime in December I think. I am also adding Bert on this, who manages our photo database, in case you wanted to see a few pics of the necropsy. Sorry again about the outcome, Martine

-----Original Message-----

From: Shelby Loos <SLoos@msq.cc>  
Sent: Wednesday, November 17, 2021 8:26 AM  
To: deWit, Martine <Martine.deWit@MyFWC.com>  
Cc: Boyd, Denise <Denise.Boyd@MyFWC.com>; Barbeau, Brittany <Brittany.Barbeau@MyFWC.com>; Bassett, Brandon <Brandon.Bassett@MyFWC.com>; Garrett, Andy <Andrew.Garrett@MyFWC.com>; Pajor, Bert <Albert.Pajor@MyFWC.com>; Panike, Anna <Anna.Panike@MyFWC.com>; Tennant, Sean <Sean.Tennant@MyFWC.com>; Whitcomb, Tara <Tara.Whitcomb@MyFWC.com>  
Subject: Re: [Internet Sender] dead manatee

[EXTERNAL SENDER] Use Caution opening links or attachments

Hi Martine,

Yes, she was severely buoyant on her right side that wasn't responding to thoracocentesis, that was done 3x about 10-14 days apart. She came in with small abscesses along her exposed side that seemed to be healing after initial antibiotic therapy then within the span of a week seemed to worsen significantly. She was started on another course of antibiotics based on another culture and they seemed to be healing again, however I worry that there might have been a draining tract that extended deeper into abdominal/thoracic cavity.

She never started eating but was being tubed gruel. She remained pretty consistent in her behavior throughout her time, breaths about every 3-4 minutes. We did not see any changes or precursors that day before we found her the next morning.

I am certainly interested in the necropsy findings, please keep me posted and let me know if you have any more questions!

Shelby

On Nov 17, 2021, 8:10 AM -0500, deWit, Martine <Martine.deWit@MyFWC.com>, wrote:

Hi Shelby, sorry about the manatee that died yesterday. Can you drop a quick note please if there is anything from the clinical history we should pay attention to? The carcass will be necropsied at MMPL this morning. Thanks!

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission  
Fish and Wildlife Research Institute  
Marine Mammal Pathobiology Laboratory  
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSTm2119  
Date of Report: 2021-Nov-16  
Filed By: FWC MMPL

FWC Case # 26863 FWC Region: SO-B

Sex: Female Length: 274 cm Weight: 284.0 kg

DATE REPORTED: 2021-Nov-16 By: MSQ to FWC-ARH  
DATE COLLECTED: 2021-Nov-16 By: FWC-EJD,MNS  
DATE NECROPSIED: 2021-Nov-17 By: MMPL-BLB,SMT FWC-MNS

LOCATION: State: FL Latitude: N  
County: Monroe Longitude: W  
Waterway: Gulf of Mexico

Locality description: Flamingo, approximately 5.35 km SW of Little Shark River Entrance Light 1.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Human Related: Watercraft Collision

EXPLAIN: Impact; Chronic; Emaciated; Skin lesions; Pneumothorax; Depleted fat(s); Serous fat(s); Serous muscle; Torn parietal pleura; Torn lung(s); Empty GI tract; Asymmetric carcass; Mucus from nares; Subluxated, remodeled ribs; Necrotic tissue; Resolving blood clots; Displaced abdominal organs; Collapsed, consolidated right lung; Swollen left lung; Fluid, mucus, foam in airways; Scar tissue lungs, parietal pleura; Ulcers duodenum; Congested fat, peritoneum, mesenteries, urinary bladder mucosa, parietal pleura, hemidiaphragms; Annlar calcification of mitral valves; Thickened wall left atrium; Lettuce in mouth.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:

Genetics, ELISA toxicology samples.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

Rescue report. Miami Seaquarium email.

REMARKS:

PIT tag scan negative. Uterine Scar. See rescue report RSW2132, rescued on 07 Oct 2021 due to watercraft injuries. Found dead in the pool at 0800 hrs on 16 Nov 2021. Hemorrhagic injection sites.

DRAFT

Page 1&2	
Necropsy Report	
Lat/Long	

**MORPHOMETRICS:**

<b>Total length:</b>	274 cm	<b>Fluke base:</b>	82 cm	<b>Girth at axillae:</b>	140 cm
<b>Snout to anus:</b>	180 cm	<b>Fluke width:</b>	67 cm		
<b>Snout to U/G:</b>	164 cm	<b>Girth at fluke base:</b>	90 cm		
<b>Snout to umbilicus:</b>	94 cm	<b>Girth at anus:</b>	114 cm		
<b>Flipper width:</b>	16 cm	<b>Girth at umbilicus:</b>	188 cm	<b>Nail count: R: 3</b>	<b>L: 3</b>

	<b>Ventral</b>	<b>Lateral</b>		
<b>Skin Thickness:</b>	cm	cm		
<b>Outer Blubber Thickness:</b>	cm	cm	<b>Abdominal Fat Thickness:</b>	cm
<b>Inner Blubber Thickness:</b>	cm	cm	<b>Epidermis Thickness:</b>	cm

<b>Perinatal:</b>	<b>Ductus Arteriosis Diameter:</b>	cm
	<b>Left Pulmonary Artery Diameter:</b>	cm
	<b>Right Pulmonary Artery Diameter:</b>	cm

**Uterine Scarring Measurements:**

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left	4.5	9
Left		

**Male Reproductive:**

**Fetus 1: Sex: Report?:**

**Length:**  
**Weight:**  
**Samples Taken:**

**Fetus 2: Sex: Report?:**

**Length:**  
**Weight:**  
**Samples Taken:**

**Brevetoxin Results:**

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

**Other Brevetoxin Results:**

## MARINE MAMMAL NECROPSY REPORT FORM

**FIELD I.D.** MSTm2119  
**RECOVERY DATE** 17 November 2021  
**GENDER** Female **TL** 274 cm **WT** 284 kg

**SPECIES** *T. manatus latirostris*  
**NECROPSY DATE** 17 November 2021  
**CONDITION** Moderately Decomposed

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**HISTORY** See rescue report RSW2132. 16 November 2021, at 0815 hrs, FWC-biologist Amber Howell (ARH) received a notification from Miami Seaquarium-Julie that MSTm2119 had been found dead at 0800 hrs. ARH relayed the information to MMPL-Martine de Wit who then asked FWC biologist-Denise M. Boyd (DMB) to make arrangements for recovery. FWC biologists-Emily J. Davidson (EJD) and Meghan N. Sutton (MNS) arrived at Miami Seaquarium by 1300 hrs, loaded the carcass by 1310 hrs, and transported it to the SW Field Station by 1734 hrs. The carcass was stored overnight in the walk-in cooler. 17 November, MNS and FWC interns-M. Walter and A. Steele loaded the carcass by 0758 hrs and transported it to the MMPL arriving by 0921 hrs.

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**EXTERNAL** All of the epidermis was present. Viscous, red-tinged mucus exuded from the nares. The carcass had a peanut-shaped head. The peduncle was thin. The right aspect of the carcass was severely distended, and the left ventrum was concave due to emaciation. The epidermis of the left lateral aspect was dry and cracked, and there were numerous healing linear and circular lesions. A minimum of four well-healed watercraft-related scar patterns was observed. There was a small, circular, well-healed mutilation at the 5 o'clock position of the fluke margin. PIT tag scan negative. A genetics sample was collected.

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**ABDOMINAL** There was scant, serous abdominal, mesenteric, and omental fat. There were bands of severe congestion in the abdominal fat and peritoneum. The abdominal organs were displaced to the left aspect due to severe distension of the right hemidiaphragm.

**STOMACH** The stomach contained 500 mL of viscous, white to light tan fluid. The mucosa was mottled red to purple. No parasites were observed.

**DUODENUM** The duodenum contained 250 mL of viscous, white to light tan fluid. The mucosa had linear and circular ulcers that were tan on the margin and black in the center. No parasites were observed.

**JEJUNUM & ILEUM** There were patches of severe congestion in the mesentery. The small intestine contained a scant amount of viscous, light-yellow fluid. The mucosa was slightly sloughing. No parasites were grossly observed.

**CECUM** The cecum contained 250 mL of wet, well-digested, homogeneous, light green digesta. The mucosa was sloughing. No parasites were observed.

**COLON** There were patches of severe congestion in the mesentery. The colon was mostly empty of contents and had alternating regions of contraction and gas distension. The proximal colon contained a scant amount of wet, well-digested, homogeneous, poorly formed, light green feces. The distal colon contained a small amount of moist, well-digested, homogeneous, moderately formed, dark green feces. The mucosa was sloughing throughout. No parasites were observed.

**PANCREAS** The pancreas was tan on serosal and cut surfaces.

**SPLEEN** The spleen was tan to pink on serosal surfaces and dark red on cut surfaces.

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**LIVER** The liver was pushed to the left side and appeared small. The margins of the liver were rounded. The liver was firm. Serosal surfaces were dark blue and cut surfaces were dark red.

**GALLBLADDER** The gallbladder contained approximately 50 mL of viscous, cloudy, yellow-green bile. The mucosa was bile-stained.

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**REPRODUCTIVE** There was a small amount of serous reproductive fat. The right uterine horn was small in diameter. The left uterine horn was contracted. The left uterine horn contained a nearly resolved scar (9 cm wide x 4.5 cm circumference). The right ovary contained a few small, fluid-filled follicles and small firm, white corpora albicantia. The left ovary contained numerous small, fluid-filled follicles and firm, white corpora albicantia.

**KIDNEYS** There was no perirenal fat. The kidneys were pink to purple on serosal surfaces. On cut surfaces, the cortices were dark pink to light red and the medullae were dark red to dark purple. The corticomedullary boundaries were distinct.

**URINARY BLADDER** The urinary bladder contained approximately 300 mL of cloudy, dark yellow urine. The mucosa was severely congested. An ELISA toxicology sample was collected.

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**HEART** There was a small amount of serous epicardial fat. The left AV valves were thickened and associated with annular calcification in the surrounding ventricular heart muscle. The left atrium wall was thickened. The remainder of the valves were unremarkable.

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**RESPIRATORY SYSTEM** Both hemidiaphragms were intact and moderately congested on the pleural aspect. The right hemidiaphragm was severely distended due to gas in the pleural cavity. The left pleural cavity contained approximately 1 L of watery, cloudy, dark red fluid. The left parietal pleura was severely congested. The right parietal pleura was torn between the proximal one-third of right ribs 5 and 6, and at right rib head 7. The right lung was collapsed, partially consolidated, and approximately one-third the size of the left lung. There was a 2 mm diameter tear in the serosa of the right lung along the primary airway of the dorsal cranial one-third (see photo). There were a few small, resolving blood clots adhered to the cranial one-third of the right lung. Serosal surfaces were tan, light pink and red, and cut surfaces were pink to dark red. The left lung was heavy and swollen. Serosal surfaces were mottled pink, purple and tan, and cut surfaces were red to dark red and very wet. There was a large, circular patch of scar tissue on the mid-dorsal aspect of the caudal one-third. The airways of both lungs contained an abundant amount of viscous, white and pink mucus, fluid and foam. A few dead trematodes were observed. The mucosa was pink to purple. An ELISA toxicology sample was collected.

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**HEAD & NECK REGIONS** There was a small thatch of moderately chewed lettuce in the mouth. Cut tissues of the head and neck were serous and bloody. There was a moderate amount of viscous, pink fluid and mucus in the trachea.

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**SKELETON** Right ribs 6 through 8 were chronically subluxated and partially remodeled at the rib heads, which protruded slightly into the pleural cavity. There was firm, stringy, white scar tissue surrounding the heads of right ribs 6 through 8. There was a pocket of necrotic muscle, small resolving blood clots, and clear light red-tinged fluid dorsal to right rib heads 7 and 8.

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**OTHER** There were hemorrhagic tracks of muscle in the dorsal peduncle (injection sites).

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**COMMENTS** There was a well-healed watercraft-related scar on the dorsum in the vicinity of the chronic rib trauma, but a direct association of rib trauma and a wound was not visible on either rescue or necropsy, likely due to the chronic, partially resolved state of the injury.

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**SIGNIFICANT FINDINGS**

- Asymmetric carcass
- Emaciated
- Mucus from nares
- Skin lesions
- Subluxated, remodeled ribs
- Necrotic tissue
- Resolving blood clots
- Depleted, serous fat
- Serous tissue
- Pneumothorax
- Displaced abdominal organs
- Torn parietal pleura, lung
- Collapsed, consolidated right lung
- Swollen, wet left lung
- Fluid, mucus, foam in airways
- Scar tissue lungs, parietal pleura
- Relatively empty GI tract
- Lettuce in mouth
- Ulcers duodenum
- Congested fat, peritoneum, mesenteries, urinary bladder mucosa, parietal pleura, hemidiaphragms
- Annular calcification of mitral valves
- Thickened wall left atrium
- Uterine scars
- Hemorrhagic injection sites

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**PROBABLE CAUSE OF DEATH**

Watercraft; Impact (Chronic)

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**NECROPSY CONDUCTED BY**

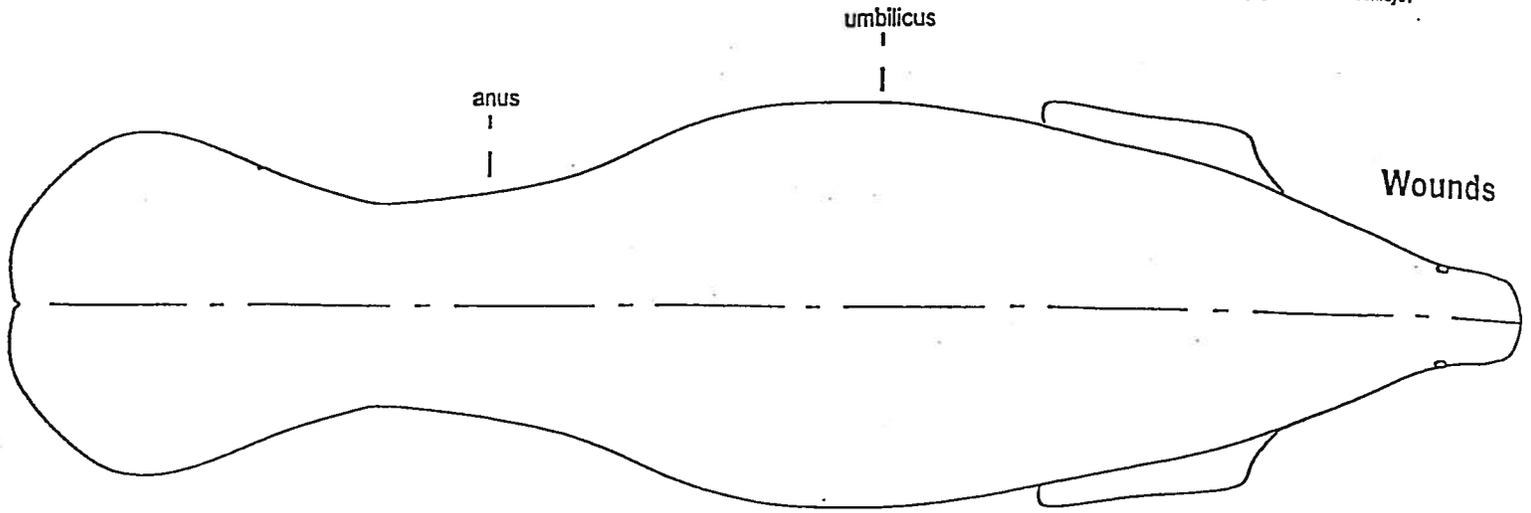
Brandon L. Bassett  
Sean M. Tennant

REPORT FILED BY Tennant/Bassett

Date \_\_\_\_\_

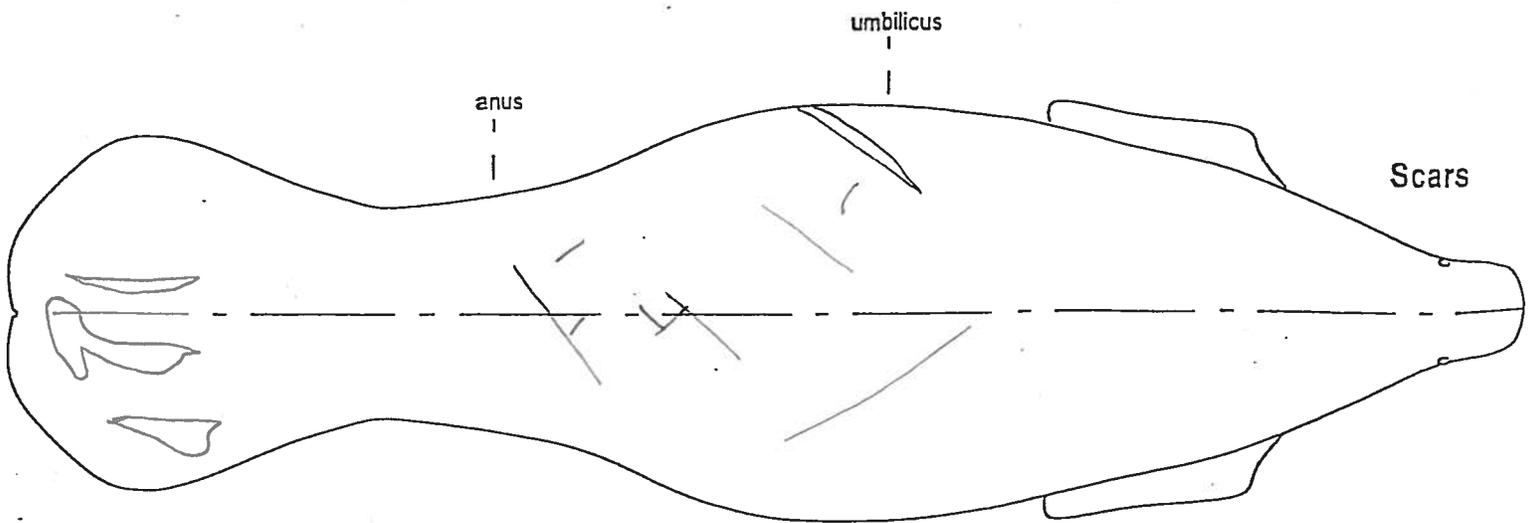
Field I.D. MSTm 2119

c:\D-Old\Necropsy\scar2dat\30May01



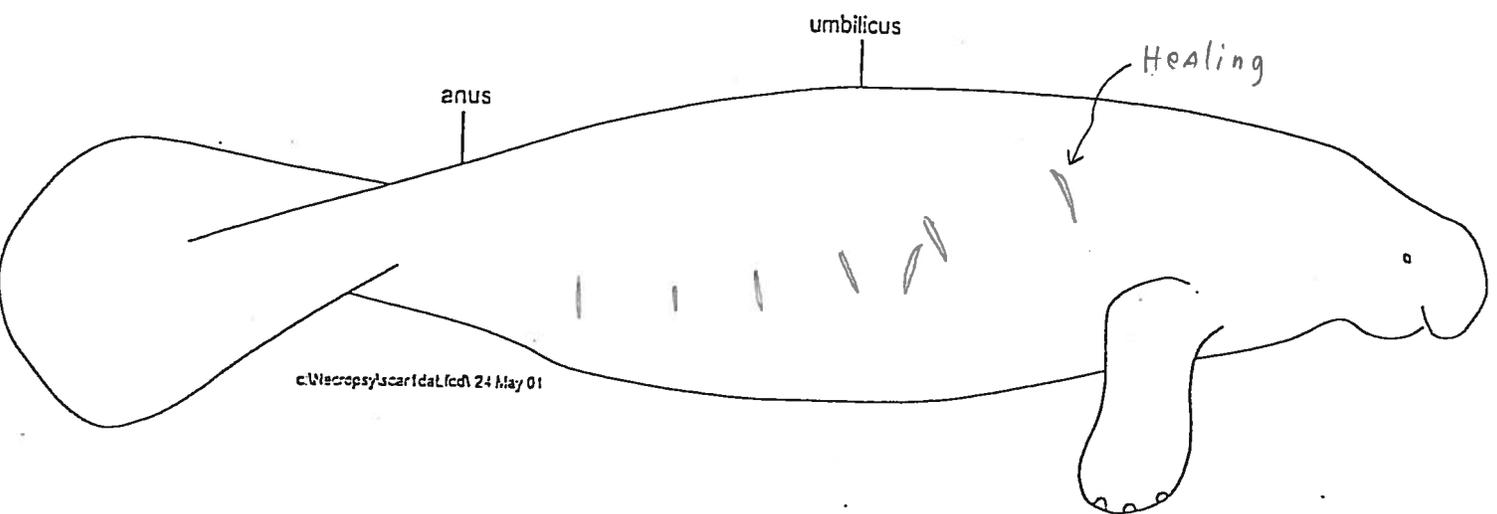
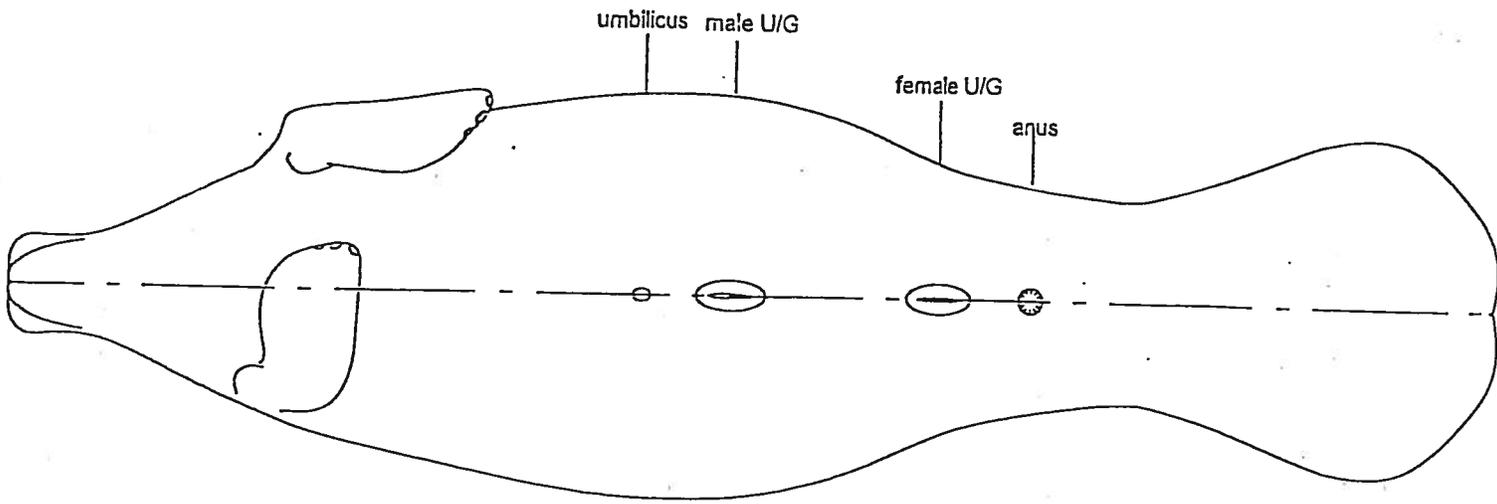
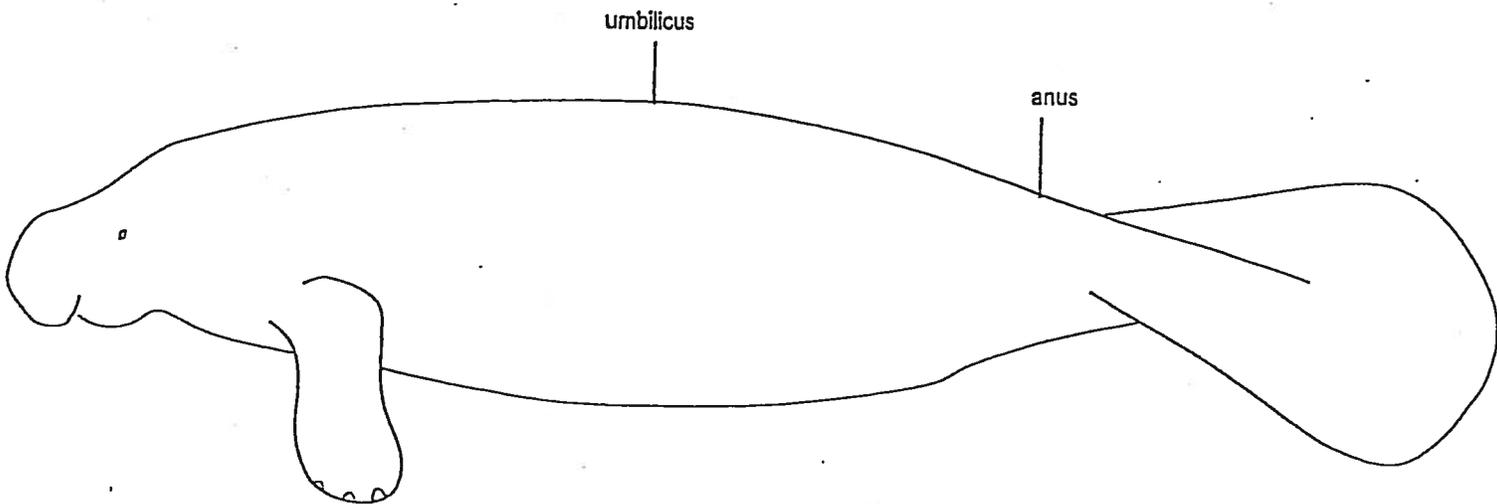
Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

over  
= BLB



FIELD I.D.

MSTm 2/19



**From:** [Calleson, Teresa](#)  
**To:** [Garrett, Andy](#); [Panike, Anna](#); [Gordon, Nadia](#); [Calleson, Charles S](#); [Valade, Jim](#); ["Abby Stone"](#); [Kleen, Joyce](#); ["Craig Miller"](#); ["Conrad Litz"](#); ["Kim O'Dell"](#); [Frisch, Katherine](#); ["Peterson, Jon"](#); ["Mark Campbell"](#); [deWit, Martine](#); ["Maya Menchaca"](#); ["Warmolts, Doug"](#); ["Chris Plante"](#); [Boyd, Denise](#); [Greer, Bill](#); [Howell, Amber](#); [Ward, Leslie](#); ["glovewell@mote.org"](#); ["David Murphy"](#); ["rhazelkorn@mote.org"](#); ["Evan Barniskis"](#); ["Meredith Persky"](#); ["Yousuf Jafarey"](#); [Jennifer Galbraith \(JGalbraith@cmaquarium.org\)](#); ["Michael Walsh"](#); ["Larry Killmar"](#); ["Junkunc, Andrea"](#); [Barlas, Margie](#); ["DiRocco, Stacy"](#); ["Chuck White"](#); [Braso, Lorri](#); ["Scott Gearhart"](#); [Wappes, Sara](#); [Mezich, Ron](#); ["Cynthia Stringfield"](#); [Monica Ross](#); ["Molly Lippincott"](#); ["Marla..Chancey@floridadep.gov"](#); ["Wagoner, Robert"](#); [Tamborini, Kyanna](#); ["akincaid@mote.org"](#); ["MSutton@cmaquarium.org"](#); ["hrogers@cmaquarium.org"](#); ["Albert Pajor"](#); [Barrett, Sarah](#); [Pasawicz, Michelle](#); [Kerry Sanchez](#); [prose@savethemanatee.org](#); ["LWaxman@flaquarium.org"](#); [Cora Berchem](#); [Kimberleigh Dinkins](#); [Tiare Fridrich](#); [Adrienne Atkins](#); [Stacy, Nicole](#); [Indra](#); [Butler, Susan](#); [Walsh,Michael T](#); [Melissa Nau](#); [Tiffany Burns](#); [Jaime Vaccaro](#); [Goodrum, Brittney](#); [Hannah Walsh](#); [Shelby Loos \(sloos@msg.cc\)](#); [Julie Heyde](#); [Shelly Marquardt](#); [Mickey, Suzanna](#); [James A \(Buddy\) Powell - Sea to Shore Alliance \(jpowell@cmaquarium.org\)](#); [Gabriel, Brant](#); [Virginia Edmonds](#)  
**Subject:** RE: Capacity Call Notes/Table - NEXT CALL is MONDAY, NOV 29th@10AM  
**Date:** Monday, November 22, 2021 10:59:00 PM  
**Attachments:** [20211122 Capacity Call Notes.docx](#)  
[20211122 Manatees In Facilities-Release Committee Chart Combo Release Committee.xlsx](#)  
**Importance:** High

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Hi all,

Hope everyone has a great week and a wonderful Thanksgiving! Call notes and a revised capacity table are attached.

Manatees in captivity: 84 (76 in FL, 8 in OH)

Next week's call info:

Conference Number: 1-888-585-9008

Passcode: 771-277-518#

**Terri Calleson**  
**Florida Manatee Recovery Lead**  
**U.S. Fish and Wildlife Service**  
**7915 Baymeadows Way, Suite 200**  
**Jacksonville, Florida 32256-7517**  
**904-731-3286 (office)**  
**Email: [Teresa\\_Calleson@fws.gov](mailto:Teresa_Calleson@fws.gov)**  
**<http://www.fws.gov/northflorida>**

## **22 November 2021 Weekly Capacity Call Notes**

### **On the Call:**

Anna Panike - FWC

Denise Boyd - FWC

Amber Howell - FWC

Sara Wappes – FWC

Nadia Gordon – FWC

Terri Calleson – USFWS

Monica Ross - CMARI

Kat Frisch - FWC

Virginia Edmonds – Bishop

Mark Campbell - Cincinnati Zoo (via email)

Hannah Rogers – CMA

Doug Warmolts – Columbus Zoo

Jackie – HSSP

Craig Miller – Jacksonville Zoo

Kim Odell - Living Seas

Julie Heyde – Miami Seaquarium

Hannah Walsh – University of Florida

Molly Lippincott – ZooTampa

### **FWC Field Station Updates:**

#### **Marine Mammal Pathobiology Lab (MMPL) - NWFL:**

1. Six carcasses and no rescues last week.
2. Nothing pending.
3. Several calves reported in Crystal River, reported as possible orphans. Seemed to have all joined up with females or left the spring. So, monitoring for now.
4. NWFL is at 165 carcasses and 28 rescues in 2021.

#### **Southwest Field Lab (SWFL):**

1. Red tide sampling: red tide cell counts have dropped to background levels in most areas. Still low to medium concentrations in some of the Panhandle. Updates can be found at: <https://myfwc.com/research/redtide/statewide/>
2. One carcass and no rescues last week.
3. Nothing pending.
4. SWFL is at 153 carcasses and 34 rescues in 2021.

#### **Southeast Field Lab (SEFL):**

1. One carcass and no rescues last week.
2. Nothing immediately pending.
3. Monitoring a calf with cold stress in Willoughby Creek, Stuart.
4. Also, received reports of a caudally buoyant manatee in Miami.
5. SEFL is at 194 carcasses and 35 rescues in 2021.

### **East Central Field Lab (ECFL):**

1. ECFL had 5 carcasses and no rescues last week.
2. Pending cases:
  - a. Wed – CMARI saw a left side high floater at CCEC. Rescue planned for Thurs/Fri but manatee was not seen.
  - b. On Friday after hours, report of a very skinny manatee in shallow water. Not there the following morning.
  - c. Sunday, a dead manatee was reported in Desoto. However, it was just an emaciated manatee. Organized for a rescue but manatee left the ditch and canal before rescue team arrived. Not there this AM.
  - d. Also on Sunday, there was a beached manatee in Vero Beach. This one was pushed back into the Atlantic Ocean by citizens.
3. New rescue boat has arrived.
4. ECFL has 402 carcasses and 23 rescues in 2021.

### **Northeast Field Lab (NEFL):**

1. One carcass and no rescues last week.
2. Animal of concern in Palm Coast that was emaciated. Awaiting more reports.
3. NEFL's rescue truck may be back before Thanksgiving.
4. 66F at the Dames Point Bridge.
5. NEFL is at 84 carcasses and 12 rescues in 2021.

### **Additional Updates:**

- USFWS:
  - USFWS working with FWC on setting up the Incident Command System.
  - Some more permits coming from Headquarters.
- CMARI:
  - Nicole verified a manatee in Hilton Head Island, SC. Manatee had concerning respiration and cold stress. CMARI assisted with the rescue the next day.
  - Early Saturday AM, CRNWR called that there was a belted manatee. It was Heavy Falcon. Jenn retagged him, last seen leaving the area. Did not get full assessment but he is thin and belt is loose, has had a couple of boat strikes.
  - Everybody else is doing well.
  - All tagged manatees now in FL (CCEC, Miami, or the Keys).
  - Considering cutting off Canary because she is down in the Keys.
- UF:
  - Weather – cold front coming through today and tomorrow. Front tomorrow will be a pretty significant cold front. 8-14 day temperature forecast to be below normal.
  - Water temps are 70F or below in most areas with the Bend Bend at 66F. Temps are getting more critical.
  - Continuing to work on contracts – trying to verify/will be asking for invoices.

## **Facility Updates:**

### **Bishop Museum of Science and Nature:**

- All 3 manatees are doing well. They are still going in the med pools.

### **Cincinnati Zoo:**

- All 3 manatees are doing well in Cincinnati.

### **Clearwater Marine Aquarium:**

- One attempt to verify a small manatee but was gone by the time CMA arrived.
- Available to assist, if needed.

### **Columbus**

- All 5 manatees good in Columbus.

### **Homosassa Springs Wildlife State Park:**

- All 4 manatees are doing well.
- Keeks had a health assessment last Wed, gained another 40 lbs.
- Gates opened for the wild manatees.

### **Jacksonville Zoo:**

- All four manatees continue to do well.
- Had a pre-release on Lawrence and Eleven. Waiting for results. Looking at releases after Thanksgiving.

### **Living Seas**

- All 4 manatees are good at the Seas.
- If vets are ok with the medical records, may consider taking another manatee (maybe Plantaina).

### **Miami Seaquarium:**

- 14 manatees in-house.
- Unfortunately, Snuggles passed away last week.
- All others doing well.

### **Mote Marine Laboratory:**

- All good with Hugh and Buffett.
- Available to assist, if needed.

**SeaWorld:**

- Some staff are out on leave this week. Bob W is probably the best contact this week.
- Good on space for all sizes and sexes.

**University of Florida:**

- No new updates.
- Still available to assist.

**ZooTampa:**

- 18 manatees at ZooTampa.
- All good/stable.
- Flapjack (skinny manatee) up and down but slowly improving.
- Chandler is ready for release. His release will be moved to after Thanksgiving due to the holiday.
- Could take a small manatee or one large manatee.

**Other (related to Captive Database and standardization):**

- **When updating weights, make sure to also update straight lengths at the same time.**
- **IF Reason for rescue changes, such as manatee is rescued for cold stress and rehab facility finds watercraft, please update Andy Garrett. Regarding facility performed necropsies, as usual, please update Dr. Martine de Wit.**
- **Continue to update Captive Manatee database within 48 hours of a manatee rescue, release, death or tags applied.**
- **Also, please continue entering FWC rescue ID's as additional identifiers in the Captive Database.**

**NEXT CALL SCHEDULED FOR Monday, November 29, 2021 at 10AM**

2021 Manatee List  
Revised 11/22/2021

Highlighted cells (yellow) = Fall/Winter Release Candidates or Medically Cleared

Highlighted cells (orange) = manatees from Atlantic Coast UME/special consideration

Facility	Rescue ID	Facility ID	Name	Rescue Date	Transfer Date - to this facility	Waterbody/ County	Cause of Rescue	Sex	Rescue Straight Length (cm)	Rescue Weight (kg)	Rescue Weight (lbs)	Medically Cleared for Release	Scar Photos Sent to USGS (Y/N)	USGS Match - Use Location	Est. # Days Fed Wild Veg	Types of Wild Veg Fed	Date of Recent SL	Recent Straight Length (cm)	Date of Recent WT	Recent Weight (kg)	Recent Weight (lbs)	Proposed Release Location	Release Time Period	Issues with Release	Tag (Y/N)	Monitor Period	Risk Factor	Actual Release Date
Miami Seaquarium (14)		MSTm5701	Romeo	10/10/1957		Miami/Miami-Dade	Preact	M				NO (non-releasable/Pre-Act)					7/9/2015	364	8/10/2010	864	1905							
		MSTm5801	Juliet	1/1/1958		Miami River/Miami-Dade	Preact	F		1136	2504	NO (non-releasable/Pre-Act)					2/18/2020	351	9/10/2014	1420	3130							
	CR0924, RNW0915	MSTm0913	Clarity	12/29/2009		Hunter Spring - Crystal River/Citrus	Watercraft	F	245	340 (*)	750 (*)	NO (conditionally non-releasable)					2/18/2020	305	2/18/2020	590(*)	1300(*)							
	RSE2011	MSTm2008	Guppy	2/22/2020		Stranahan River - Ft. Lauderdale/Broward	Calf of Rescued Mother	F	152	57 (*)	126 (*)	NO					8/26/2021	239	8/26/2021	262	578	Miami/Dade or PEEC		Atlantic Coast UME area/Should make weight for winter/mom was a PEEC animal	Y	full		
	RSE2105	MSTm2105	Lemur	1/15/2021		Riviera Beach/Palm Beach County	Watercraft Prop	M	187	113	249	NO					8/26/2021	224	8/26/2021	240	528	RBPP	Early winter/maybe partial tag	Atlantic Coast UME Area	Y	partial		
	RSE2111	MSTm2108	Lizard	2/12/2021		Dania Beach/Broward	Natural, Orphan calf	F	163	78	172	NO					8/26/2021	193	11/15/2021	193	425	Miami/Dade	Early winter	Atlantic Coast UME area/May not make weight	?			
	RSE2113	MSTm2109	Mr305	2/13/2021		Little River/Miami-Dade	Watercraft/Impact	M	215	185	408	YES, early winter					8/17/2021	224	8/17/2021	242	534	Little River	Early winter	Atlantic Coast UME area/Will make weight				
	RSE2115	MSTm2110	Ferret	3/2/2021		FPL Cooling Lakes/Broward	Orphan calf	M	140	50	110	NO					8/17/2021	171	8/17/2021	96	211							
	RSE2116	MSTm2111	Finch	3/2/2021		FPL Cooling Lakes/Broward	Orphan calf	M	135	48	106	NO					8/17/2021	159	8/17/2021	80	177							
	RSE2120	MSTm2113	Panda	3/9/2021		Stranahan River/Ft. Lauderdale/Broward	Orphan calf	F	155	64	141	NO					8/26/2021	189	8/26/2021	138	303		Late winter(?)					
	RSE2121	MSTm2114	Bongo	3/11/2021		Brickell Key/Miami-Dade	Entrapment /Orphan calf	M	182	79	174	NO					8/26/2021	214	8/26/2021	158	347		Late winter(?)		N			
	RSE2124	MSTm2116	Hammerhead	3/23/2021		Jensen Beach/St. Lucie Power Plant Canal/St Lucie	Orphan Calf/Emaciated/Shark bite	M	141	42	93	NO					8/17/2021	163	8/17/2021	68	151							
	RSE2127/SWF Tm2123	MSTm1814	Plantaina	4/9/2021		Port Everglades Dania Beach/Broward	Natural/Not Suitable Habitat	F	215	202	445	NO					8/26/2021	231	8/26/2021	265	583	BSSP		May want transfer to SWF; Atlantic Coast UME Area	Y	full		

2021 Manatee List  
Revised 11/22/2021

Highlighted cells (yellow) = Fall/Winter Release Candidates or Medically Cleared	Highlighted cells (orange) = manatees from Atlantic Coast UME/special consideration																											
Facility	Rescue ID	Facility ID	Name	Rescue Date	Transfer Date - to this facility	Waterbody/ County	Cause of Rescue	Sex	Rescue Straight Length (cm)	Rescue Weight (kg)	Rescue Weight (lbs)	Medically Cleared for Release	Scar Photos Sent to USGS (Y/N)	USGS Match - Use Location	Est. # Days Fed Wild Veg	Types of Wild Veg Fed	Date of Recent SL	Recent Straight Length (cm)	Date of Recent WT	Recent Weight (kg)	Recent Weight (lbs)	Proposed Release Location	Release Time Period	Issues with Release	Tag (Y/N)	Monitor Period	Risk Factor	Actual Release Date
	RSE2135	MSTm2120		10/19/2021		Spanish Harbor Channel - Big Pine Key/Monroe	Natural Buoyancy Problem	M	206	150	331	NO					10/19/2021	206	10/19/2021	150	331		Run case through Monitoring committee					

**From:** [Calleson, Teresa](#)  
**To:** [McKinnie, Carolyn - APHIS](#)  
**Subject:** MSQ  
**Date:** Thursday, December 2, 2021 11:30:00 AM  
**Attachments:** [Snuggles 2021.pdf](#)

---

**Terri Calleson**  
**Florida Manatee Recovery Lead**  
**U.S. Fish and Wildlife Service**  
**7915 Baymeadows Way, Suite 200**  
**Jacksonville, Florida 32256-7517**  
**904-731-3286 (office)**  
**Email: [Teresa\\_Calleson@fws.gov](mailto:Teresa_Calleson@fws.gov)**  
**<http://www.fws.gov/northflorida>**

**Manatee Information (MLog:7492 )**Animal ID:**MSTm2119** Sex:**F** Name:**Snuggles** Rearing:**Wild reared****-- Rescue Information -----****Rescue Date:** 10/07/2021 **Rescue Per Day:** 1**Rescue Type:** Brought into captivity**Primary Cause:** Watercraft Impact**Primary Cause Text:****Secondary Cause:****Secondary Cause Text:****Health Status:** Guarded**Suspected Pregnant:** No information on potential pregnancy is known**-- Rescue Location Information -----****State:** FL **County:** Monroe **City:** Flamingo**Waterway:** Gulf of Mexico**Latitude:** 25.277726 **Longitude:** -81.173756**Relocated, where?:****Did animal die during rescue or transport?:** No**-- Measurement -----****Weight (kg):** 349 **Estimated Weight?:** No **Date Weighed:** 10/08/2021**Length (cm):** 282 **Estimated Length?:** No **Date Measured:** 10/08/2021**-- Other Rescue Information -----****Tracker:** **Transporter:** FWC Southwest Field Station**Facility transported to:** Miami Seaquarium**Veterinarian:** Shelby Loos **Organization:** Miami Seaquarium**Participating Org:** SWFL, SEFL, Rookery Bay, ENP staff**Flood Gate:** **Pot Status:****Additional Narrative:** Floating right side high about 90degrees**-- Report Information -----****Created By:** Julie Heyde **Created Date:** 10/13/2021**Updated By:** D **Updated Date:** 10/13/2021

**From:** [Calleson, Teresa](#)  
**To:** [McKinnie, Carolyn - APHIS](#)  
**Subject:** RE: MSQ  
**Date:** Thursday, December 2, 2021 1:18:00 PM  
**Attachments:** [MSTm2119 draft.pdf](#)

---

Hi Carolyn,

As requested...due to the watercraft injuries, this manatee had a very poor prognosis. Please take a look and let me know if you have questions.

**Terri Calleson**  
**Florida Manatee Recovery Lead**  
**U.S. Fish and Wildlife Service**  
**7915 Baymeadows Way, Suite 200**  
**Jacksonville, Florida 32256-7517**  
**904-731-3286 (office)**  
**Email: [Teresa\\_Calleson@fws.gov](mailto:Teresa_Calleson@fws.gov)**  
**<http://www.fws.gov/northflorida>**

---

**From:** McKinnie, Carolyn - APHIS <[carolyn.j.mckinnie@usda.gov](mailto:carolyn.j.mckinnie@usda.gov)>  
**Sent:** Thursday, December 2, 2021 12:37 PM  
**To:** Calleson, Teresa <[teresa\\_calleson@fws.gov](mailto:teresa_calleson@fws.gov)>  
**Subject:** [EXTERNAL] RE: MSQ

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Thank you Terri....I just see the basic intake info. Were you sending me the necropsy report? Thanks, Carolyn

---

**From:** Calleson, Teresa <[teresa\\_calleson@fws.gov](mailto:teresa_calleson@fws.gov)>  
**Sent:** Thursday, December 2, 2021 8:30 AM  
**To:** McKinnie, Carolyn - APHIS <[carolyn.j.mckinnie@usda.gov](mailto:carolyn.j.mckinnie@usda.gov)>  
**Subject:** MSQ

**Terri Calleson**

**Florida Manatee Recovery Lead**  
**U.S. Fish and Wildlife Service**  
**7915 Baymeadows Way, Suite 200**  
**Jacksonville, Florida 32256-7517**  
**904-731-3286 (office)**  
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Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission  
Fish and Wildlife Research Institute  
Marine Mammal Pathobiology Laboratory  
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSTm2119  
Date of Report: 2021-Nov-16  
Filed By: FWC MMPL

FWC Case # 26863 FWC Region: SO-B

Sex: Female Length: 274 cm Weight: 284.0 kg

DATE REPORTED: 2021-Nov-16 By: MSQ to FWC-ARH  
DATE COLLECTED: 2021-Nov-16 By: FWC-EJD,MNS  
DATE NECROPSIED: 2021-Nov-17 By: MMPL-BLB,SMT FWC-MNS

LOCATION: State: FL Latitude: N  
County: Monroe Longitude: W  
Waterway: Gulf of Mexico

Locality description: Flamingo, approximately 5.35 km SW of Little Shark River Entrance Light 1.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Human Related: Watercraft Collision

EXPLAIN: Impact; Chronic; Emaciated; Skin lesions; Pneumothorax; Depleted fat(s); Serous fat(s); Serous muscle; Torn parietal pleura; Torn lung(s); Empty GI tract; Asymmetric carcass; Mucus from nares; Subluxated, remodeled ribs; Necrotic tissue; Resolving blood clots; Displaced abdominal organs; Collapsed, consolidated right lung; Swollen left lung; Fluid, mucus, foam in airways; Scar tissue lungs, parietal pleura; Ulcers duodenum; Congested fat, peritoneum, mesenteries, urinary bladder mucosa, parietal pleura, hemidiaphragms; Annlar calcification of mitral valves; Thickened wall left atrium; Lettuce in mouth.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:

Genetics, ELISA toxicology samples.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

Rescue report. Miami Seaquarium email.

REMARKS:

PIT tag scan negative. Uterine Scar. See rescue report RSW2132, rescued on 07 Oct 2021 due to watercraft injuries. Found dead in the pool at 0800 hrs on 16 Nov 2021. Hemorrhagic injection sites.

DRAFT

Page 1&2	
Necropsy Report	
Lat/Long	

**MORPHOMETRICS:**

<b>Total length:</b>	274 cm	<b>Fluke base:</b>	82 cm	<b>Girth at axillae:</b>	140 cm
<b>Snout to anus:</b>	180 cm	<b>Fluke width:</b>	67 cm		
<b>Snout to U/G:</b>	164 cm	<b>Girth at fluke base:</b>	90 cm		
<b>Snout to umbilicus:</b>	94 cm	<b>Girth at anus:</b>	114 cm		
<b>Flipper width:</b>	16 cm	<b>Girth at umbilicus:</b>	188 cm	<b>Nail count: R: 3</b>	<b>L: 3</b>

	<b>Ventral</b>	<b>Lateral</b>		
<b>Skin Thickness:</b>	cm	cm		
<b>Outer Blubber Thickness:</b>	cm	cm	<b>Abdominal Fat Thickness:</b>	cm
<b>Inner Blubber Thickness:</b>	cm	cm	<b>Epidermis Thickness:</b>	cm

<b>Perinatal:</b>	<b>Ductus Arteriosis Diameter:</b>	cm
	<b>Left Pulmonary Artery Diameter:</b>	cm
	<b>Right Pulmonary Artery Diameter:</b>	cm

**Uterine Scarring Measurements:**

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left	4.5	9
Left		

**Male Reproductive:**

**Fetus 1: Sex: Report?:**

**Length:**  
**Weight:**  
**Samples Taken:**

**Fetus 2: Sex: Report?:**

**Length:**  
**Weight:**  
**Samples Taken:**

**Brevetoxin Results:**

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

**Other Brevetoxin Results:**

## MARINE MAMMAL NECROPSY REPORT FORM

**FIELD I.D.** MSTm2119  
**RECOVERY DATE** 17 November 2021  
**GENDER** Female **TL** 274 cm **WT** 284 kg

**SPECIES** *T. manatus latirostris*  
**NECROPSY DATE** 17 November 2021  
**CONDITION** Moderately Decomposed

---

**HISTORY** See rescue report RSW2132. 16 November 2021, at 0815 hrs, FWC-biologist Amber Howell (ARH) received a notification from Miami Seaquarium-Julie that MSTm2119 had been found dead at 0800 hrs. ARH relayed the information to MMPL-Martine de Wit who then asked FWC biologist-Denise M. Boyd (DMB) to make arrangements for recovery. FWC biologists-Emily J. Davidson (EJD) and Meghan N. Sutton (MNS) arrived at Miami Seaquarium by 1300 hrs, loaded the carcass by 1310 hrs, and transported it to the SW Field Station by 1734 hrs. The carcass was stored overnight in the walk-in cooler. 17 November, MNS and FWC interns-M. Walter and A. Steele loaded the carcass by 0758 hrs and transported it to the MMPL arriving by 0921 hrs.

---

**EXTERNAL** All of the epidermis was present. Viscous, red-tinged mucus exuded from the nares. The carcass had a peanut-shaped head. The peduncle was thin. The right aspect of the carcass was severely distended, and the left ventrum was concave due to emaciation. The epidermis of the left lateral aspect was dry and cracked, and there were numerous healing linear and circular lesions. A minimum of four well-healed watercraft-related scar patterns was observed. There was a small, circular, well-healed mutilation at the 5 o'clock position of the fluke margin. PIT tag scan negative. A genetics sample was collected.

---

**ABDOMINAL** There was scant, serous abdominal, mesenteric, and omental fat. There were bands of severe congestion in the abdominal fat and peritoneum. The abdominal organs were displaced to the left aspect due to severe distension of the right hemidiaphragm.

**STOMACH** The stomach contained 500 mL of viscous, white to light tan fluid. The mucosa was mottled red to purple. No parasites were observed.

**DUODENUM** The duodenum contained 250 mL of viscous, white to light tan fluid. The mucosa had linear and circular ulcers that were tan on the margin and black in the center. No parasites were observed.

**JEJUNUM & ILEUM** There were patches of severe congestion in the mesentery. The small intestine contained a scant amount of viscous, light-yellow fluid. The mucosa was slightly sloughing. No parasites were grossly observed.

**CECUM** The cecum contained 250 mL of wet, well-digested, homogeneous, light green digesta. The mucosa was sloughing. No parasites were observed.

**COLON** There were patches of severe congestion in the mesentery. The colon was mostly empty of contents and had alternating regions of contraction and gas distension. The proximal colon contained a scant amount of wet, well-digested, homogeneous, poorly formed, light green feces. The distal colon contained a small amount of moist, well-digested, homogeneous, moderately formed, dark green feces. The mucosa was sloughing throughout. No parasites were observed.

**PANCREAS** The pancreas was tan on serosal and cut surfaces.

**SPLEEN** The spleen was tan to pink on serosal surfaces and dark red on cut surfaces.

---

**LIVER** The liver was pushed to the left side and appeared small. The margins of the liver were rounded. The liver was firm. Serosal surfaces were dark blue and cut surfaces were dark red.

**GALLBLADDER** The gallbladder contained approximately 50 mL of viscous, cloudy, yellow-green bile. The mucosa was bile-stained.

---

**REPRODUCTIVE** There was a small amount of serous reproductive fat. The right uterine horn was small in diameter. The left uterine horn was contracted. The left uterine horn contained a nearly resolved scar (9 cm wide x 4.5 cm circumference). The right ovary contained a few small, fluid-filled follicles and small firm, white corpora albicantia. The left ovary contained numerous small, fluid-filled follicles and firm, white corpora albicantia.

**KIDNEYS** There was no perirenal fat. The kidneys were pink to purple on serosal surfaces. On cut surfaces, the cortices were dark pink to light red and the medullae were dark red to dark purple. The corticomedullary boundaries were distinct.

**URINARY BLADDER** The urinary bladder contained approximately 300 mL of cloudy, dark yellow urine. The mucosa was severely congested. An ELISA toxicology sample was collected.

---

**HEART** There was a small amount of serous epicardial fat. The left AV valves were thickened and associated with annular calcification in the surrounding ventricular heart muscle. The left atrium wall was thickened. The remainder of the valves were unremarkable.

---

**RESPIRATORY SYSTEM** Both hemidiaphragms were intact and moderately congested on the pleural aspect. The right hemidiaphragm was severely distended due to gas in the pleural cavity. The left pleural cavity contained approximately 1 L of watery, cloudy, dark red fluid. The left parietal pleura was severely congested. The right parietal pleura was torn between the proximal one-third of right ribs 5 and 6, and at right rib head 7. The right lung was collapsed, partially consolidated, and approximately one-third the size of the left lung. There was a 2 mm diameter tear in the serosa of the right lung along the primary airway of the dorsal cranial one-third (see photo). There were a few small, resolving blood clots adhered to the cranial one-third of the right lung. Serosal surfaces were tan, light pink and red, and cut surfaces were pink to dark red. The left lung was heavy and swollen. Serosal surfaces were mottled pink, purple and tan, and cut surfaces were red to dark red and very wet. There was a large, circular patch of scar tissue on the mid-dorsal aspect of the caudal one-third. The airways of both lungs contained an abundant amount of viscous, white and pink mucus, fluid and foam. A few dead trematodes were observed. The mucosa was pink to purple. An ELISA toxicology sample was collected.

---

**HEAD & NECK REGIONS** There was a small thatch of moderately chewed lettuce in the mouth. Cut tissues of the head and neck were serous and bloody. There was a moderate amount of viscous, pink fluid and mucus in the trachea.

---

**SKELETON** Right ribs 6 through 8 were chronically subluxated and partially remodeled at the rib heads, which protruded slightly into the pleural cavity. There was firm, stringy, white scar tissue surrounding the heads of right ribs 6 through 8. There was a pocket of necrotic muscle, small resolving blood clots, and clear light red-tinged fluid dorsal to right rib heads 7 and 8.

---

**OTHER** There were hemorrhagic tracks of muscle in the dorsal peduncle (injection sites).

---

**COMMENTS** There was a well-healed watercraft-related scar on the dorsum in the vicinity of the chronic rib trauma, but a direct association of rib trauma and a wound was not visible on either rescue or necropsy, likely due to the chronic, partially resolved state of the injury.

---

**SIGNIFICANT FINDINGS**

- Asymmetric carcass
- Emaciated
- Mucus from nares
- Skin lesions
- Subluxated, remodeled ribs
- Necrotic tissue
- Resolving blood clots
- Depleted, serous fat
- Serous tissue
- Pneumothorax
- Displaced abdominal organs
- Torn parietal pleura, lung
- Collapsed, consolidated right lung
- Swollen, wet left lung
- Fluid, mucus, foam in airways
- Scar tissue lungs, parietal pleura
- Relatively empty GI tract
- Lettuce in mouth
- Ulcers duodenum
- Congested fat, peritoneum, mesenteries, urinary bladder mucosa, parietal pleura, hemidiaphragms
- Annular calcification of mitral valves
- Thickened wall left atrium
- Uterine scars
- Hemorrhagic injection sites

---

**PROBABLE CAUSE OF DEATH**

Watercraft; Impact (Chronic)

---

**NECROPSY CONDUCTED BY**

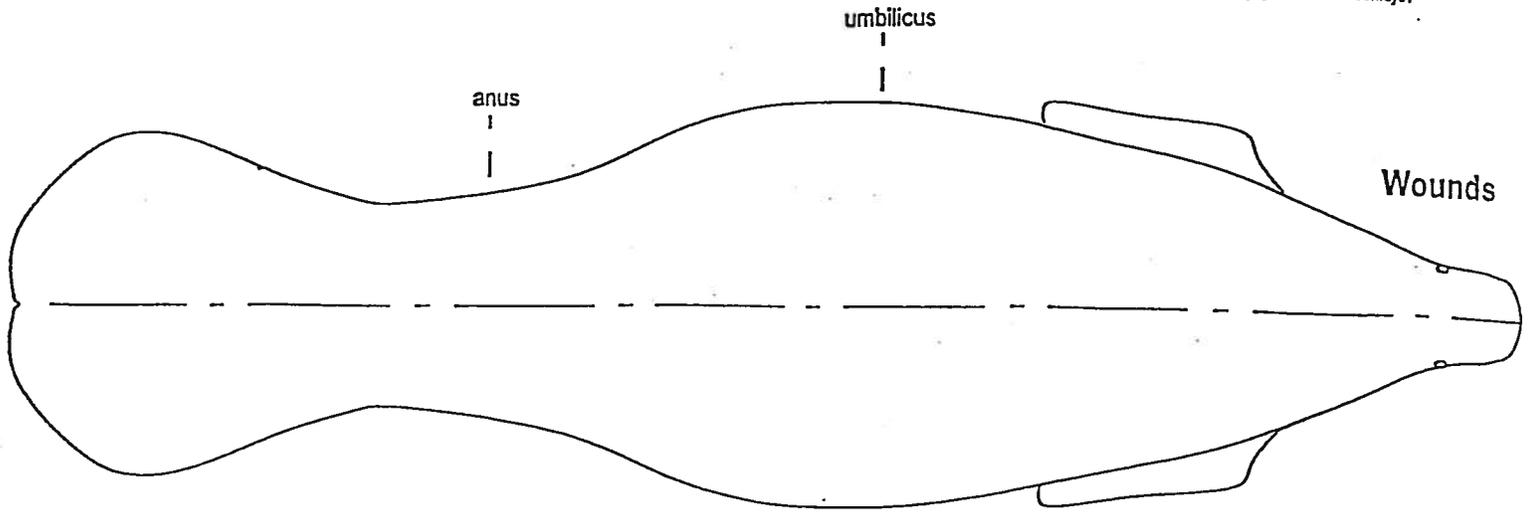
Brandon L. Bassett  
Sean M. Tennant

REPORT FILED BY Tennant/Bassett

Date \_\_\_\_\_

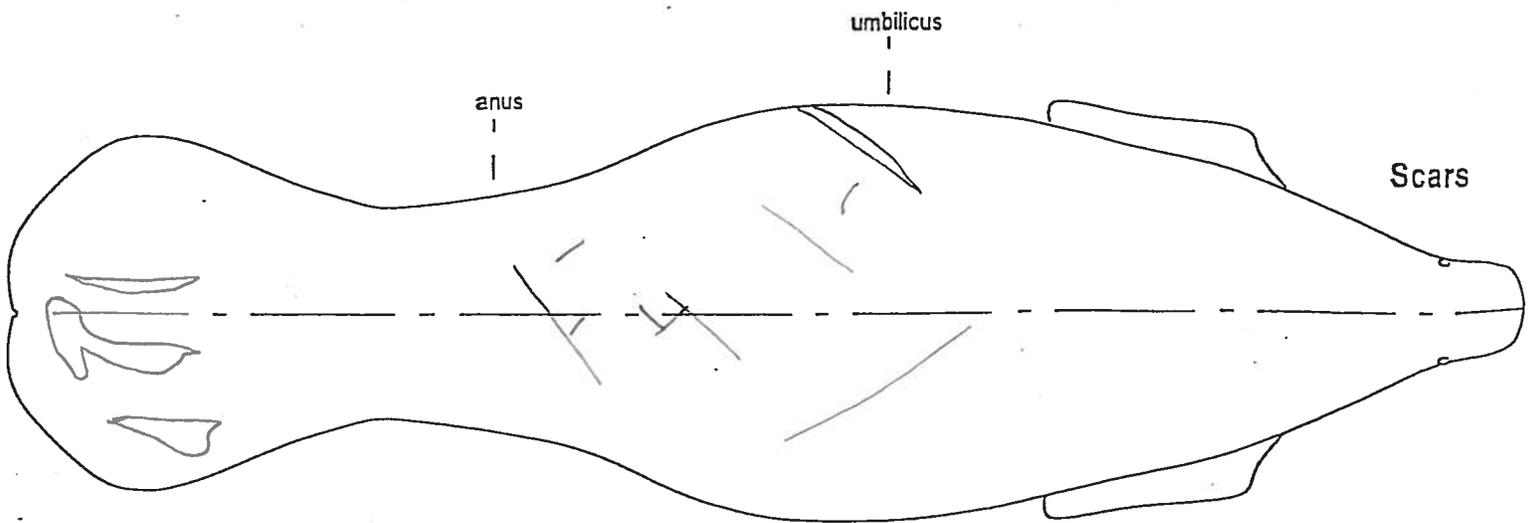
Field I.D. MSTm 2119

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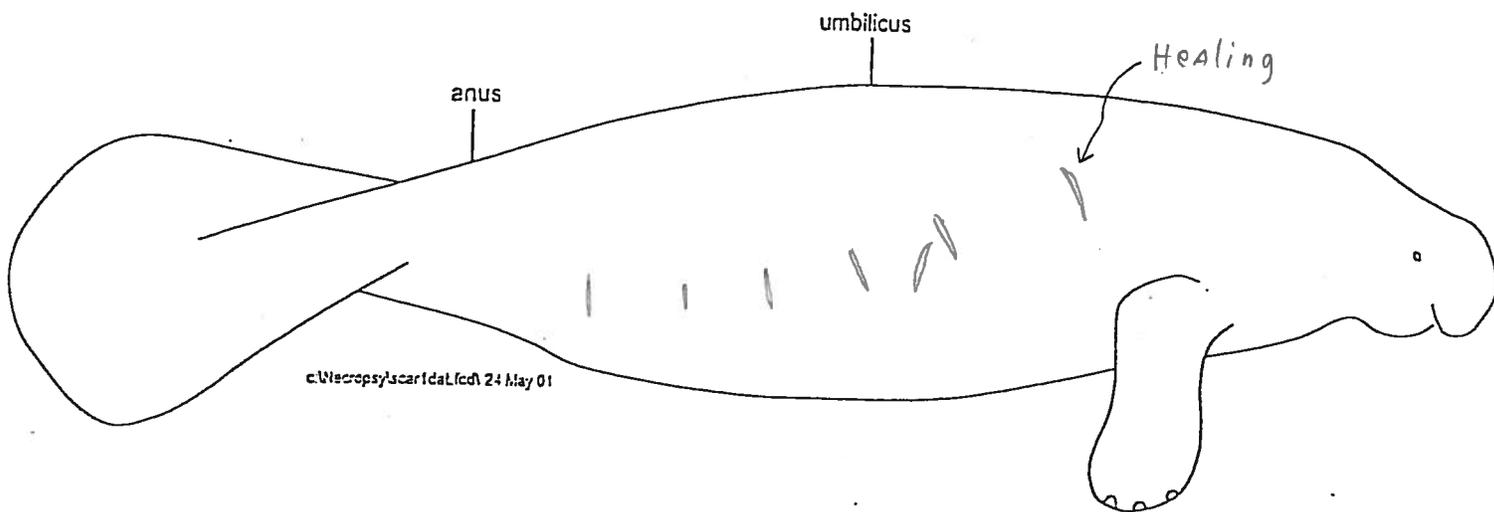
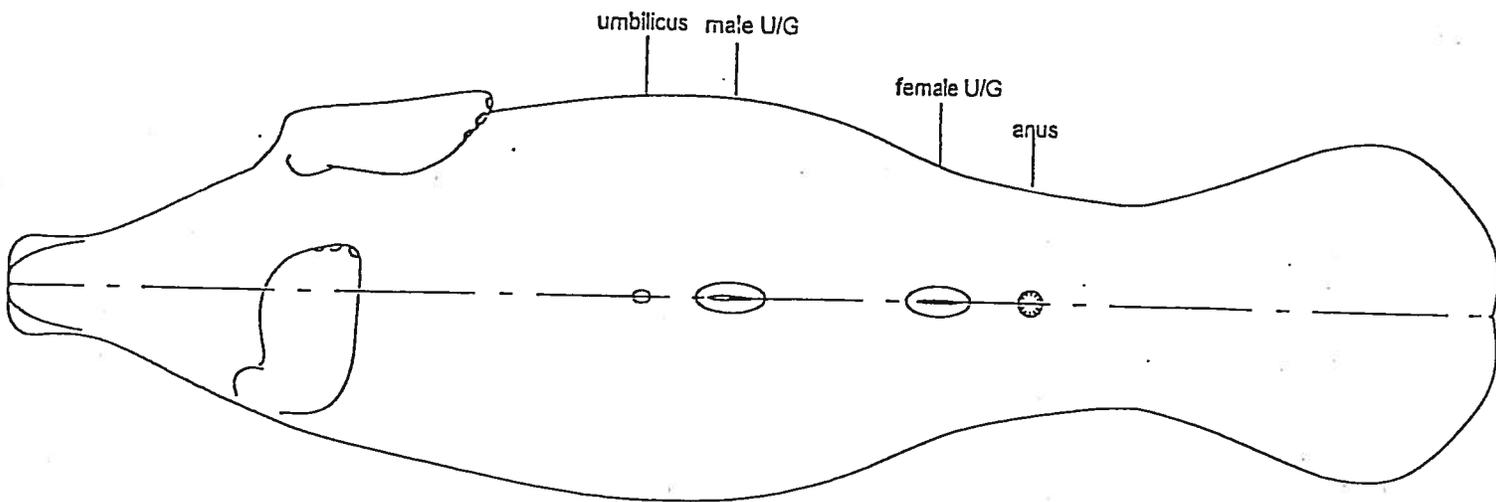
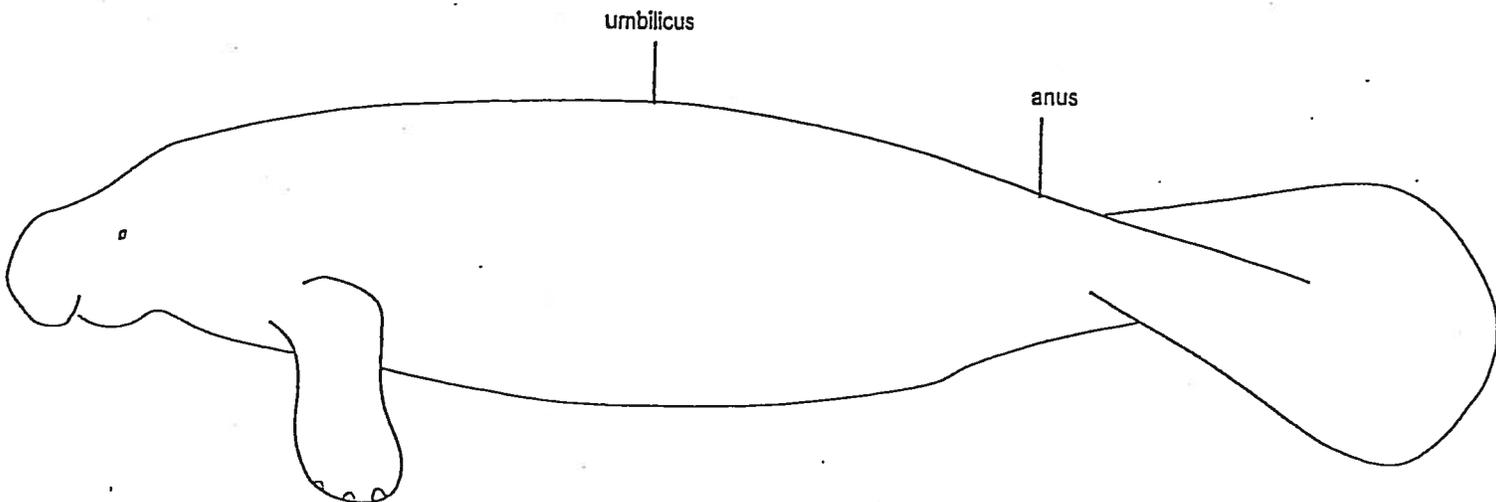
Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

over  
= BLB



FIELD I.D.

MSTm 2/19



**From:** [Calleson, Teresa](#)  
**To:** [McKinnie, Carolyn - APHIS](#)  
**Subject:** Miami Seaquarium - followup/current status  
**Date:** Sunday, December 5, 2021 11:08:00 AM  
**Importance:** High

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Hi Carolyn,

As discussed last week, I'm providing you with some additional information on the current situation at Miami Seaquarium (MSQ) from our perspective on manatee care. At this time, MSQ is closed to all incoming critical care or holding cases, and I would anticipate that to be the situation until late winter/early spring 2022. The facility currently has 12 manatees in-house including 2 Pre-Act manatees, one female non-releasable (watercraft case), 4 manatees slated for release this winter, and 5 smaller, orphaned calves that will not make length and weight benchmarks to go back to the wild this winter, per the release guidelines. Transferring the additional stable manatees owned by the USFWS out of the MSQ facility would take all of the Manatee Rescue and Rehabilitation Partnership (MRP) program's available rehab space, so at this time, we are electing to keep those stable manatees at MSQ until release or until other holding facilities may have space available, should they need to be transferred. The MRP is discussing sending a team of animal care, vet and facility experts to MSQ to evaluate the site and provide recommendations. They are also open to helping this partner facility to try to get them back online for critical care.

Capacity: MSQ has recently had at least 18 manatees. For them, I think 12-15 was fairly typical.

Current number in-house: 12 – this includes 2 Pre-act manatees, one female non-releasable (watercraft case), 4 slated for release this winter, and 5 small, orphaned calves that will not make weight to go out this winter, per the federal release guidelines.

Facility status: Closed to all new critical care or holding cases, per MSQ's request to transition back to a holding facility.

Recent Chronology of Events:

November 16-17, 2021: A 274 cm female watercraft case (MSTm2119) was found deceased in the pool at MSQ. Julie Heyde and Dr. Shelby Loos called me that morning to make notification, in compliance with the USFWS permit condition. Arrangements were made to get the carcass to Florida Fish and Wildlife Conservation Commission's Marine Mammal Pathobiology Lab (MMPL) for necropsy. The manatee was necropsied at MMPL on November 17, 2021 and there were some concerning findings. As a result, I made a formal request to FWC for the draft necropsy report. It is important to note that this watercraft-injured manatee had an extremely poor prognosis due to its injuries, and the probable cause of death is listed by FWC-MMPL as "Human Related: Watercraft Collision."

November 18, 2021: Due to the findings of concern, I alerted a partner facility that had been providing help with veterinary care and sent a request for a meeting with MSQ for the following morning at 9AM.

November 19, 2021: The meeting included myself, MSQ staff, and the partner facility. Following disclosure that MSQ had limitations that prevented them from tubing fluids/food more than once per day (and also had staffing issues that would prevent them from providing cases such as abandoned calves with “round the clock” care), I told them that was not consistent with the standard of care for a critical care facility. Due to the fact that this was a Friday and in order to help with rescue/transport planning over the weekend, I made the difficult decision to recommend closure of MSQ to incoming rescue intakes and notified FWC’s Rescue Coordinator and the Southeast Field Lab lead for manatee rescues in that area.

November 22, 2021: As follow up to the previous week’s meeting, MSQ provided me with an email stating that they wanted to transition from critical care to a holding facility. I accepted this request, and then sent notification of this decision to the MRP for planning purposes with the suggestion that the MRP provide this important partner with some support to help them return to critical care status.

November 30, 2021: Following the holidays and some time off, I texted Dr. Carolyn McKinnie with APHIS/USDA and asked to meet with her to discuss MSQ. There is a pending USDA investigation that is in process due to some past concerns with animal welfare at the facility. To my knowledge, these past concerns only included one manatee case, and that manatee has since been successfully released back to the wild. Carolyn and I set up a meeting for December 2, 2021. Due to concerns for manatee welfare at the facility, I requested that MSQ transfer 2 manatees (a young female “Plantaina” that needed to get to Disney’s Living Seas and closer to her release site at Blue Spring and one manatee rescued due to being positively buoyant that needed additional diagnostics - MSTm2120 “Waterbear”) to Sea World of Florida staff that would be in Port Everglades for a release the following morning. This transfer required MSQ to only transport the manatees about an hour north before handing them off to Sea World staff. Sea World of Florida had agreed to take the manatees, and I asked both parties to reflect the transfer as a “management decision.” Disney’s Living Seas had agreed to accept Plantaina in the pool with their two females, so this transport from South Florida to Central Florida was a way to get her to the receiving facility a little quicker via a “hand off” to Sea World of Florida.

December 1, 2021: Between 12-1PM, the two facilities met at Port Everglades (Broward County), and these two manatees were transferred to Sea World of Florida’s team.

December 2, 2021: Carolyn and I discussed the issues at MSQ and our decision to close the facility, followed by MSQ’s request to transition to just a holding facility. I was asked for the email transmitting their request to transition to holding, rather than critical care and for information on the watercraft-injured manatee in question. I provided all info as requested including the draft necropsy report for the carcass. During our conversation, it became apparent that the investigation into animal care practices at MSQ that started in June 2021 was still ongoing and that animal welfare concerns may still exist. I relayed the USFWS’ support and to let us know if USDA needed anything further.

December 3, 2021: I set up a meeting with Anna Barry at USFWS’ Division of Management Authority

to discuss a few issues. At that time, I notified Anna of the MSQ situation, the conversation with USDA, and the steps that had been taken. We also discussed the transfers of the “critical” manatee(s) out of MSQ, and the manatees currently in the facility’s collection.

Should any additional information be needed from USFWS, please do not hesitate to reach out to me. Thank you!

**Terri Calleson**  
**Florida Manatee Recovery Lead**  
**U.S. Fish and Wildlife Service**  
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# Captive manatee database: Search / View / Reports

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Manatee Information (MLog:7492)			
Sex:	F	Name:	<b>Snuggles</b>
Animal ID:	<b>MSTm2119</b>	Studbook:	
Rearing:	<b>Wild reared</b>	Dam's Name:	
Sire's Name:			

Animal History			
Event Date	Event	Details	Location
10/07/2021	<a href="#">Rescue</a>	To: MSQ (Watercraft)	Gulf of Mexico
11/16/2021	<a href="#">Death</a>	Cause: Watercraft	MSQ

Animal ID Information							
Animal ID	Primary	IDType	Created By	Created Date	Updated By	Updated Date	
<a href="#">MSTm2119</a>	YES	Facility	jheyde	10/13/2021	D	10/13/2021	
<a href="#">RSW2132</a>	NO	Rescue	jheyde	10/20/2021	D	10/20/2021	

Death Information						
Death Date	Cause ID	Euth	Death Location	Organization	Veterinarian	
<a href="#">11/16/2021</a>	Watercraft	0	Rehab	Miami Seaquarium	Shelby Loos	

Rescue Information					
Date, Per Day	Waterway	Rescue Type	Primary Cause	Organization	
<a href="#">10/07/2021</a> , 1	Gulf of Mexico	Brought into captivity	Watercraft	MSQ	

Manatee Name Information						
Name	Primary	Created By	Created Date	Updated By	Updated Date	
Snuggles	YES	jheyde	10/27/2021	D	10/27/2021	

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**Manatee Information (MLog:7492 )**

Animal ID:**MSTm2119** Sex:**F** Name:**Snuggles** Rearing:**Wild reared**

-- **Death Information** -----

**Death Date:** 11/16/2021

**Death Occurred?:** During Rehabilitation

**Was animal euthanized?**

**Death Cause:** Watercraft Impact

**Other Human-Related:**

**Death Location:** During Rehabilitation

-- **Other Death Information** -----

**Facility:** Miami Seaquarium

**Veterinarian:** Shelby Loos

**Additional Narrative:** Necropsy by FWC MMPL, COD: Watercraft; Impact (chronic)

-- **Report Information** -----

**Created By:** Shelby Loos    **Created Date:** 01/18/2022

**Updated By:** Nadia Gordon    **Updated Date:** 01/25/2022