

South Quay Wall Recapitalization at Naval Station Mayport

Marine Mammal Observer Report 30 June 2021 to 24 August 2021

The recapitalization of the South Quay Wall at Naval Station Mayport (NS Mayport) entailed the installation of 240 single sheet piles over 29 days. The incidental harassment authorization (IHA; 85 FR 81183) authorized the take of 70 bottlenose dolphins. In-water pile driving began on 30 June 2021 and concluded on 24 August 2021. Marine mammal observers were employees of Vantage Observers, LLC, subcontracted by Brantley Construction Company. They were given the IHA and marine mammal observer plan for this project. They also received marine mammal observer training from NAVFAC Southeast on 28 June 2021 and 5 August 2021.

Two marine mammal observers (MMOs) were present for all in-water pile driving. One was stationed at the actual pile driving site on the South Quay Wall to ensure no Level A takes of regulated marine animals and to enumerate all marine mammals visible in the vicinity. The other observer was stationed on the northeast corner of the southern turning basin's dog-leg to enumerate all dolphins that entered the behavioral zone of influence (ZOI) during pile driving activities (Figure 1). This allowed for observations of as large a portion of the behavioral ZOI as possible.



Figure 1. Positions of the observers during in-water pile driving.

OBSERVATIONS

The maximum numbers of bottlenose dolphins observed during pile driving activities each day are presented in Table 1. A summary of the observer dataset is presented in Appendix A and scans of the individual data sheets are provided in Appendix B. Data from the two observers were consolidated into single sets of submitted sheets at the end of each day.

A total of 42 bottlenose dolphins were observed, but only 13 of them were incidentally harassed by vibratory pile driving. The other 29 individuals were only sighted during periods before, between, or after vibratory pile driving. No impact pile driving was performed.

Pile driving took place over 29 days and bottlenose dolphins were harassed on just two (7%) of those days. Although zero takes occurred on the other 27 days, it is noted that bottlenose dolphins were observed in the area on eight of those days (denoted by asterisks in Table 1), but they were not within the zone of influence during pile driving activities. Had they been present during pile driving, the total number of takes would have been 42 bottlenose dolphins, or 60% of the maximum take authorization (n=70 dolphins).

Vibratory pile driving never had to shut down due to close proximity of bottlenose dolphins, but it did shut down a total of 17 times across 12 days due to green sea turtles venturing within 50 feet of the operations. Reduced water currents inside the basin's dog-leg and high availability of algae forage in the area likely contributed to the frequent green sea turtle occurrences.

Table 1. The maximum number of bottlenose dolphins observed on each day of in-water pile driving

Date	Max #		Date	Max #		Date	Max #
6/30/2021	7*		7/22/2021	0		8/12/2021	1*
7/1/2021	0		7/26/2021	0		8/13/2021	4*
7/9/2021	2*		7/27/2021	3*		8/16/2021	0
7/12/2021	0		7/28/2021	7		8/17/2021	0
7/13/2021	0		7/29/2021	4*		8/19/2021	0
7/14/2021	0		7/30/2021	6		8/20/2021	0
7/15/2021	5*		8/5/2021	0		8/21/2021	0
7/16/2021	0		8/6/2021	0		8/23/2021	0
7/19/2021	3*		8/9/2021	0		8/24/2021	0
7/20/2021	0		8/10/2021	0		TOTAL	42

* = Bottlenose dolphins were observed on these days, but not during pile driving activities.

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Appendix A. Marine mammal observer data collected between 30 June and 25 August 2021.

Date	Bottlenose Dolphin			Pile Driving ?	Shut-down	Nearest Distance (yards)	Other Species Observed	Shutdown for Other Species
	Max #	# of Calves	Behaviors					
6/30/2021	7	0	DI, FO, MI, PO, TR	N	N	470	GST, Manatee	2
7/1/2021	.	.	.	.	.	.	GST, Manatee	.
7/9/2021	2	0	DI, TR	N	N	100	GST	.
7/12/2021	.	.	.	.	.	.	GST	.
7/13/2021	.	.	.	.	.	.	GST	.
7/14/2021	.	.	.	.	.	.	GST	.
7/15/2021	5	2	MI, TR	N	N	520	GST	1
7/16/2021	.	.	.	.	.	.	.	.
7/19/2021	3	1	BR, DI, MI	N	N	400	GST	1
7/20/2021	.	.	.	.	.	.	GST	.
7/22/2021	.	.	.	.	.	.	GST	.
7/26/2021	.	.	.	.	.	.	GST	.
7/27/2021	3	0	DI, MI	N	N	450	GST	.
7/28/2021	7	0	BR, MI, TR	Y	N	550	GST	2
7/29/2021	4	0	BR, MI	N	N	500	GST	1
7/30/2021	6	0	BR, FO	Y	N	150	GST	.
8/5/2021	.	.	.	.	.	.	GST	.
8/6/2021	.	.	.	.	.	.	GST	.
8/9/2021	.	.	.	.	.	.	GST	1
8/10/2021	.	.	.	.	.	.	GST	1
8/12/2021	1	0	TR	N	N	220	GST	.
8/13/2021	4	0	MI	N	N	900	GST	1
8/16/2021	.	.	.	.	.	.	GST	4
8/17/2021	.	.	.	.	.	.	GST	1
8/19/2021	.	.	.	.	.	.	GST	1
8/20/2021	.	.	.	.	.	.	GST	1
8/21/2021	.	.	.	.	.	.	GST	.
8/23/2021	.	.	.	.	.	.	GST	.
8/24/2021	.	.	.	.	.	.	GST	.

GST = Green sea turtle

Behavior Codes: BR=Breaching, DI=Diving, FO=Foraging, MI=Milling, PO=Porpoising, TR=Travelling.

Appendix B
Marine Mammal Observer
Data Sheets

Project name: South Quay Wall Restoration

Lead observer: Courtney Friday

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Project location: NAVSTA - Vicksburg, Jacksonville, FL

Lead observer contact info: 843-502-9127

Date: 06/30/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	07:51 07:51	South Quay Wall Courtney Friday	E@Wkts No glare Off swell	T.m. latirostris (manatee)	N/A yds Not pile driving	1 / 1 / 1 0 calves	toward or away parallel <u>none</u> Behavior Code: TR	No in water activity at time of sighting. Manatee surfaced 10ft from South Quay wall traveling NE. Single sighting.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	10:52 11:19	South Quay Wall Courtney Friday	E@Wkts no glare Off swell	Chelonia mydas (green turtle)	N/A yds Not pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel <u>none</u> Behavior Code: FO	No in water activity at time of sighting. Feeding on turbidity curtain.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	10:52 12:01	South Quay Wall Courtney Friday	E@Wkts No glare Off swell	Chelonia mydas (Green turtle)	N/A yds Not pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel <u>none</u> Behavior Code: FO	No in water activity at time of sighting. Feeding on turbidity curtain
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	10:52 13:04	South Quay Wall Courtney Friday	E@Wkts No glare Off swell	Chelonia mydas (green turtle)	7 yds	1 / 1 / 1 1 juvenile calves	toward or away <u>parallel</u> none Behavior Code: FO	Crew was ready to begin pile driving at 1250, 2 juvenile green turtles were feeding in exclusion zone resulting in delay. Turtle below
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	10:52 14:44	South Quay Wall Courtney Friday	E@Wkts No glare Off swell	Chelonia mydas (green turtle)	7 yds	1 / 1 / 1 1 juvenile calves	toward or away <u>parallel</u> none Behavior Code: FO	extended delay after 1304 Turtle was in exclusion zone until 1435 resulting in delay. At 1445 turtle was 60ft from work area, gave all clear to put piling in water at 1437
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	:/	/	/	/	/ yds	1 / 1 - calves	toward or away parallel none Behavior Code:	turtle dove 60ft from work area. At 1444 began pile driving and turtle resurfaced 20ft from pile driving. All stop initiated at 1444, turtle dove and was not required. All clear at 1459.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	14:15 14:40	NE Quay Wall Chad Friday	E@Wkts No glare Off swell	Tursiops truncatus (Bottlenose dolphin)	2@470 3@680 2@930 yds	7 / 7 / 7 Adults 2 calves	toward or away parallel <u>none</u> Behavior Code: MI, PO, DI, FO, TR	No in water activity. 7 adults observed for 25 minutes. At 1440 dolphin traveled East out of port before pile driving began.

Project name: South Quay Wall Remedialization Lead observer: Chad Friday

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Project location: NAVSTA - Mayport, Jacksonville, FL Lead observer contact info: 321-946-9972

Date: 07/01/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:33 07:50	South Quay Wall Chad Friday	E @ 4.1 kts No glare Off swell	Chelonia mydas (Green turtle)	3 yds Not pile driving	3 / 3 / 3 3 juveniles calves	toward or away parallel none Behavior Code: FO, MI, DI	3 juvenile green turtles feeding on turbidity caltair 3m from South Quay Wall. No in-water activity.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:03 08:15	NE wall Courtney Friday	E @ 4.1 kts No glare Off swell	Chelonia mydas (Green turtle)	300 yds Not pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: FO, TR	1 juvenile green turtle feeding along NE wall 300m from South Quay Wall. No in-water activity.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:35 11:08	South Quay Wall Chad Friday	ESE @ 5.1 kts No glare Off swell	T. m. latirostris (manatee)	1 yds Not pile driving	2 / 2 / 2 0 calves	toward or away parallel none Behavior Code: FO, TR	2 adult manatee traveling 1m off South Quay Wall. Last sight at 1040. Re-appeared at 1103 traveling east along wall. Feeding on beds. No in-water activity.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:50 12:00	South Quay Wall Chad Friday	ESE @ 5.1 kts No glare Off swell	Chelonia mydas (Green turtle)	0 yds Not pile driving	1 / 1 / 1 1 sub adult calves	toward or away parallel none Behavior Code: FO	1 sub adult green turtle feeding on South Quay Wall. No in-water activity.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:40 13:40	South Quay Wall Chad Friday	SE @ 5.1 kts No glare Off swell	T. m. latirostris (manatee)	3 yds Not pile driving	1 / 1 / 1 0 calves	toward or away parallel none Behavior Code: TR	1 adult manatee traveling NW. Single sighting. No in-water activity.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:42 14:47				yds	1 / 1 calves	toward or away parallel none Behavior Code:	Pile driving from 1442-1446. Shut down for lightning at 1447.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	:				yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Recapitalization Lead observer: Courtney Friday
 Project location: NAVSTA Mayport, Jacksonville, FL Lead observer contact info: 843-503-9127

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 Date: 07/09/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:12	South Quay Wall - Courtney Friday NE Wall - Chad Friday	Wind - W @ 7 kts No glare off swell	None	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Observers on location begin observation 07:12
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:55 09:00	" "	Wind: WSW @ 7 kts No glare off swell	Tursiops truncatus (Bottlenose dolphin)	100 - yds 400 Not pile driving	2 / 2 / 2 0 calves	toward or away parallel none Behavior Code: TR, DI	At 08:55 NE wall observer Chad, observe 2 dolphin traveling inbound, at 09:00 South Quay wall observer single sighting 100 yds from work area. Not pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:25 09:46	" "	Wind WSW @ 7 kts No glare off swell	None	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Pile driving 09:25-09:46. No sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:40 11:48	South Quay wall Courtney Friday	Wind - W @ 8 kts No glare off swell	Chelonia mydas (Green turtle)	3 yds Not pile driving	1 / 1 / 1 1 juvenile 1 calves	toward or away parallel none Behavior Code: TR	At 11:40 a juvenile green was observed swimming along turbidity curtain at 11:48 turtle dove 70ft from work area. Not pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:55 13:00	South Quay wall Courtney Friday NE Wall Chad Friday	WSW @ 11.1 kts No glare off swell	None	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Pile driving 12:55-13:00 No sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:44 14:48	" "	W @ 8.9 kts No glare off swell	None	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Pile driving 14:44-14:48. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 16:00	" "	WSW @ 8.9 kts No glare off swell	None	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Observers cleared to leave at 16:00 no more in water work.

Project name: South Quay Wall Remediation Lead observer: Chad Friday

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Project location: NAVSTA Mayport, Jacksonville, FL Lead observer contact info: 321-946-9972

Date: 07/12/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:15 :	South Quay Wall Chad Friday NE wall Courtney Friday	SE @ 2.9 kts NO glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	observers on location begin monitoring at 07:15.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:43 08:44	South Quay Wall Chad Friday	S @ 5.1 kts No glare off swell	Chelonia mydas (Green turtle)	45 yds Not pile driving	2 / 2 / 2 2 juveniles 2 calves	toward or away parallel none Behavior Code: TR, DI	Two juvenile greens surfaced and dove 45 yds from wall traveling N. No pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:30 09:48	South Quay Wall Chad Friday	SE @ 5.1 kts Moderate glare off swell	Chelonia mydas (Green turtle)	0-16 yds Not pile driving	1 / 1 / 1 1 juvenile 3 calves	toward or away parallel none Behavior Code: TR, DI	At 0930 juvenile green surfaced feeding on west wall (2-4 ft), traveling S to South Quay Wall dove at 0948 off from work area. Not pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:39 14:44	South Quay Wall Chad Friday NE wall Courtney Friday	ESE @ 8.9 kts No glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1439-1444. Down for lightning 1444-1512. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	15:18 15:33	" "	ESE @ 8.9 kts No glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1518-1533. Down for lightning 1533-1610. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	16:20 16:43	" "	SE @ 7 kts No glare (ft 5 VIP)	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1620-1643. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	16:43 17:13	" "	" "	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	End monitoring at 1713. No sightings

Project name: South Quay Wall RehabilitationLead observer: Courtney FridayPage 1 of 1Project location: NAVSTA - Mayport Jacksonville, FLLead observer contact info: 843-508-9127Date: 07/13/2022

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:18 :	South Quay wall Courtney Friday NE wall Chad Friday	NNW @ 5.1 kts Extreme glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Observers on watch at 07:18. No initial sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:12 08:18	NE wall Chad Friday	ENE @ 4.1 kts No glare off swell	Chelonia mydas (Green turtle)	150 yds No pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: TR	At 0812 green turtle surfaced 150yds from work area traveling south. At 0818 resurfaced dive heading North. No pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:22 08:27	South Quay wall Courtney Friday	" "	Chelonia mydas (Green turtle)	10-50 yds No pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: TR	At 0822 green turtle surfaced traveling west 10 yards from work area. Traveled along west wall heading North. Diver 50yds from work area. No pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:11 10:32	South Quay wall Courtney Friday NE wall Chad Friday	E @ 4.1 kts slight glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1011-1032. No sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:42 14:59	" "	E @ 8.4 kts No glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1442-1459. NO sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	16:03 16:37	" "	E @ 10.4 kts No glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1603-1637. NO sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	16:37 17:07	" "	" "	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Observers end watch 1637-1707. No sightings.

Project name: South Quay Wall Recapitalization Lead observer: Chad Friday

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Project location: NAVSTA - Mayport, Jacksonville, FL Lead observer contact info: 321-746-9972

Date: 07/14/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:18 :	S. Quay Wall Chad Friday Courtney Friday	ESE @ 2.9 kts No glare off swell	N/A	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Observers on location begin watch 07:18. No initial sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:38 07:41	S. Quay Wall Chad Friday	ESE @ 2.9 kts No glare off swell	Chelonia mydas (green turtle)	3-50 yds No pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: TR	At 07:38 juvenile green turtle surfaced 10ft from work area traveled N along W wall, last seen 50yds from work area. No pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:26 08:33	E. Wall Courtney Friday	E @ 6.0 kts No glare off swell	Chelonia mydas (green turtle)	100 yds No pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: FO	At 08:26 green turtle observed feeding on S. wall 100yds from work area. Navy boat setting oil boom at the time, oil boom drifted over turtle, last sight of turtle under boom did not re-acquire turtle. No pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:34 12:04	S. Quay Wall Chad Friday E. Wall Courtney Friday	ENE @ 8 kts No glare off swell	N/A	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Pile driving 1034-1204. Brief pause to weld 1122-1144. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:49 14:02	" "	ENE @ 8.1 kts No glare off swell	N/A	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Pile driving 1349-1402 No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:52 15:17	" "	ENE @ 8.9 kts No glare off swell	N/A	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Pile driving 1452-1517. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	15:17 :	" "	" "	N/A	N/A yds	N/A / - calves	toward or away parallel none Behavior Code: N/A	End monitoring 1517-1547 No sightings

Project name: South Quay Wall RecapitalizationLead observer: Courtney FridayPage 1 of 1Project location: NAVSTA Newport, Jacksonville, FLLead observer contact info: 843-503-9127Date: 07/15/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:05 :	S. Quay Wall Courtney Friday E. Wall Chad Friday	No wind Moderate glare Off swell	N/A	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Observers on location at 0705. No initial sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:54 08:20	E. Wall Chad Friday	WNW @ 1.9 kts slight glare off swell	Tursiops truncatus (Bottlenose dolphin)	520 yds No pile driving	5 / 5 / 5 2 calves	toward or away parallel none Behavior Code: TR, MI	3 adult 2 juvenile 520 yds traveling west, at 0756 observed milling until 0820 No pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:09 10:15	S. Wall Courtney Friday E. Wall Chad Friday	EWE @ 0.6 kts slight glare off swell	N/A	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Pile driving 1009-1015. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:40 10:48	S. Wall Courtney Friday E. Wall Chad Friday	ENE @ 5.1 kts slight glare off swell	Chelonia mydas (Green turtle)	7-70 yds	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: TR, DI	At 1037 green turtle surfaced 70 yds from work area traveling W, at 1040 started pile driving and immediately shut down when turtle surfaced 7 yds, at 1048 all clear turtle
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:49 11:00	" "	" "	N/A	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	was 25 yds from work area. Last seen at 1052 70 yds away. Pile driving 1049-1100. Same turtle as above seen at 1052 70 yds away.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:23 11:24	" "	E @ 5.1 kts slight glare off swell	Chelonia mydas (Green turtle)	35 yds Not pile driving	2 / 2 / 2 2 juveniles calves	toward or away parallel none Behavior Code: TR	At 1123 2 juvenile green turtles surfaced side by side 35 yds from work area traveling NW. Not pile driving single sighting
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	15:53 15:58	" "	No glare off swell	N/A	N/A yds	1 / 1 N/A - calves	toward or away parallel none Behavior Code: N/A	Pile driving 1553-1558. No sightings

End monitoring 1628 No sightings

Project name: South Quay Wall Recapitalization Lead observer: Chad Friday
 Project location: NAVSTA Mayport, Jacksonville, FL Lead observer contact info: 321-946-9972

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 Date: 07/16/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:05 :	S. Quay wall Chad Friday E. Wall Courtney Fricker	SSW @ 2-9 kts Moderate glare off swell	N/A	N/A yds	/ / N/A - calves	toward or away parallel none Behavior Code: N/A	Observers on location at 0705. No initial sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:47 15:44	" "	ESE @ 8-9 kts No glare off swell	N/A	N/A yds	/ / N/A - calves	toward or away parallel none Behavior Code: N/A	Pile driving 1447-1544. No sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 16:14	" "	ESE @ 11 kts No glare off swell	N/A	N/A yds	/ / N/A - calves	toward or away parallel none Behavior Code: N/A	End monitoring 1544-1614. No sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / - calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / - calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / - calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / - calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Remedialization Lead observer: Courtney Friday

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Project location: NAVSTA Miramar - Jacksonville, FL Lead observer contact info: 843-503-9127

Date: 07/19/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:15 07:19	SW Wall Courtney Friday SE Wall Chad Friday	WSW @ 5.1kts No glare off swell	Chelonia mydas (green turtle)	20-70 yds No pile driving	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: TR, DI	At 0715 Observers begin watch. 1 juvenile green traveling west along S. Quay Wall, dove at 0719. No pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:12 10:29	SE wall Chad Friday	SW @ 5.1kts No glare off swell	Chelonia mydas (green turtle)	0-20 yds Not pile driving	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: TR, MI	At 1012 juvenile green milling 45ft from work area, traveling west, at 1029 turtle dove koft away. No pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:27 10:37	SW wall Courtney Friday	" "	Chelonia mydas (green turtle)	30-45 yds Not pile driving	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: TR, FO	At 1027 juvenile green traveling N along W wall 30yds from work area, stop to forage briefly last sight at 1037 45yds away. Not pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:41 10:47	SW wall Courtney Friday SE wall Chad Friday	SW @ 5.1kts No glare off swell	N/A	N/A yds	1/1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1041-1047. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:50 11:09	SE wall Chad Friday	" "	Chelonia mydas (green turtle)	0-5 yds	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: MI, DI	At 1050 juvenile green surfaced in work area, dove in exclusion zone at 1054, last seen 1054, delay work until 1109.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:09 11:10	SW wall Courtney Friday SE wall Chad Friday	" "	N/A	N/A yds	1/1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1109-1110. No sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:13 13:30	" "	SSE @ 6kts No glare off swell	Tursiops truncatus (common dolphin)	110 yds No pile driving	3/3/2 1 calves	toward or away parallel none Behavior Code: MI, DI, BK	At 1313 2 adult 1 juvenile dolphin milling 450 yds away, last seen at 1330. Not pile driving

Turtle had notch in carapace old wound see pics

Project name: South Quay wall Recapitalization Lead observer: Courtney Friday

Page 2 of 2

Project location: NAVSTA Mayport Jacksonville, FL Lead observer contact info: 843-503-9127

Date: 07/19/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	13:58 14:09	SW Wall Courtney Friday SE Wall Chad Friday	SSE @ 7.8 kts No glare Off swell	N/A	N/A yds	/ / N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1358-1409. No sightings. Shutdown for lightning 1409-end of day.
Start Monitoring - <u>End Monitoring</u> Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 14:30	" "			yds	/ / — calves	toward or away parallel none Behavior Code:	Down for lightning. Large storm moving in. Crew left for the day at 1430.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: : :				yds	/ / — calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Recapitalization Lead observer: Chad Friday
 Project location: NAVSTA-Maysport, Jacksonville, FL Lead observer contact info: 321-946-9172

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 Date: 07/30/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:25 07:29	SW Wall Chad Friday SE Wall Courtney Friday	SW @ lxts Extreme glare off swell	Chelonia mydas (green turtle)	3 yds not pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: JR, DI	Observers on location at 0725. Juvenile green traveling west along south wall at 0725, dove at 0728. No pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:39 08:41	" "	SW @ lxts Moderate glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 0839-0841. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:30 09:40	" "	SW @ lxts No glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 0930-0940 No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:57 09:58	" "	SW @ lxts No glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 0957-0958. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:23 10:33	SE wall Courtney Friday	" "	Chelonia mydas (green turtle)	10 yds No pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: FO, DI	At 1023 juvenile green observed feeding on turbidity curtain 10 yds from work area, moving slowly east. Dove at 1033. No pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 15:00				yds	1 / 1 calves	toward or away parallel none Behavior Code:	Shutdown for lightning. End of day.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Recapitalization Lead observer: Courtney Friday

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Project location: NAVSTA-Maryport, Jacksonville, FL Lead observer contact info: 843-503-9127

Date: 07/22/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:37 :	SW Wall Courtney Friday SE Wall Jared Friday	WSW 5 kts moderate glare off swell	N/A	N/A yds	/ / N/A calves	toward or away parallel none Behavior Code: N/A	observers on location, No initial sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:33 15:26	" "	SW 5 kts No glare off swell	Chelonia mydas (leopard turtle)	25 yds	/ / / 1 juvenile calves	toward or away parallel none Behavior Code: TR, DI	Pile driving 1433-1526. At 1450 a juvenile green surfaced 25yds from work area, dove at 1451 traveling NW away from exclusion zone.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 16:30	" "			yds	/ / calves	toward or away parallel none Behavior Code:	End monitoring 1630.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	/ / calves	toward or away parallel none Behavior Code:	

Project name: South Omy Wall Recolonization

Lead observer: Chad Friday

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Project location: NAVSTA Mayport Jacksonville, FL

Lead observer contact info: 321-911-9972

Date: 07/26/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:27 08:00	SW Wall Chad Friday SE Wall Counting Friday	NW @ 4.1 kts Moderate glare 0.25ft swell	Chelonia mydas (Green turtle)	5 yds not pile driving	2 / 2 / 2 2 juveniles calves	toward or away parallel none Behavior Code: FO	At 0727 two juvenile green turtles were observed feeding on turbidity curtain. One turtle last seen at 0735. Second turtle last seen at 0800.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:00 10:15	" "	WNW @ 9.9 kts No glare 0.25ft swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1000-10:15 No sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 15:00	" "			yds	1 / 1 calves	toward or away parallel none Behavior Code:	Shutdown for storms 1200-1500. End of day 1500.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Recapitalization

Lead observer: Courtney Friday

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Project location: NAVSTA Mayport, Jacksonville, FL

Lead observer contact info: 343-503-9127

Date: 07/27/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:42 :	SW Wall Courtney Friday SE Wall Chad Friday	WSW @ 5.1 kts Extreme glare Off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Observers on location 0742. No initial sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:59 10:00	SW Wall Courtney Friday	W @ 5.1 kts No glare Off SWELL	Chelonia mydas (Green turtle)	75 yds Not pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: TR	At 0959 a juvenile green turtle surfaced 75 yds from work area traveling NW. Single sighting. Not pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:25 10:55	SE Wall Chad Friday	WNW @ 5.1 kts No glare Off swell	Tursiops truncatus (Bottlenose dolphin)	450 yds Not pile driving	3 / 3 / 3 0 calves	toward or away parallel none Behavior Code: MI, DI	3 adult bottlenose dolphin observed milling and diving 450m away. Not pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:33 10:34	SE Wall Chad Friday	WNW @ 5.1 kts No glare Off swell	Chelonia mydas (Green turtle)	25 yds Not pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: TR	1633 juvenile green observed traveling east 25 yards from work area. single sighting. Not pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:50 15:05	SE Wall Chad Friday	SW @ 8.9 kts No glare Off swell	Chelonia mydas (Green turtle)	3 yds Not pile driving	2 / 2 / 2 2 juveniles calves	toward or away parallel none Behavior Code: FO	2 juvenile green turtles feeding on turbidity curtain 10ft from work area. Not pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 15:10				yds	1 / 1 - calves	toward or away parallel none Behavior Code:	Shutdown for lightning 1315-1510. End of day 1510.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 - calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Remediation Lead observer: Chad Friday

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Project location: NAVSTA-Maupart, Jacksonville FL Lead observer contact info: 321-940-9972

Date: 07/29/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:15 08:15	SE Wall Chad Friday	WNW @ 9-10kts No glare off swell	Chelonia mydas Green turtle	2 yds Not pile driving	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: FD	Observed on beach at 0715. Juvenile green feeding on pile of debris in work area. Turtle not seen 0815. No pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:25 07:48	SE Wall Chad Friday	W @ 6kts Moderate glare off swell	Chelonia mydas (green turtle)	5 yds Not pile driving	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: FD	Green turtle feeding on turbidity curtain in work area. Not seen 0748. Not pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:02 09:05	SE Wall Chad Friday	WNW @ 1.9 kts Moderate glare off swell	Chelonia mydas (green turtle)	1 yds	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: FO, TR	At 0902 turtle surfaced in front of piling, crew was setting harpoon set to begin pile driving, delayed start. At 0905 turtle was out of view.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:05 09:07	SE Wall Chad Friday	" "		yds	1/1 calves	toward or away parallel none Behavior Code:	Began pile driving 0905 at 0907 same turtle as above traveled into exclusion zone see below.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:07 09:20	" "	" "	Chelonia mydas (green turtle)	0 yds	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: TR, DI	At 0907 turtle re-entered exclusion zone. Shutdown implemented. At 0920 turtle was 60ft away traveling N, all clear 0920.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:20 09:42	" "	WNW @ 4.1 kts Extreme glare off swell	Tursiops truncatus (Bottlenose dolphin)	550 yds	2/3/3 0 calves	toward or away parallel none Behavior Code: TR	Pile driving 0920-0942. Dolphin observed 0938-0940 550yds traveling NW.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:43 09:53	SW Wall Courtney Friday	" "	Chelonia mydas (green turtle)	60-75 yds Not pile driving	2/2/2 2 juveniles calves	toward or away parallel none Behavior Code: TR	At 0943 two juvenile greens surfaced 75yds from work area traveling South. One turtle dove at 0949 60yds. second turtle dove at 0953 50yds. Not pile driving.

Project name: South Quay Wall Remedialization

Lead observer: Chad Friday

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Project location: NAVSTA Mayport, Jacksonville, FL

Lead observer contact info: 321 946-9972

Date: 07/28/2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	10:32 10:40	SE wall Chad Friday SW wall Courtney Friday	W @ 8kts sight glare off swell	Tursiops truncatus Bottlenose dolphin	600 yds	4/4/4 2 calves	toward or away parallel none Behavior Code: PR, MI	At 1032 4 adult dolphin observed breaching and milling 500yds
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact <u>Sighting</u> - Delay - Shutdown	13:30 13:38	SW wall Courtney Friday	ENE @ 0kts No glare off swell	Chelonia mydas (Green turtle)	30 yds	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: TR	At 1330 green turtle traveling west 30yds from work area. Last seen at 1338 outside exclusion zone. Pile driving.
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	13:33 13:45	SE wall Chad Friday SW wall Courtney Friday	" "		yds	1/1 _ calves	toward or away parallel none Behavior Code:	Pile driving 1333-1345. Green turtle outside exclusion zone see above notes.
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	15:20 15:39	" "	No glare off swell	N/A	N/A yds	1/1 _ calves	toward or away parallel none Behavior Code: N/A	pile driving 1520. No sightings
Start Monitoring - <u>End Monitoring</u> Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 16:09	" "			yds	1/1 _ calves	toward or away parallel none Behavior Code:	End monitoring 1607.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1/1 _ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1/1 _ calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Rehabilitation

Lead observer: Courtney Friday

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Project location: NAVSTA Mayport, Jacksonville, FL

Lead observer contact info: 843-503-9127

Date: 07/29/2011

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:22 :	SE Wall Courtney Friday SW Wall Chad Friday	W @ 4. kts No glare off swell	Tursiops truncatus (bottlenose dolphin)	500 yds Not pile driving	3/4 13 0 calves	toward or away parallel none Behavior Code: MI, BR	Observers on location 07:22 3 dolphin milking and breathing 500 yds. Last seen 07:54.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:49 14:48	" "	ENE @ 7 kts No glare off swell		yds	1/1 - calves	toward or away parallel none Behavior Code:	Pile driving 1349-1448 Shutdown for turtle 1448. See below
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:48 14:50	SE Wall Courtney Friday	E @ 7 kts No glare off swell	Chelonia mydas (Green turtle)	7 yds	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: TR	At 1448 juvenile green surfaced 20ft from work area traveling E (away). All clear at 1450, turtle was left away turtle dove at 1451 100ft away.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:50 15:07	EE NO Courtney Friday	" "	N/A	N/A yds	1/1 N/A calves	toward or away parallel none Behavior Code: N/A	PR driving 1450-1507. No sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	16:12 16:25	" "	" "	Chelonia mydas (green turtle)	65 yds	1/1/1 1 juvenile calves	toward or away parallel none Behavior Code: TR	At 1612 juvenile green traveling E 45yds from work area. Last seen at 1625 50yds and traveling away.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	16:28 16:35	" "	" "	N/A	N/A yds	1/1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 1628-1635 No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 17:05				yds	1/1 - calves	toward or away parallel none Behavior Code:	

Project name: South Wall / Wall Foundation

Lead observer: Chad Friday

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Project location: NAFAC - 1000 S. Jacksonville, FL

Lead observer contact info: 321-216-9772

Date: 7/30/2012

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:25 :	SE wall Chad Friday SW wall Courtney Friday	SW @ 0 kts Moderate glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	DOLPHINS on site. No initial sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:34 08:38	"	W @ 4.1 kts Extreme glare off swell	N/A	N/A yds	1 / 1 N/A calves	toward or away parallel none Behavior Code: N/A	Pile driving 0834-0838. No sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:14 11:20	" "	SW @ 0 kts No glare off swell	Tursiops truncatus (Bottlenose dolphin)	150 yds	5 / 6 / 6 0 calves	toward or away parallel none Behavior Code: FO, BR	Dolphin sighting 1108-1125. Dolphin were 150yds when pile driving began moved away to ~450yds during pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:09 13:11	SW wall Courtney Friday	WSW @ 0.5 kts No glare off swell	Chelonia mydas (Green turtle)	100 yds not pile driving	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: TR	Juvenile green traveling north 100yds from work area. No pile driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:33 13:49	SE wall Chad Friday SW wall Courtney Friday	" "	Chelonia mydas (Green turtle)	120 yds	1 / 1 / 1 1 juvenile calves	toward or away parallel none Behavior Code: E	Pile driving 1333-1349. Green turtle feeding along W wall 120 yds away 1331-1356. Dove traveling NE at 1356.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 16:00				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	

Project name: SOUTH QUAY WALL RECAPITULATION PROJECT - L3 BLACKWELL
 Project location: NAUSTA - MAYPORT, JAX, FL
 Lead observer contact info: 804-512-7467

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 Date: 08/05/21

Effort Info			Sighting Info					
Event	Time of Event (start and end)	Observer*	visibility info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:05	L3 Blackwell Nicole Hageman	w - 5 kts, SSW g - extreme s - 0 m		20 yds	1 / 1 — calves	toward or away parallel none Behavior Code:	Observers stationed on site.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:35	L3 Blackwell Nicole Hageman	w - 5 kts, SSW g - extreme s - 0 m		20 yds	1 / 1 — calves	toward or away parallel none Behavior Code:	Begin in water activity.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:20	L3 Blackwell Nicole Hageman	w - 9 kts, SW g - extreme s - 0 m		20 yds	1 / 1 — calves	toward or away parallel none Behavior Code:	Lunch break.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:20	L3 Blackwell Nicole Hageman	w - 4 kts, SSW g - extreme s - 0 m		20 yds	1 / 1 — calves	toward or away parallel none Behavior Code:	Back from break.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	16:23	L3 Blackwell Nicole Hageman	w - 7 kt, SW g - moderate s - 0 m		20 yds	1 / 1 — calves	toward or away parallel none Behavior Code:	Begin vibratory driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	16:33	Nicole Hageman *S wind	w - 6 kts SSW g - moderate s - 0 m	Chelonia mydas (Green Sea Turtle)	20 yds	1 / 1 / 1 1 calves	toward or away parallel none Behavior Code: TR(NE), DI	One GST spotted near the surface heading away from activity. Dived in 3 seconds later.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	17:10	L3 Blackwell Nicole Hageman	w - 5 kts SW g - moderate s - 0 m		20 yds	1 / 1 — calves	toward or away parallel none Behavior Code:	In water operations completed for the day @ 16:40.

* L3 at SW wall mostly
 * Nicole at SE wall mostly

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

Page 1 of 2

Project location : NASTA - Mayport, Jacksonville, FL

Lead observer contact info: 804-512-7167

Date: 06 AUG 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:20	LJ Blackwell SE wall Nicole Hageman SW wall	5 kts SSW Slight glare No swell	NA	NA	/ / ___ calves	toward or away parallel none Behavior Code: --	Observers on site at 0730 to badge office at 0730 to obtain DBIDS; 0800 on site.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09:53 10:24	LJ Blackwell SE wall	7.0 kts SSW Moderate glare .25' swell	C. mydas	40 yds Not pile driving	1 / 1/ ___ calves	toward or away parallel none Behavior Code: FO CD	1 juvenile C. mydas sighted from SE wall 40 yds away from exclusion zone (EZ), foraging, hdg yowards and away from EZ (NW to SE) direction on the oil stop buoys and tethered pneumatic fender of moored USN ship. Surfacing intervals between 5 seconds and one minute. Looked healthy in appearance and agility. First sighting duration ends at 10:03. Resurfaced at 10:04 on South wall and heading towards construction zone then back towards SE and S wall corner, subsurfacing 2x then went under SE quay wall in corner. Animal did not appear to be disturbed by in water activity
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:44 10:58	LJ Blackwell SE wall Nicole Hageman SW wall	5.1 kts SSW No glare .20' swell	NA	NA	/ / ___ calves	toward or away parallel none Behavior Code: --	No sightings. At 1100 all set pilings were complete. Gangway lifted, support vessels deployed to begin next section of installation eastward towards S and E adjoining corner of wall.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:17 11:35	LJ Blackwell SE wall Nicole H. moved to South wall*	11.1 kts SW Slight glare .50' swell	C. mydas Juvenile	25 yds Not pile driving	1 / 1/ ___ calves	toward or away parallel none Behavior Code: FO CD	1 juvenile C. mydas sighted from SE wall 25 yds from EZ moving away from EZ foraging on oil stop buoys (algae growth) Animal did not appear to be disturbed by in water activity
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:42 11:47	LJ Blackwell SE wall	8.0 kts SW Slight glare .30' swell	C. mydas Juvenile	10 yds Not pile driving	1 / 1/ ___ calves	toward or away parallel none Behavior Code: TR	1 juvenile C. mydas sighted from SE wall 10 yds from EZ moving away from EZ foraging on oil stop buoys (algae growth) Animal did not appear to be disturbed by in water activity
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:53 12:05	LJ Blackwell SE wall	8.9 kts SW Slight glare .30' swell	C. mydas Juvenile	10-25yds Not pile driving	1 / 1/ ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile C. mydas sighted from SE wall moving towards and away from EZ foraging on oil stop buoys (algae growth) Animal did not appear to be disturbed by in water activity
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:12 14:52	LJ Blackwell SE wall	7.0 kts S Moderate glare .25' swell	C. mydas Juvenile	10-15yds Not pile driving	1 / 1/ ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile C. mydas sighted from SE wall moving towards and away from EZ foraging on oil stop buoys (algae growth) Animal did not appear to be disturbed by in water activity

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13: 15 13: 22	LJ Blackwell SE wall	7.0 kts S Moderate glare .25' swell	C. mydas Juvenile	10-15 yds Not pile driving	1 / 1/ ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile C. mydas sighted from SE wall moving towards and away from EZ foraging on oil stop buoys (algae growth) Animal did not appear to be disturbed by in water activity
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13: 15 13: 16	LJ Blackwell SE wall	7.0 kts S Moderate glare .25' swell	C. mydas Larger in size, Est. 1 year older	25 yds Not pile driving	1 / 1/ ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile C. mydas sighted from SE wall 25 yds from EZ moving away from EZ foraging on oil stop buoys (algae growth) on STB side of USN ship. Animal did not appear to be disturbed by in water activity
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14: 45 14: 52	LJ Blackwell SE wall	8.0 kts SE No glare .25' swell	C. mydas Juvenile	6-10 yds Not pile driving	1 / 1/ ___ calves	toward or away parallel none Behavior Code: TR, CD	1 juvenile C. mydas sighted from SE wall moving towards and away from EZ, traveling and changing directions. Animal did not appear to be disturbed by in water activity
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: 15 00	LJ Blackwell SE wall Nicole Hagerman South wall	12.0 kts SE No glare .40' swell	NA	yds NA	/ / ___ calves	toward or away parallel none Behavior Code: --	Ceased daily activity due to incoming lightening.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:20 :	LJ BLACKWELL, SE WALL NICOLE HAGEMAN, S WALL	4.1 KTS SW Slight glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Observers on site. No initial sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:54 08:00	LJ BLACKWELL, SE WALL	5.1 kts WSW Slight glare No swell	C. mydas juvenile	10 yds	1/ 1/ ___ calves	toward or away parallel none Behavior Code: SW (E), FO	1 juvenile green sea turtle in corner of S and E (SE) walls swimming away from PD site (pile driving not occurring) and under SE wall. Then surfaced at oil stop curtain tethered to moored USN ship. Distinguishable characteristic - carapace (shell) very flat with dome-like center w/ algae growth.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:10 08:12	LJ BLACKWELL, SE WALL NICOLE HAGEMAN, S WALL	4.1 kts W Slight glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Template pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:20 08:21	LJ BLACKWELL, SE WALL NICOLE HAGEMAN, S WALL	5.1 kts SW Slight glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Template pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:27 08:28	LJ BLACKWELL, SE WALL NICOLE HAGEMAN, S WALL	4.1 kts W Slight glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Template pile driving
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:27 09:20	LJ BLACKWELL, SE WALL	4.1 kts W Slight glare No swell	C. mydas juvenile	26 yds	1/ 1/ ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle foraging on oil stop curtain. Barnacles on lower marginal scutes. Did not appear to be disturbed by in water construction activity and PD. Animal was outside of exclusion / construction shutdown zone of 50'
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:33 08:35	LJ BLACKWELL, SE WALL NICOLE HAGEMAN, S WALL	4.1 kts WSW Slight glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings within 50' exclusion / construction zone

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:03 09:08	LJ BLACKWELL, SE WALL	2.9 kts W Slight glare No swell	C. mydas juvenile	22 yds	1 / 1/ ___ calves	toward <input checked="" type="checkbox"/> away parallel none Behavior Code: SW (E), DI, FO	1 juvenile green sea turtle in corner of S and E (SE) walls swimming away from PD site (pile driving not occurring). Dove then surfaced at oil stop curtain tethered to moored USN ship. This animal appeared to be in better health than previous sighted C. mydas. Barnacle line at nuchal scut
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:34 09:47	LJ BLACKWELL SE WALL	2.9 kts W Slight glare No swell High tide (0950)	C. mydas juvenile	15 yds	1 / 1/ ___ calves	toward or away parallel <input checked="" type="checkbox"/> none Behavior Code:	1 juvenile green sea turtle foraging on oil-stop curtain alongside previous sighted sea turtle above. No in water activity occurring. Healthy appetite and appeared to be in good physical health.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11: 11 12: 15	LJ BLACKWELL, SE WALL, S WALL	1.0 kts WSW Slight glare No swell	C. mydas juvenile	0 yds	1 / 1/ ___ calves	<input checked="" type="checkbox"/> toward or away parallel none Behavior Code: SW (W), DS, CD, MI	1 juvenile green sea turtle sighted heading towards PD site - milled at john boat, alongside and underneath. Reappeared behind completed section of South wall pilings, surfacing freq. (5-15 sec). Not foraging as animal turned directions and prodded pilings with mouth closed. Changed directions from West to East (back towards PD site, West maintaining tight body positioning alongside completed portion of S wall. Foreman and site management notified. No driving occurred thus no shutdown was needed. Excellent communication by all involved.
Start Monitoring – <input checked="" type="checkbox"/> End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12: 15 13: 00	LJ BLACKWELL, S WALL NICOLE HAGEMAN, S WALL	7.0 kts ENE Slight glare .025' swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch break
Start Monitoring – <input checked="" type="checkbox"/> End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13: 15 :	LJ BLACKWELL, SW WALL NICOLE HAGEMAN, S WALL	8.0 kts ENE No glare .025' swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No initial sightings.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13 20 13 24	LJ BLACKWELL, SE WALL	8.0 kts ENE No glare .025' swell	C. mydas juvenile	5 yds	1 / 2 / ___ calves	<input checked="" type="checkbox"/> toward or away parallel none Behavior Code: SW (W)	1 juvenile green sea turtle swimming alongside South wall heading towards PD site (West).
Start Monitoring – <input checked="" type="checkbox"/> End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13 24 :	LJ BLACKWELL, SE WALL NICOLE HAGEMAN, S WALL	8.0 kts E No glare .025' swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Shutdown for in vicinity T-1 No vibratory driving done.

Project name: SOUTH QUAY WALL RECAPITALIZATION

Lead observer: LJ BLACKWELL

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Project location: NAVSTA - MAYPORT, JACKSONVILLE, FL

Lead observer contact info: LIZAJANEBWELL@GMAIL.COM 804-512-7167

Date: 09 AUGUST 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14:35 :	LJ BLACKWELL, SW WALL NICOLE HAGEMAN, S WALL	5.1 kts ESE High glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No initial sightings.
* Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14:37 14:50	LJ BLACKWELL, SW WALL, S WALL NICOLE HAGEMAN, S WALL	5.1 kts ESE High glare No swell	C. mydas juvenile	1.5 yds	1 / 1 / ___ calves	toward or away parallel none Behavior Code: <u>FO</u>	1 juvenile green sea turtle sighted within construction exclusion zone 10 ft away from active pile driving operations. Discussed with project mgmt option to begin pile driving on other side of the pile line as it was outside of 50 ft radius. This was decided and activity proceeded with caution from all crew.
* Start Monitoring – End Monitoring Soft Start – <u>Vibratory</u> – Impact Sighting – Delay – Shutdown	14:50 14:53	LJ BLACKWELL, SW WALL NICOLE HAGEMAN, S WALL	5.1 kts SE High glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Observer maintained 100% visual contact on the animal while vibratory driving occurred. Continuation of comments below. Rows denoted with asterisk are in relation to shutdown event.
* Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14:53 14:53	LJ BLACKWELL, SW WALL	5.1 kts ESE High glare No swell	C. mydas juvenile	0 yds	1 / 1 / ___ calves	toward or away parallel none Behavior Code:	At 14:53 the yellow curtain shifted with the current and the animal crossed over the 50 ft shutdown threshold. Shutdown was implemented immediately. The curtain continued to move with the current (ebb at 13:54, slack at 15:48). The juvenile green sea turtle sighted above was foraging on yellow project curtain, which became flush to pilings ready for driving.
* Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – <u>Shutdown</u>	14:53 15:09	LJ BLACKWELL, S WALL NICOLE HAGEMAN, S WALL	6.0 kts ESE High glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code: *DIRECTLY NEXT TO* <u>FO</u>	The animal was not visually sighted again and driving resumed upon completion of 15 minute shutdown.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15:00 15:04	NICOLE HAGEMAN, S WALL	6.0 kts SE High glare .020' swell	C. mydas juvenile	22 yds	1 / 1 / ___ calves	toward or <u>away</u> parallel none Behavior Code: <u>TR (E, THEN N)</u>	1 juvenile green sea turtle swimming east along south wall away from PD platform. Turned north when it reached the E wall and was last seen next to oil stop curtain of East South wall moored naval ship. (Little Rock) Was swimming at a steady pace and appeared healthy.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15:03 15:05	NICOLE HAGEMAN, S WALL	7.0 kts ESE High glare .020' swell	C. mydas juvenile	25 yds	1 / 1 / ___ calves	toward or away parallel <u>none</u> Behavior Code: <u>FO</u>	1 juvenile green sea turtle foraging in between oil-stop curtain of moored USN ship. Flippers flapping, heading east towards main basin.

Project name: SOUTH QUAY WALL RECAPITALIZATIOI

Lead observer: LJ BLACKWELL

Project location : NAVSTA - MAYPORT, JACKSONVILLE, F

Lead observer contact info: LIZAJANEBWELL@GMAIL.COM 804-512-716

Date: 09 AUGUST 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15 09 15 43	LJ BLACKWELL, SE WALL NICOLE HAGEMAN, S WALL	6.0-8.0 kts ESE High glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Pile driving occurred in appropriate increments. No sightings within 50' exclusion / construction zone.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15 39 16 00	LJ BLACKWELL, SE WALL	2.9 kts SE High glare No swell	C. mydas juvenile	25 yds	1/ 1/ ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle foraging on oil-stop curtain of moored USN ship. Animal continued foraging past end of monitoring.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	16 00 :	LJ BLACKWELL, SE WALL NICOLE HAGEMAN, S WALL	7.0 kts SE High glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Daily totals: 1 shutdown of 15 minutes 10 green sea turtle sightings
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:30 :	LJ Blackwell, SE wall Nicole Hageman, S wall	1.0 kts S Slight glare No swell Tide rising		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Morning safety meeting 0630-0700 Observers on site at 0730 No initial sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:01 08:20	LJ Blackwell, SE wall	1.0 kt SW Slight glare No swell	C. mydas juveniles	0 yds	2 / 1 / 2 ___ calves Juveniles, ~2yo	toward or away parallel none Behavior Code: FO	FO on curtain buoys directly in front pilings ready to be driven. Spoke with Foreman, hammer clamped on but no driving until all clear. Requested access to board moored carpenter barge, as it was obstructing view c sighting. Upon approval, sighted 2nd juvenile C. mydas, distinguishable due to portion of scutes missing (right costal 3, marginal 9). Maintained visuals while trucks arrived on site with materials, then boarded jon boat for curtain replacement with 2nd observer stationed on barge. Last time sighted prior to crane hoisting up old curtain was 0905. Continued in-water visual monitoring for extent of process. New curtain installation complete (1015). No sea turtle or project listed endangered species sighted within 50-ft vicinity. Construction site confirmed clear throughout replacement and after prior to driving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:20 10:25	LJ Blackwell, jon boat Nicole Hageman, carpenter barge	2.9 kts SSW Slight glare No swell		yds see above	/ / see above ___ calves	toward or away parallel none Behavior Code: see above	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:25 10:42	LJ Blackwell, SE wall Nicole Hageman, S wall	1.9 kts E Slight glare No swell High tide (1034) 17% cloud coverage 10 miles visibility		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Driving intervals conducted within permit requirements All sightings occurring within driving timespan outside of 50' exclusion zone and did not appear to be disturbed by in water vibratory activity.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:27 11:45	LJ Blackwell SE wall	2.9 kts E Moderate glare No swell	C. mydas juveniles	25 yds	2 / 1 / 2 ___ calves	toward or away parallel none Behavior Code:	2 juvenile green sea turtles foraging on algae on tethered oil stop barrier of moored USN ship on SE wall. Animals outside of 50' exclusion shutdown zone. Animals did not appear to be disturbed by in water construction activity.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:14 11:16	Nicole Hageman, S wall	5.1 kts ESE Moderate glare No swell	C. mydas juvenile	33 yds	1 / 1 / ___ calves	toward or away parallel none Behavior Code: SW (E then W), CD	1 juvenile green sea turtle spotted swimming east alongside the south wall. It reached the SE corner and turned around and went back the other direction towards the pile driving platform site. It was lost to sight approx. 20 feet from the carpenter barge b/c it was unsafe to follow the animal as crane operations were underway in that location, but there was no in water activity at the time.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:05 13:20	LJ Blackwell, SE wall Nicole Hageman, S wall	6.0 kts Extreme glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch break

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:20 13:20	LJ Blackwell, SE wall* Nicole Hageman, S wall	5.0 kts ESE Extreme glare No swell	C. mydas juvenile	22 yds	1 / 1/ 1 juvenile ~ 3 yo ___ calves	toward or away parallel <u>none</u> Behavior Code: FO	1 juvenile green sea turtle spotted feeding on algae along the outside of the oil stop curtain tethered to the moored USN ship.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:47 13:48	Nicole Hageman, S wall	8.0 kts E Extreme glare No swell	C. mydas juvenile	10 yds	1 / 1/ ___ calves	toward or <u>away</u> parallel none Behavior Code: TR (E then W), CD	1 juvenile green sea turtle (with a missing right hind flipper) was spotted swimming east, then it turned NE and dove out of sight. No in water activity at the time.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:14 14:36	LJ Blackwell, SE wall	7.0 kts E Extreme glare No s well	C. mydas juvenile	24 yds	1 / 1/ ___ calves	toward or away parallel <u>none</u> Behavior Code: SW (S), FO	1 juvenile green sea turtle sighted surfacing 30 degrees off port bow of moored USN ship on SE wall. Animal then dove, resurfaced at oil-stop barrier and began foraging on algae. Carapace shape very pear shape with strong taper at rear. No in water activity at the time of sighting.
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	15:15 15:45	LJ Blackwell, SE wall Nicole Hageman, S wall	8.9 kts E Extreme glare 0.10' swell TIDE	see below	yds	/ / ___ calves	toward or away parallel none Behavior Code:	1 juvenile green sea turtle was spotted appx. 45 feet from pile driving platform during vibratory operations, but it was while the clamp was being craned from one slate to the next, and therefore, not being driven. As the turtle was traveling due east, it had made it outside of 50 feet by the time the driver was running so no mitigation was required. The turtle swam to the SE corner and turned around and swam back towards the platform, where it was seen milling around the barge for several minutes. By this time the vibratory drilling was complete and no mitigation was required. At 15:35 the turtle was seen moving to inside the curtain and was lost to sight, but reappeared at 15:46 and was seen swimming away from the curtain. It was lost to sight behind the carpenter barge at 15:47.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	15:23 15:47	Nicole Hageman, S wall	8.9 kts E Extreme glare 0.10' swell	C. mydas juvenile	15 yds	1 / 1/ ___ calves	<u>toward or away</u> parallel none Behavior Code: SW (E-W), CD, MI	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	16:08 16:16	LJ Blackwell, SE wall Nicole Hageman, S wall	9.9 kts E Extreme glare No swell	C. mydas juvenile	30 yds	1 / 1/ ___ calves	toward or <u>away</u> parallel none Behavior Code: FO	1 juvenile green sea turtle spotted feeding on algae along the outside of the oil stop curtain tethered to the moored USN ship.
Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact Sighting - Delay - Shutdown	16:20 17:00	LJ Blackwell, SE wall Nicole Hageman, S wall	9.9 kts E Extreme glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Template pilings pulled out with hammer, positioned and driven into new pile driving site East of previous.

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	16:40 16:46	LJ Blackwell, SE wall Nicole Hageman, S wall	8.0 kts SE Mpderate glare No swell	C. mydas, juvenile	25 yds	1 / 1 / ___ calves	toward or away parallel none Behavior Code: MI, DI	1 juvenile green sea turtle spotted feeding on algae along the outside of the oil stop barrier tethered to the moored USN ship.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	17:08 17:09	LJ Blackwell, SE wall Nicole Hageman, S wall	8.0 kts SE Mpderate glare No swell	C. mydas, juvenile	20 yds	1 / 1 / ___ calves	toward or away parallel none Behavior Code:	1 juvenile green sea turtle sighted on outer side of oil stop barrier before it dove out of sight. Daily operations ended at 1500.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	07:23 07:23	LJ Blackwell, In transit on Macon St	1.9 kts WSW Moderate glare No swell	T. truncatus	220 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: TR (NE)	1 bottlenose dolphin sighted surfacing, heading out of the project berth traveling NE
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	07:25 :	LJ Blackwell, West wall	1.9 kts WSW Moderate glare No swell	Leucophaeus atricilla juvenile (Laughing gull)	25 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: Sick, floating	Floating with current, not in good health. Notified on base environmental POC, Caitlin R. delivered nets. Successfully retrieved at 1215. Animal being transported to nearby wildlife rehabilitation. Prognosis slim. Of note, same age species sighted yesterday. Same procedures occurred.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	07:30 :	LJ Blackwell, SE wall Nicole Hageman, SE and S wall corner	1.9 kts WSW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:20 10:21	Nicole Hageman, SE and S wall corner	5.1 kts ENE Moderate glare Slight swell	C. mydas Juvenile	25 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: TR (SE), DI	1 juvenile green sea turtle spotted 2-3 yds from east wall swimming towards the SE corner. Lost sight when it reached the corner and dove.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:34 10:40	LJ Blackwell, SE wall Nicole Hageman, SE and S wall corner	4.0 kts E Moderate glare Slight swell Tide rising 11% cloud cov 10 mi vis		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during vibratory activity.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:52 11:58	LJ Blackwell, SE wall Nicole Hageman, SE and S wall corner	2.2 kts E moderate glare Slight swell High tide (1203) 5% cloud cov 10mi vis		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during vibratory activity.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12:00 13:00				yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch. Laughing gull picked up for transport by Caitlin R

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:00 :	LJ Blackwell, SE wall Nicole Hageman, SE and S wall corner	7 kts NE moderate glare Slight swell lightning 14 mi away		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:47 15:24	Nicole Hageman, SE and S wall corner		C. mydas Juvenile	25 yds	/ / ___ calves	toward or away parallel none Behavior Code:	1 juvenile green sea turtle was spotted feeding along the outside oil stop curtain. For the duration of the sighting the animal was observed going back and forth along the outside curtain as well as between the outside and inside curtains, until it was lost to sight heading north. No observed changes in behavior during vibratory driving, it continued to graze without pause.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:51 14:01	LJ Blackwell, SE wall	9.0 kts ENE Moderate glare Slight swell	C. mydas Juvenile	6 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle foraging on oil stop bumper of SE wall. Fitting pilings together at time of initial sighting Animal had noticeable anterior white neck
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:14 14:19	LJ Blackwell, SE wall Nicole Hageman, S wall	9.0 kts ENE Moderate glare Slight swell Tide falling 6% cloud cov 10mi vis Lightning 16mi away		yds	/ / ___ calves	toward or away parallel none Behavior Code: DI	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:48 14:48	Nicole Hageman, SE corner	9.9 kts ENE Extreme glare Slight swell	C. mydas Juvenile	20 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: DI	1 juvenile green sea turtle spotted near the surface just before diving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	15:16 15:16	Nicole Hageman, SE corner	9.9 kts ENE Extreme glare Slight swell	C. mydas Juvenile	15 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code:	1 juvenile green sea turtle spotted near the surface just before diving.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	15:49 16:02	LJ Blackwell, SE wall Nicole Hageman, SE wall	10.0 kts E High glare Ebb 30% cloud cov 10mi vis		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Resetting template columns in next cut

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-7167

Date: 12 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	16:38 17:05	Nicole Hageman SE wall	8 kts E Moderate glare Slight swell	C. mydas Juveniles	22 yds	/ 2/ ___ calves	toward or away parallel none Behavior Code: FO, SW (all directions)	1 juvenile green sea turtle spotted feeding along the outside oil stop barrier. At 1647 a second juvenile green sea turtle was seen feeding beside the first one. Both animals were observed swimming back and forth for the duration. In water activity for the day had been completed at the time of the initial sighting.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	17:15 :	LJ Blackwell, SE wall Nicole Hageman, SE wall			yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-716

Date: 13 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:10 :	LJ Blackwell, SE wall Nicole Hageman, SE wall	3.0 kts S no glare no swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No initial sightings
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:12 07:16	Nicole Hageman, S wall	1.0 kts S no glare no swell	T. truncatus	900 yds	/ 3-4 / ___ calves	toward or away parallel none Behavior Code: MI	3 or 4 bottlenose dolphins milling back and forth east to west.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:26 07:32	LJ Blackwell, SE wall	1.0 kts S no glare no swell	C. mydas Juvenile	10 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: FO	foraging on oil stop barrier. Flatter carapace. Resurfaced at 0756, foraging, hdg toward piles
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	08:04 08:37	LJ Blackwell, SE wall	1.0 kts no glare no swell	C. mydas Juvenile	15 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: FO	foraging on inside of oil stop barrier
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10 37 11 15	LJ Blackwell, SE wall	8 kts NNE Moderate glare No swell	C. mydas Juvenile	13 yds	/ 1/ ___ calves	toward or away parallel none Behavior Code: FO	foraging on inside and outside of oil stop barrier
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11 17 11 17	Nicole Hageman, SE wall	7.0 kts ENE Moderate glare No swell	C. mydas Juvenile	30 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: FO	Dropping in sheet piles. 1 juvenile green sea turtle foraging along outside oil stop barrier.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:00 12:50		8.0 knots NE High glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-716

Date: 13 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12 50 :	LJ Blackwell, SE wall Nicole Hageman, SE wall	6.0 kts NE High glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No initial sightings.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13 30 13 39	LJ Blackwell, SE wall Nicole Hageman, SE wall	8.9 kts ENE High glare Slight swell Tide falling 40% cloud cov 10mi vis		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13 39 14 21	LJ Blackwell, SE wall	8.9 kts ENE Moderate glare Slight swell	C. mydas Juvenile "Chunk"	5 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: DS, FO	Shutdown for 1 juvenile green sea turtle ("Chunk") within exclusion zone during vibratory and water activities estimated distance from active pile being driven 13 yards and closing. Operations shut down immediately. Animal trapped within environmental curtain due to current. It encircled the animal 360 degrees.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	Distress observed. Requested Jon boat to untie curtain to assist in freeing animal. Once freed from enclosed curtain, animal changed directions approximately five times traveling west to east behind the completed quay wall. Then dove underneath southeast wall. Resurfaced and swam on southeast wall to oil stop curtain.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	1402 exited corner of South Wall and Southeast wall headed towards oil stop barrier and began foraging immediately. Animal still within 50' exclusion zone until 1418. Continued to forage on oil stop barrier hdg East.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14 42 15 26	LJ Blackwell, SE wall Nicole Hageman, SE wall	10.0 kts ENE Slight glare Slight swell Tide falling 45% cloud coverage 10mi visibility		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Environmental curtain re-tethered to pneumatic fender. Excellent communication by all involved.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15 01 15 18	LJ Blackwell, SE wall	8.9 kts E High glare Slight swell	C. mydas Juvenile	20yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: FO	Blue crabs (3) observed fleeing/dispersing from active site One juvenile green sea turtle foraging on oil stop (inside) barrier 60 ft from active vibratory hammering. Animal did not appear to be disturbed by in water activity.

End Monitoring 15:31

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting - <input type="checkbox"/> Delay - Shutdown	07:20 :	LJ Blackwell Nicole Hageman Shelter	7.0 kts SSE No glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	WEATHER DELAY Arrive on site 0636 T1 shutdown No initial sightings.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting - <input type="checkbox"/> Delay - Shutdown	07:20 07:50	LJ Blackwell Nicole Hageman Shelter	7.0 kts SSE No glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	WEATHER DELAY Navy T1 delay
<input type="checkbox"/> Start Monitoring - End Monitoring Soft Start – Vibratory – Impact <input type="checkbox"/> Sighting - Delay - Shutdown	07:50 :	LJ Blackwell, SE wall Nicole Hageman, SE wall	1.0 kt S Moderate glare No swell	C. mydas Juvenile	2 yds	/ 1 / ___ calves	<input type="checkbox"/> toward or away parallel none Behavior Code: SW (W, E, N), FO, SV	ENVIRONMENTAL (ENDANGERED SPECIES) DELAY 1 juvenile green sea turtle sighted swimming on south wall behind piles. HDG W then E, then N. Began foraging on oil stop barrier with 2nd C. mydas sighting. At 0825 I'll stop barrier and moving closer towards pile driving site with current and outgoing tide. Right side of carapace medially cracked not life threatening) One barnacle on left posterior hind flipper "Beauty Spot"
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting - <input type="checkbox"/> Delay - Shutdown	07:50 :	LJ Blackwell, SE wall	1.0 kt S Moderate glare No swell	C. mydas Juvenile	18 yds	/ 1 / ___ calves	toward or away <input type="checkbox"/> parallel none Behavior Code: FO	0837 resurfaced heading east behind piling wall came through active piling site when John boat was being hoisted down. Slight delay to the turtle being in vicinity underneath boat where it was going to be landed. Turtle cleared from area at 0844 of site heading east
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact <input type="checkbox"/> Sighting - Delay - Shutdown	07:55 09:09	LJ Blackwell, SE wall	1.0 kt S Moderate glare No swell	C. mydas Juvenile	1 yds	/ 1 / ___ calves	<input type="checkbox"/> toward or away parallel none Behavior Code: CD	1 juvenile green sea turtle with 3 flippers sighted foraging on oil stop barrier (side nearest pile driving site)
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting - <input type="checkbox"/> Delay - Shutdown	08:43 08:46	LJ Blackwell, SE wall Nicole Hageman, SE and S wall corner	9.9 kts ESE Slight glare No swell	C. mydas Juvenile	0 yds	/ 1 / ___ calves	toward or away <input type="checkbox"/> parallel none Behavior Code: SW (E)	ENVIRONMENTAL (ENDANGERED SPECIES DELAY) Delay in lowering of John boat for sea turtle to exit drop site
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact <input type="checkbox"/> Sighting - Delay - Shutdown	09:00 09:03	Nicole Hageman SE wall	9.9 kts SE Slight glare No swell	C. mydas Juvenile	8 yds	/ 1 / ___ calves	toward or <input type="checkbox"/> away parallel none Behavior Code: SW (N), DI	One juvenile green sea turtle sighted below the surface heading NW in direction then dove. Resurfaced 2 min later on inside of the inner oil stop barrier swimming S. This individual is easily identifiable by it's missing rear hind flipper ("Gimpy") 0905 curtain complete

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:17 10:24	LJ Blackwell, SE wall	7.0 kts SE Moderate glare No swell	C. mydas Juvenile	5 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code:	One juvenile green sea turtle sighted inside the project's environmental curtain, showing signs and behavior of trying to find exit route. No driving activity occurring at the time. Immediately informed the Foreman and Crane Operator. No immediate action taken to move the curtain. Continued to observe as the turtle swam back and forth behind the completed portion of the South quay wall, until the curtain was moved. The animal is identifiable by a distinct barnacle pattern on the carapace. It was sighted again along the outside oil stop barrier on SE wall and moving away from the pile driving platform.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay Shutdown	09:18 10:27	LJ Blackwell, SE wall Nicole Hageman, SE and S wall corner	7.0 kts SE Moderate glare No swell	C. mydas Juvenile (s)	0 yds	/ 2 / ___ calves	toward or away parallel none Behavior Code: CD	Two juvenile green sea turtles entangled in Project's environmental curtain behind completed portion of South Quay Wall. Distress observed in both animals.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:52 09:52	LJ Blackwell, SE wall	11.1 kts SE Moderate glare No swell	C. mydas Juvenile	1 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code:	Previously sighted (0755, "Gimpy") juvenile green sea turtle visually confirmed safely exiting environmental curtain, and active pile drivingsite.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:52 10:07	LJ Blackwell, SE wall	11.1 kts SE Moderate glare No swell	C. mydas Juveniles	5 yds	/ 2 / ___ calves	toward or away parallel none Behavior Code: CD	2 juvenile green sea turtles re-sighted when surfaced behind completed S quay wall.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:11 10:21	LJ Blackwell SE wall	12.0 kts SE Moderate glare No swell	C. mydas Juveniles	30 yds	/ 2 / ___ calves	toward or away parallel none Behavior Code: FO	2 (additional) juvenile green sea turtles sighted foraging on SE wall oil stop barrier
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:27 10:32	LJ Blackwell, SE wall Nicole Hageman, SE and S wall corner	9.9 kts SE Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No endangered species within the ZOI.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:38 10:38	Nicole Hageman SE corner	9.9 kts SE Slight glare Slight swell	C. mydas Juvenile	7 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code:	Individual with 3 flippers spotted near pile driving platform after vibratory driving. Dove after a few seconds.

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:40 10:41	LJ Blackwell SE wall	9.9 kts SE Slight glare Slight swell	C. mydas Juvenile	20 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: SW (N)	Previously sighted juvenile sea turtle with 3 flippers sighted hdg N
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:00 12:25	LJ Blackwell SE wall	8.0 kts ESE Moderate glare Slight swell	C. mydas Juvenile	30 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: SW (NE), FO	Previously sighted juvenile sea turtle (entangled in curtain sighted foraging on algae oil stop barrier.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:45 11:55	LJ Blackwell SE wall Nicole Hareman S SE corner	9.9 kts ESE Moderate glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	MOB
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12:00 13:00	LJ Blackwell SE wall Nicole Hareman S SE corner	8.0 kts SE Moderate glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:10 10:21	LJ Blackwell SE wall Nicole Hareman S SE corner	11.1 kts E, Slight glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	All clear.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:05 13:12	Nicole Hageman SE corner	11.1 kts E, Slight glare Slight swell	C. mydas Juvenile	23 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: SW (S, SE), FC	One juvenile green sea turtle sighted inside oil stop barrier heading S, SE. Was at the end of the barrier by the east wall when operations delayed for lightning.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:13 15:30	Sought shelter	11.1 kts E Slight glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	WEATHER SHUTDOWN T-1 shutdown

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14:43 14:43	Nicole Hareman S SE corner	11.0 kts SE moderate glare .50' swell	C. mydas Juvenile	21 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: SW (S, SE), FC	One juvenile green turtle spotted feeding along inside of the outer oil stop barrier.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14:45 :	LJ Blackwell SE wall Nicole Hareman S SE corner	11.0 kts SE moderate glare .50' swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings at time of start up
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15:02 15:18	LJ Blackwell SE wall Nicole Hareman S SE corner	8.0 kts ESE moderate glare .60' swell tide rising (H 1351) 76% cloud cov 5 mi visibility		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings within ZOI
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15:25 :	LJ Blackwell SE wall Nicole Hareman S SE corner			yds	/ / ___ calves	toward or away parallel none Behavior Code:	WEATHER SHUTDOWN T-1 shutdown for day
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:20 :	LJ Blackwell S wall Nicole Hageman	6.0 kts S Slight glare No swell		yds	/ / 2 calves	toward or away parallel none Behavior Code:	Initial sightings below.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:21 07:45	LJ Blackwell S wall	6.0 kts SSW Slight glare No swell	C. mydas Juvenile	0 yds	/ / 1 calves	toward or away parallel none Behavior Code: CD, SW (E, N)	ENTANGLEMENT INTERVENTION 1 juvenile green sea turtle stuck behind curtain. I'm sure how long this animal was trapped. I was able to leverage E end of curtain open with 2x4. Animal immediately swam to exit and out alongside east wall. Time spent behind completed quay wall of concern.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:26 08:00	LJ Blackwell S wall	6.0 kts SSW Slight glare no swell	C. mydas Juvenile	0 yds	/ / 1 calves	toward or away parallel none Behavior Code: CD, FO	ENTANGLEMENT INTERVENTION 1 juvenile green sea turtle, marking on carapace shows it was previously fitted with gps receiver also trapped behind curtain on S wall. Untied curtain to open and release. animal swam under E wall then resurfaced at Sea wall oil stop and began foraging on algae. have no this is the first time this sea turtle has been cited while on the project during my time monitoring. No flipper tags visible.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:34 Unk	Nicole Hageman SE corner	6.0 kts SSW Slight glare no swell	C. mydas Juvenile	25 yds	/ / 1 calves	toward or away parallel none Behavior Code: FO, SW (N)	1 juvenile green sea turtle feeding along outside oil stop barrier on SE wall. In sight until at least 0812. During observation, 4 juvenile green sea turtles were seen along the barriers simultaneously, at the same time another was on the inside of the curtain and can't be sure of the final sighting time of the original sighted animal.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:39 08:15	LJ Blackwell, SE wall	6.0 kts SSW Slight glare no swell	C. mydas Juvenile	5 yds	/ / 1 calves	toward or away parallel none Behavior Code: FO	One juvenile green sea turtle foraging on curtain at template platform. Delay required for lowering jon boat into the water. Details below.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:39 08:15	LJ Blackwell S wall	6.0 kts SSW Slight glare no swell		yds	/ / calves	toward or away parallel none Behavior Code:	Delay and lowering of Jon boat from crane due to one juvenile green sea turtle foraging on environmental curtain directly at midship underneath landing site.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:57 08:03	LJ Blackwell SE wall Nicole Hageman SE wall	6.0 kts SSW slight glare No swell	C. mydas Juvenile	0 yds	/ / 1 calves	toward or away parallel none Behavior Code: SW (W), FO	Delay in welding on template platform due to risk of injury from dropping embers above a juvenile green sea turtle swimming foraging underneath.

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-716

Date: 17 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	08:55 08:55	LJ Blackwell, SE wall	7.0 kts SSW moderate glare slight swell	C. mydas Juvenile	27 yds	/ / 1 calves	toward or away parallel none Behavior Code: Surfaced	1 juvenile green sea turtle HDG south at oil stop surfaced
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:10 09:15	LJ Blackwell, SE wall Nicole Hageman, SE wall	8.9 kts S moderate glare slight swell Tide falling 37% cloud 10mi vis		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No endangered species sightings during inwater vibratory activity Of note one alligator gar observed on south wall. At time of hammering swam quickly under southeast wall. Pulling out king piles and resetting in S SE corner. curtain reset at 0925. 1015 template lowered.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:31 10:31	Nicole Hageman SE wall	12.0 kts SSW moderate glare Slight swell	C. mydas Juvenile	30 yds	/ / 1 calves	toward or away parallel none Behavior Code: FO, SW (S)	1 juvenile green sea turtle sighted feeding along outside oil stop barrier, following the barrier south toward the template.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:52 10:54	LJ Blackwell, SE wall Nicole Hageman, SE wall	12.0 kts SSW moderate glare Sight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during vibratory time. Pulling out and resetting second king pile
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:57 11:00	LJ Blackwell SE wall Nicole Hageman SE wall	5.1 kts SSW Moderate glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Moving soldier piles Shutdown below
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:00 11:37	LJ Blackwell, SE wall* Nicole Hageman, SE wall	5.1 kts SSW Moderate glare Slight swell	C. mydas Juvenile	0 yds	/ / 1 calves	toward or away parallel none Behavior Code: TR (NE, SW), DS	1 juvenile green sea turtle sighted darting out from behind vibratory activity traveling NE. Became entangled and disorientated on inside of environmental curtain frequently changing directions. Animal showed signs of distress, disorientation and fatigue. Shutdown ongoing as animal resurfaced behind quay wall further west.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12:00 13:00				yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-7167

Date: 17 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:00	LJ Blackwell SE Wall* Nicole Hageman SE wall	9.9 kts SW Extreme glare .50' swell	C. mydas Juveniles	45 yds	/ / 3 ___ calves	toward or away parallel none Behavior Code: <u>FO</u>	3 juvenile green sea turtles foraging on oil stop on SE wall. Outside of ZOI at initial sighting. One animal previously in distress behind completed pile wall. ("Hexi")
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15:00	LJ Blackwell SE wall Nicole Hageman S wall	13.0 kts SE Slight glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	T-1 shutdown for remainder of day.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-7167

Date: _____

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:20	LJ Blackwell, SE wall Nicole Hageman, SE wall	2.9 kts SSW no glare no swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No initial sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:27 07:50	LJ Blackwell SE wall	2.9 kts SSW No glare No swell	C. mydas Juvenile	35 yds	/ / 1 calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle foraging on inside of oil stop barrier on southeast wall
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:44 07:56	LJ Blackwell SE wall	1.9 kt WSW No glare No swell	C. mydas Juvenile	32yds	/ / 1 calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle foraging on inside of oil stop barrier on southeast wall
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:24 10:32	LJ Blackwell, SE wall Nicole Hageman, SE wall	1.9 kt WSW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:00 11:22	Nicole Hageman, SE wall	1.0 kt S Moderate glare No swell	C. mydas Juvenile	1 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: SW (N, S)	1 juvenile green sea turtle sighted near the east wall swimming away from the template and towards the oil stop barrier. This individual is easily identifiable by a small chunk missing from the edge of left side of the carapace. It dove then surfaced in between the two oil stops, and was out of sight for a few minutes until it resurfaced heading back towards the template and into the exclusion zone, resulting in a shutdown of vibratory operations. It was observed swimming around the cap barge and template for several minutes, until it turned north and swam back toward the oil stop barrier and out of the exclusion zone. It was foraging between the oil stop barriers for 3 minutes before it was lost to sight at 1:22 when it swam around the side of the barrier.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:01 11:06	LJ Blackwell, SE wall Nicole Hageman, SE wall	1.0 Slight glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:06 11:19	LJ Blackwell, SE wall* Nicole Hageman SE wall	0.0 kts WSW Slight glare No swell	C. mydas Juvenile	0yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: SW (N), DI	Shutdown of vibratory operations due to juvenile green sea turtle entering within 50 feet of template. Operations resumed when turtle observed exiting.

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-716

Date: 19 AUG 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:19 11:32	LJ Blackwell, SE wall* Nicole Hageman SE wall	0 kts WSW moderate glare no swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:30 11:35	Nicole Hageman SE wall	0 kts WSW, moderate glare, no swell	C. mydas Juvenile (s)	15 yds	/ / 1 ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle sighted foraging along inside of outer oil stop barrier. It was initially heading towards the template then turned around and headed back north and out of sight.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:39 11:48	LJ Blackwell SE wall Nicole Hageman SE wall	0 kts WSW moderate glare no swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:50 12:50	Lunch			yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12:50 :	LJ Blackwell SE wall Nicole Hageman SE wall	8.0 kts E Moderate glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:33 13:56	LJ Blackwell, SE wall Nicole Hageman, SE wall	5.1 kts E Moderate glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:59 14:03	LJ Blackwell SE wall	6.0 kts E Extreme glare Slight swell	C. mydas Juvenile	7 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code:	1 juvenile green sea turtle foraging on algae oil stop bumper on bow of navy ship hdg N on starboard

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14 18 14 27	LJ Blackwell SE wall	8.9 kts E extreme glare Slight swell	C. mydas Juvenile	20 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle foraging on inside of oil stop barrier on southeast wall
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14: 39 14: 49	LJ Blackwell SE wall	8.9 kts E extreme glare slight swell	C. mydas Juvenile	30 yds	/ 1 / ___ calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle foraging on oil stop barrier on SE Wall
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14 53 15 00	LJ Blackwell SE wall	7.0 kts E extreme glare slight swell	C. mydas Juvenile	32 yds	/ / 1 calves	toward or away parallel none Behavior Code:	One juvenile green sea turtle sighted foraging on oil stop barrier. This individual has a cracked carapace starting at the nuchal notch, extending through right posterior side of carapace. Notified Heather Hahn on base. Following up tomorrow morning concerning individual
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15:10 16:05	LJ Blackwell SE wall Nicole Hareman SE wall	8.9 kts E extreme glare slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: 16: 10				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-716

Date: 20 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	07:20 :	LJ Blackwell SE wall Nicole Hageman SE wall	7.0 kts W No glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	07:32 08:01	LJ Blackwell SE wall	7.0 kts W No glare No swell	C. mydas Juvenile	15 yds	/ / 1 calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle (small) sighted foraging on oil stop barrier off SE wall
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	07:41 07:45	LJ Blackwell SE wall Nicole Hageman SE wall	6.0 kts WNW No glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	08:45 09:33	LJ Blackwell SE wall Nicole Hageman SE wall	5.1 kts WNW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:36 09:40	LJ Blackwell SE wall Nicole Hageman SE wall	5.1 kts WNW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:45 09:49	LJ Blackwell SE wall Nicole Hageman SE wall	2.9 kts WSW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:49 09:55	LJ Blackwell SE wall	2.9 kts WNW Moderate glare No swell	C. mydas Juvenile	0 yds	/ / 1 calves	toward or away parallel none Behavior Code: SW (S, N)	1 juvenile green sea turtle swimming towards active construction site. 0 yards away next to pile being driven. shut down until sea turtle left active construction site heading north along Southeast wall began foraging on oil stop barrier resumed operations upon exit of ZOI

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-716

Date: 20 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:55 10:00	LJ Blackwell SE wall Nicole Hageman SE wall	2.9 kts WNW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:50 11:30	Nicole Hageman SE wall	1.9 kt WNW No glare No swell	C. mydas Juvenile	25 yds	/ / 1 calves	toward or away parallel none Behavior Code: FO, SW (N, S)	Resighting of the juvenile green sea turtle with chunk missing from the left edge of the carapace. Swimming back and forth feeding between the oil stop barriers.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:55 10:56	LJ Blackwell SE wall Nicole Hageman SE wall	7.0 kts NW Moderate glare slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:35 12:00	LJ Blackwell SE wall	5.1 kts NNW Moderate glare No swell	C. mydas Juvenile	42 yds	/ / 1 calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle going back and forth feeding along oil stop barriers.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12:00 13:00				yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:00 :	LJ Blackwell SE wall Nicole Hageman SE wall	6.0 kts WNW Extreme glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No initial sightings.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:25 13:33		4.1 kts NW extreme glare no swell	C. mydas Juvenile	20 yds	/ / 1 calves	toward or away parallel none Behavior Code: FO	1 juvenile green sea turtle seen periodically going back and forth feeding along oil stop barriers. Did not appear disturbed by in water activity.

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-7167

Date: 20 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:35 13:36	LJ Blackwell SE wall Nicole Hageman SE wall	4.1 kts ENE extreme glare no swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during in water activity
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:42 13:47	LJ Blackwell SE wall Nicole Hageman SE wall	5.1 kts N Extreme glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during in water activity
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14:15 16:00	Nicole Hageman SE wall	4.1 kts ENE Extreme glare No swell	C. mydas Juvenile	yds 18	/ / _1 calves	toward or away parallel none Behavior Code: FO, SW (S, N)	1 juvenile green sea turtle sighted periodically going back and forth foraging along oil stop barriers. No visual displays or behaviors of stress. Not disturbed by in water activity.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	15:18 15:48	LJ Blackwell SE wall Nicole Hageman SE wall	4.1 kts ENE extreme glare no swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Sightings occurred outside of ZOI
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	16:00 :	LJ Blackwell SE wall Nicole Hageman SE wall	8.0 kts ENE extreme glare no swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Storm approaching.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-716

Date: 21 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	07:20 :	LJ Blackwell* SE wall Nicole Hageman SE wall	1.1 kts SSW No glare No swell	C. mydas Juvenile	65 yds	/ / 1 calves	toward or away parallel <u>none</u> Behavior Code: <u>FO</u>	1 juvenile green sea turtle sighted foraging on oil stop bumpers on Southeast wall. Observed to be unaffected by in water vibratory activity during hammering intervals.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	08:21 08:23, 08:32 08:37	LJ Blackwell SE wall Nicole Hageman SE wall	1.1 kts SSW No glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code: _____	No sightings during in water activity
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:00 09:17	LJ Blackwell SE wall Nicole Hageman SE wall	4.1 kts W Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code: _____	no sightings during in water activity within ZOI
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:59 10:00	LJ Blackwell SE wall Nicole Hageman SE wall*	6.0 it's WSW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code: _____	no sightings during in water activity within ZOI
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:22 10:26	LJ Blackwell SE wall Nicole Hageman SE wall	5.1 kts W Moderate glare No swell	C. mydas Juvenile	yds	/ / ___ calves	toward or away parallel none Behavior Code: <u>FO</u>	1 juvenile green sea turtle foraging along outside of oil stop barrier. No active vibratory drilling occurring at initial sighting, yet it was heading east and approaching the cart barge in the SE corner. It then turned around and was heading west at the time of the last sighting.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	1022, 1026, 1028, 1032, 1053, 1054	LJ Blackwell SE wall Nicole Hageman SE wall			yds	/ / ___ calves	toward or away parallel none Behavior Code: _____	no sightings during in water activity within ZOI
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	1138, 1140, 1145, 1147	LJ Blackwell SE wall Nicole Hageman SE wall	5.1 kts N Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code: _____	no sightings during in water activity within ZOI

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-716

Date: 21 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12:00 12:50				yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12:50 13:13	LJ Blackwell SE wall	5.1 kts W Extreme glare No swell	C. mydas Juvenile	75 yds	/ / 1 ___ calves	toward or away parallel none Behavior Code: SW (SE, S, SW, SE, SW)	previously sighted sub-adult green sea turtle foraging on or stop barrier along Southeast wall. active pile driving no longer going on in corner of South and Southeast wall
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:03 14:18	LJ Blackwell SE wall		C. mydas Juvenile	300 yds	/ / 1 ___ calves	toward or away parallel none Behavior Code:	one sub adult green sea turtle surfaced dove on southeast wall heading south towards completed quay wall. New individual, distinct by two orange patches on carapace.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:24 14:18	LJ Blackwell SE wall Nicole Hageman SE wall	8.9 kt SW Extreme glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	(Construction moving west on South quaywall leveling piles)
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14:18 :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: :				yds	/ / ___ calves	toward or away parallel none Behavior Code:	

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	07:15 :	LJ Blackwell SW wall Tracy Kowalczyk SW wall	8.0 kts WSW No glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No initial sightings.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	09 03 12:04	LJ Blackwell SW wall Tracy Kowalczyk SW wall	8.0 kts W Slight glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during in water activity
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:05 13:00		9.9 kts SW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13 04 13:15	LJ Blackwell SW wall Tracy Kowalczyk SW wall	8.9 kts WSW Extreme glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during in water activity
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	13:18 14:26	LJ Blackwell, SW wall	8.9 kts WSW Extreme glare No swell	C. mydas Sub adult	0-200 yds	/ / ___ calves	toward or away parallel none Behavior Code: SW, MI	1 sub adult green sea turtle sighted heading towards West wall swimming from West wall to corner of West and South wall where one new pile being prepped for driving. Swam parallel on South Quay wall heading east. New individual observed for me while on project: larger with concave cut out on left carapace, midline. Resighted at 1418. The animal was milling under W wall fender, took same transit path as previous sighting (W, S, E). Of note, sighted two jellyfish today (large portion of green sea turtle diet)
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	14:30 14:34	LJ Blackwell SW wall Tracy Kowalczyk SW wall	9.9 kts SW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during in water activity
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: 15 00		11.1 kts WNW Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Weather shutdown.

Project name: South Quay Wall Recapitalization

Lead observer: LJ Blackwell

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Project location : NAVSTA Mayport Jacksonville, FL

Lead observer contact info: lizajanebwell@gmail.com 804-512-716

Date: 24 August 2021

Effort Info				Sighting Info				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Pile Driving)	# of Animals Group Size (min/max/best) # of Calves	Animal Movement Relative to Pile Driving Equipment/ Behavior Code	Behavior Change/ Response to Activity/ Other Comments
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	07:15 :	LJ Blackwell SW wall Tracy Kowalczyk SW wall	2.9 kts S Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No initial sightings.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	08:30 09:19	LJ Blackwell, S wall	4.1 kts S Extreme glare No swell	C. mydas Juvenile	500 yds	/ / _1_ calves	toward or away parallel none Behavior Code: SW (E, N)	1 juvenile green sea turtle sighted by construction crew behind south Quay wall on southeast end. Dove under SE Wall. Resighted on open end of South Quay wall at 0919 heading north. individual appeared unaffected and seen milling.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	08:41, 09:30	LJ Blackwell SW wall Tracy Kowalczyk SW wall	4.1 kts SSW Extreme glare No swell	C. mydas Juvenile	25 yds	/ / _1_ calves	toward or away parallel none Behavior Code: MI	1 Juvenile green 70 feet away fast swimming behavior, headed east. Resighted on West Wall heading north. surfaced and swam.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	09:35 09:36	LJ Blackwell SW wall Tracy Kowalczyk SW wall	5.1 kts S Extreme glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during in water activity
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	10:25 11:50	LJ Blackwell SW wall Tracy Kowalczyk SW wall			yds	/ / ___ calves	toward or away parallel none Behavior Code:	Mechanical - hammer
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	11:50 12:05	LJ Blackwell SW wall Tracy Kowalczyk SW wall	6.0 kts S Moderate glare No swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during in water activity
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	12:05 13:05				yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lunch.

Project name: South Quay Wall Recapitalization

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Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:30 :	LJ Blackwell SW wall Tracy Kowalczyk SW wall	6.0 kts ESE No glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	No initial sightings.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	13:30 14:12	LJ Blackwell SW wall Tracy Kowalczyk SW wall			yds	/ / ___ calves	toward or away parallel none Behavior Code:	No sightings during in water activity All pile driving complete.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	14:12 14:25		6.0 kts SE No glare Slight swell		yds	/ / ___ calves	toward or away parallel none Behavior Code:	Lightning shutdown - 7.7 miles 14 25 - Navy T1 shutdown until 1600
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	:				yds	/ / ___ calves	toward or away parallel none Behavior Code:	