

Wharf Charlie Two at Naval Station Mayport

Marine Mammal Observer Interim Report Covering the Period of May 26 to August 17, 2015

In-water pile driving began at Wharf Charlie Two (Wharf C2) at Naval Station Mayport (NS Mayport) on 26 May 2015 and is ongoing. Marine mammal observers were provided by Orion Marine Group. They were provided with the incidental harassment authorization (IHA) and marine mammal observer plan for this project. Additionally, they received marine mammal observer training from NAVFAC Southeast on 26 May 2015. The IHA authorized the take of 365 bottlenose dolphins and 95 Atlantic spotted dolphins during this project. No Atlantic spotted dolphins have been observed, so this report applies only to bottlenose dolphins.

At least two marine mammal observers (MMOs) were present for all in-water pile driving. Generally, they have been stationed on either end of the construction barge to ensure no Level A takes of marine mammals and to enumerate all marine mammals visible in the NS Mayport Turning Basin. Three MMOs were present on August 6th, 7th, 10th, and 12th, stationed at the construction barge, a tower directly across the basin from Wharf C2, and on the rock jetty east of the basin (Figure 1). These additional locations allowed for observations of as large a portion of the behavioral zone of influence as possible so that observations collected from the construction barge could be extrapolated to calculate total Level B takes.



Figure 1. Position of the observers on the barge, tower, and jetty on August 6, 7, 10, and 12.

The results are presented in two ways: (1) based both upon uncorrected raw data and (2) based upon a dataset corrected for likely duplicate sightings. Based upon the uncorrected data, calculated Level B takes of bottlenose dolphins were estimated to be 396. Correcting for likely

duplicates, calculated Level B takes were estimated to be 272. The Navy believes the corrected data to be more accurate, but results derived from both datasets are presented below.

UNCORRECTED DATA

The complete uncorrected dataset is provided in **Appendix A**. For all the dates when there were two observers on the barge (all dates except August 6th, 7th, 10th, and 12th), the higher number of observations was used for further analysis. Those numbers are presented in Table 1.

Table 1. The maximum number of bottlenose dolphins observed by a single observer stationed at the Construction Barge on each day of in-water pile driving

Date	Max #	Date	Max #	Date	Max #
5/26/2015	0	6/18/2015	0	7/30/2015	2
5/27/2015	0	6/19/2015	2	7/31/2015	0
5/28/2015	2	6/22/2015	6	8/3/2015	7
5/29/2015	24	6/23/2015	0	8/4/2015	0
6/2/2015	0	6/24/2015	6	8/5/2015	3
6/3/2015	9	6/25/2015	0	8/6/2015	22
6/4/2015	2	6/26/2015	1	8/7/2015	3
6/5/2015	5	6/29/2015	3	8/10/2015	1
6/8/2015	1	6/30/2015	2	8/11/2015	0
6/9/2015	0	7/1/2015	0	8/12/2015	8
6/10/2015	16	7/2/2015	0	8/13/2015	0
6/11/2015	3	7/10/2015	0	8/14/2015	0
6/12/2015	0	7/24/2015	0	8/17/2015	0
6/15/2015	0	7/27/2015	6		
6/16/2015	0	7/28/2015	0	TOTAL	136

Correction factors were applied to the 136 observed takes in Table 1 to derive a total number of estimated takes for the entire behavioral zone of influence (ZOI). This was done using the data collected from the barge, tower, and jetty on August 6th, 7th, 10th, and 12th. On those dates, a total of 34 bottlenose dolphins were observed from the barge, 41 from the tower, and 58 from the jetty (Appendix A). The total number of tower observations was divided by the total number of barge counts to calculate a correction factor for inside the Turning Basin. Similarly, the total number of jetty counts was divided by the total number of barge counts to calculate the correction factor for outside the turning basin. These two correction factors were then multiplied by the 136 observations in Table 1 and added together to yield 396 takes, as presented below.

Total Counts from August 6th, 7th, 10th, and 12th: Barge (n=34), Tower (n=41), Jetty (n=58)

$$\left(\frac{\text{Tower Counts}}{\text{Barge Counts}} \times 136 \right) + \left(\frac{\text{Jetty Counts}}{\text{Barge Counts}} \times 136 \right) = \text{Level B Takes}$$

$$\left(\frac{41}{34} \times 136 \right) + \left(\frac{58}{34} \times 136 \right) = 396 \text{ Takes}$$

This estimate for Level B takes may have been lower if two observers had been stationed on the barge on the days when data for the correction factor was collected. On all the other days, two observers were on the barge and only the higher count between their two data sheets was used (as in Table 1). On August 6th, 7th, 10th, and 12th, though, only one observer was on the barge, so no data was tossed out. Considering that the two observers' total counts differed on 18 of the 19 days during which they observed at least one bottlenose dolphin (see Appendix A), it is probable that the barge counts could have been higher on at least one correction factor day if two observers had been stationed there, which would have resulted in lower extrapolated takes when the correction factor was applied to the entire dataset.

DATA CORRECTED FOR LIKELY DUPLICATES

The complete corrected dataset is provided in **Appendix B**. More than six bottlenose dolphins were observed from the barge on only six of the 44 days, which was 13% of the time. However, two of these occurrences were on two of the four days when data was gathered for the correction factor. So, while unusually high numbers of bottlenose dolphins occurred on 50% of those four days, they only occurred on 10% of the other 40 days. The Navy will collect more days of correction factor data for the next IHA issued at Wharf C2, which will help refine the corrections.

At least twenty dolphins were observed on May 29 and August 6. These numbers, being so infrequent and so abnormally high, prompted further analyses to determine if some individuals were counted more than once. Indications of duplicate counts would be large groups (5 or more dolphins) observed within an hour or so of each other and with a comparable number of calves.

After examining the six days on which more than six bottlenose dolphins were recorded, the counts were adjusted to account for duplication on four of those dates: May 29, June 10, August 6, and August 12 (Appendix B):

May 29 (Appendix C): Observer SP counted 24 bottlenose dolphins but observer DM counted 10. Further analysis revealed that observer SP recorded a pod of up to 6 dolphins four times in a four-hour period. Two calves were counted in this pod when it was within 200 yards. Although only one calf was counted when the pod was 400 yards away and no calves were included when the group was at 500 yards, it appears very likely that observer SP counted the same pod of six dolphins four times. Observer SP's count was reduced from 24 to 6. Since observer DM's count of 10 then became the maximum count for the day, it was used in the estimated take.

June 10 (Appendix D): Observer SP counted a pod of up to 10 bottlenose dolphins, including 2 calves, at 11:05. Thirty minutes later, at 11:35, observer SP counted a pod of up to six dolphins, including 2 calves. Observer OG also counted a large pod of up to nine dolphins, including one calf, at 11:05, the same time when observer SP made his first record, but did not record any other dolphins for the remainder of the day. Observer SP's 11:35 record is a likely duplicate of his 11:05 record. Removing it, both observers counted 10 dolphins for the day and that is the new number that was used.

August 6 (Appendix E): Observer SP, stationed at the jetty, counted a pod of up to 10 bottlenose dolphins moving towards the pile driving at 13:35 at a distance of 250 yards. About an hour later, at 14:40, he observed a pod of up to 15 dolphins moving away from the pile driving at a distance of 200 yards. An hour and twenty minutes later, at 16:00, he counted a pod of up to 14 dolphins at a distance of 350 yards. Such enormous pods were never seen on any

other day and it is most likely that this was the same large pod counted three times. Reducing the two lower counts of the three (10 and 14), the pod of 15 dolphins was added to observer SP's other observations for the day to yield a corrected total of 23 dolphins observed from the jetty.

On the same day, observer JD, stationed at the barge, counted a pod of up to five bottlenose dolphins, including 2 calves, moving away from the pile driving at 10:30 at a distance of 200 yards. Only fifteen minutes later, at 10:45, she counted a pod of up to six dolphins, including one calf, moving away at 250 yards. These two records likely were the same pod counted twice. The first count of 5 was removed, reducing observer JD's total count for the day to 17 dolphins.

August 12 (Appendix F): Observer SP, stationed at the tower, counted a pod of up to five bottlenose dolphins, including 1 calf, at 11:10 moving away at a distance of 275 yards. Only five minutes later, at 11:15, she counted a pod of up to four dolphins, including one calf, moving away at a distance of 350 yards. These two records likely were the same pod counted twice. The record of four dolphins was removed, reducing observer SP's total count for the day to 12 dolphins.

Table 3 presents the same data as Table 1, but with the above corrections implemented (those changes are in red text). For all the dates when there were two observers on the barge (all dates except August 6,7,10, and 12), the higher number of observations.

Table 2. Adjusted for likely duplicate counts, these are the maximum number of bottlenose dolphins observed by a single observer stationed at the Construction Barge on each day of in-water pile driving. Values that differ from Table 1 are RED.

Date	Max #	Date	Max #	Date	Max #
5/26/2015	0	6/18/2015	0	7/30/2015	2
5/27/2015	0	6/19/2015	2	7/31/2015	0
5/28/2015	2	6/22/2015	6	8/3/2015	7
5/29/2015	10	6/23/2015	0	8/4/2015	0
6/2/2015	0	6/24/2015	6	8/5/2015	3
6/3/2015	9	6/25/2015	0	8/6/2015	17
6/4/2015	2	6/26/2015	1	8/7/2015	3
6/5/2015	5	6/29/2015	3	8/10/2015	1
6/8/2015	1	6/30/2015	2	8/11/2015	0
6/9/2015	0	7/1/2015	0	8/12/2015	8
6/10/2015	10	7/2/2015	0	8/13/2015	0
6/11/2015	3	7/10/2015	0	8/14/2015	0
6/12/2015	0	7/24/2015	0	8/17/2015	0
6/15/2015	0	7/27/2015	6		
6/16/2015	0	7/28/2015	0	TOTAL	111

Correction factors were applied to the 111 observed takes in Table 3 to derive a total number of estimated takes for the entire behavioral ZOI. This was done using the data collected from the barge, tower, and jetty on August 6, 7, 10, and 12. On those dates, a total of 29 bottlenose

dolphins were observed from the barge, 37 from the tower, and 34 from the jetty (Appendix B). The total number of tower observations was divided by the total number of barge counts to calculate a correction factor for inside the Turning Basin. Similarly, the total number of jetty counts was divided by the total number of barge counts to calculate the correction factor for outside the turning basin. These two correction factors were then multiplied by the 111 observations in Table 1 and added together to yield 272 takes, as presented in below.

Total Counts from August 6th, 7th, 10th, and 12th: Barge (n=29), Tower (n=37), Jetty (n=34)

$$\left(\frac{\text{Tower Counts}}{\text{Barge Counts}} \times 111 \right) + \left(\frac{\text{Jetty Counts}}{\text{Barge Counts}} \times 111 \right) = \text{Level B Takes}$$

$$\left(\frac{37}{29} \times 136 \right) + \left(\frac{34}{29} \times 136 \right) = 272 \text{ Takes}$$

THIS PAGE IS INTENTIONALLY BLANK

Appendix A. Marine mammal observer data collected between 26 May and 17 August 2015. Shaded cells on August 6, 7, 10, and 12 represent data collected to generate correction factors.

Date	Obs	Observer Location	Bottlenose Dolphin			Shutdown	Nearest Distance (yards)	Other Species
			Max #	# of Calves	Behaviors			
5/26/2015	DM	East Barge	0	0	.	.	.	
5/26/2015	SP	West Barge	0	0	.	.	.	
5/27/2015	SP	West Barge	0	0	.	.	.	
5/27/2015	DM	East Barge	0	0	.	.	.	Manatee, Sea Turtle
5/28/2015	SP	West Barge	1	0	FO	Y (m,t)	50	Manatee, Sea Turtle
5/28/2015	DM	East Barge	2	0	TR	Y (u)	25	
5/29/2015	DM	East Barge	10	0	PO, FO, TR	.	125	
5/29/2015	SP	West Barge	24	0	PO, FO, SP	.	100	
6/1/2015	OG	East Barge	1	0	PO	.	150	
6/1/2015	SP	West Barge	2	0	PO	.	150	Sea Turtle
6/2/2015	DM	East Barge	0	0	.	Y(w)	.	Sea Turtle
6/2/2015	SP	West Barge	0	0	.	Y(w)	.	Sea Turtle
6/3/2015	DM	East Barge	7	1	FO, MI	.	175	
6/3/2015	SP	West Barge	9	1	SW	.	500	Manatee, Sea Turtle
6/4/2015	DM	East Barge	0	0	.	.	.	
6/4/2015	SP	West Barge	2	0	PO	.	75	
6/5/2015	OG	East Barge	5	0	PO	.	200	
6/5/2015	SP	West Barge	0	0	.	.	.	
6/8/2015	DM	East Barge	1	0	TR	.	200	
6/8/2015	SP	West Barge	0	0	.	.	.	
6/9/2015	DM	East Barge	0	0	.	.	.	Sea Turtle
6/9/2015	SP	West Barge	0	0	.	.	.	
6/10/2015	OG	East Barge	10	1	PO	.	.	
6/10/2015	SP	West Barge	16	4	PO, FO	.	300	Sea Turtle
6/11/2015	OG	East Barge	0	0	.	Y(m)	.	Manatee, Sea Turtle
6/11/2015	SP	West Barge	3	0	PO	Y(m)	300	Manatee, Sea Turtle
6/12/2015	DM	West Barge	0	0	.	Y(t)	.	Sea Turtle
6/12/2015	OG	East Barge	0	0	.	.	.	
6/15/2015	OG	East Barge	0	0	.	.	.	Sea Turtle
6/15/2015	SP	West Barge	0	0	.	.	.	Sea Turtle
6/16/2015	OG	East Barge	0	0	.	.	.	
6/16/2015	SP	West Barge	0	0	.	.	.	Sea Turtle
6/18/2015	OG	East Barge	0	0	.	Y(t)	.	Sea Turtle
6/18/2015	SP	West Barge	0	0	.	Y(t)	.	Sea Turtle
6/19/2015	JD	East Barge	2	0	PO, DI	.	50	Manatee, Sea Turtle
6/19/2015	SP	West Barge	0	0	.	.	.	Sea Turtle

Date	Obs	Observer Location	Bottlenose Dolphin			Shutdown	Nearest Distance (yards)	Other Species
			Max #	# of Calves	Behaviors			
6/22/2015	JD	East Barge	6	2	PO	.	100	
6/22/2015	OG	West Barge	6	2	PO	.	100	Sea Turtle
6/23/2015	JD	East Barge	0	0	.	Y(t)	.	Sea Turtle
6/23/2015	OG	West Barge	0	0	.	Y(t)	.	Sea Turtle
6/24/2015	JD	East Barge	6	2	PO, TR	.	50	Manatee, Sea Turtle
6/24/2015	OG	West Barge	0	0	.	.	.	Sea Turtle
6/25/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
6/25/2015	BC	West Barge	0	0	.	.	.	
6/26/2015	JD	East Barge	1	0	PO	.	100	
6/26/2015	BC	West Barge	0	0	.	.	.	
6/29/2015	JD	East Barge	3	0	DI	Y(w)	100	Sea Turtle
6/29/2015	BC	West Barge	0	0	.	.	.	
6/30/2015	JD	East Barge	2	0	PO	.	150	Sea Turtle
6/30/2015	BC	West Barge	0	0	.	.	.	Sea Turtle
7/1/2015	JD	East Barge	0	0	.	.	.	
7/1/2015	BC	West Barge	0	0	.	.	.	
7/2/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
7/2/2015	BC	West Barge	0	0	.	.	.	Sea Turtle
7/10/2015	BC	West Barge	0	0	.	.	.	Sea Turtle
7/10/2015	OG	East Barge	0	0	.	.	.	Sea Turtle
7/24/2015	JD	East Barge	0	0	.	.	.	
7/24/2015	OG	West Barge	0	0	.	.	.	
7/27/2015	JD	West Barge	6	1	PO, FO	.	30	Sea Turtle
7/27/2015	BC	West Land	0	0	.	.	.	Sea Turtle
7/28/2015	JD	West Barge	0	0	.	.	.	
7/28/2015	BC	West Land	0	0	.	.	.	Manatee
7/30/2015	OG	West Barge	0	0	.	.	.	
7/30/2015	JD	East Barge	2	1	PO	.	.	
7/31/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
7/31/2015	OG	West Barge	0	0	.	.	.	
8/3/2015	JD	East Barge	7	1	PO	.	130	Manatee, Sea Turtle
8/3/2015	OG	West Land	0	0	.	.	.	
8/4/2015	JD	West Land	0	0	.	.	.	
8/4/2015	OG	West Barge	0	0	.	.	.	
8/5/2015	JD	East Barge	3	1	PO	.	50	Sea Turtle
8/5/2015	OG	West Barge	0	0	.	.	.	
8/6/2015	SP	Jetty	47	2	PO	.	100	Manatee, Sea Turtle
8/6/2015	JD	West Barge	22	4	PO, DI, FO	.	60	
8/6/2015	RL	Tower	13	7	PO, FO	.	300	

Date	Obs	Observer Location	Bottlenose Dolphin			Shutdown	Nearest Distance (yards)	Other Species
			Max #	# of Calves	Behaviors			
8/7/2015	JD	East Barge	3	0	DI	.	150	Sea Turtle
8/7/2015	SP	Tower	7	0	PO, SW	.	200	
8/7/2015	OG	Jetty	10	0	SW	.	200	
8/10/2015	JD	West Barge	1	0	PO	.	50	Sea Turtle
8/10/2015	SP	Tower	5	1	SW	.	300	
8/10/2015	OG	Jetty	0	0	.	.	.	
8/11/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
8/11/2015	OG	West Barge	0	0	.	.	.	Sea Turtle
8/12/2015	JD	East Barge	8	3	.	.	100	Sea Turtle
8/12/2015	SP	Tower	16	3	PO	.	175	Sea Turtle
8/12/2015	OG	Jetty	1	0	PO	.	.	Sea Turtle
8/13/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
8/13/2015	OG	West Barge	0	0	.	.	.	
8/14/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
8/14/2015	OG	West Barge	0	0	.	.	.	Sea Turtle
8/17/2014	OG	East Barge	0	0	.	.	.	Sea Turtle
8/17/2014	RN	West Barge	0	0	.	.	.	Sea Turtle

Observer Codes: BC = Blair Calvo, DM = Dave Martin, JD = Joyce Doronila, OG = Oscar Garcia, RL = Rick Lewis, RN = Renaldo, SP = Steven Peavey.

Behavior Codes: DI = Diving, FO = Foraging, MI = Milling, PO = Porpoising, SP = Spyhopping, SW = Swimming, TR = Traveling.

THIS PAGE IS INTENTIONALLY BLANK

Appendix B. Marine mammal observer data collected between 26 May and 17 August 2015, and corrected to remove likely duplicates. Shaded cells on August 6, 7, 10, and 12 represent data collected to generate correction factors. **RED** text identifies numbers that have been reduced due to deletion of duplicate observations.

Date	Obs	Observer Location	Bottlenose Dolphin			Shutdown	Nearest Distance (yards)	Other Species
			Max #	# of Calves	Behaviors			
5/26/2015	DM	East Barge	0	0	.	.	.	
5/26/2015	SP	West Barge	0	0	.	.	.	
5/27/2015	SP	West Barge	0	0	.	.	.	
5/27/2015	DM	East Barge	0	0	.	.	.	Manatee, Sea Turtle
5/28/2015	SP	West Barge	1	0	FO	Y (m,t)	50	Manatee, Sea Turtle
5/28/2015	DM	East Barge	2	0	TR	Y (u)	25	
5/29/2015	DM	East Barge	10	0	PO, FO, TR	.	125	
5/29/2015	SP	West Barge	6	0	PO, FO, SP	.	100	
6/1/2015	OG	East Barge	1	0	PO	.	150	
6/1/2015	SP	West Barge	2	0	PO	.	150	Sea Turtle
6/2/2015	DM	East Barge	0	0	.	Y(w)	.	Sea Turtle
6/2/2015	SP	West Barge	0	0	.	Y(w)	.	Sea Turtle
6/3/2015	DM	East Barge	7	1	FO, MI	.	175	
6/3/2015	SP	West Barge	9	1	SW	.	500	Manatee, Sea Turtle
6/4/2015	DM	East Barge	0	0	.	.	.	
6/4/2015	SP	West Barge	2	0	PO	.	75	
6/5/2015	OG	East Barge	5	0	PO	.	200	
6/5/2015	SP	West Barge	0	0	.	.	.	
6/8/2015	DM	East Barge	1	0	TR	.	200	
6/8/2015	SP	West Barge	0	0	.	.	.	
6/9/2015	DM	East Barge	0	0	.	.	.	Sea Turtle
6/9/2015	SP	West Barge	0	0	.	.	.	
6/10/2015	OG	East Barge	10	1	PO	.	.	
6/10/2015	SP	West Barge	10	4	PO, FO	.	300	Sea Turtle
6/11/2015	OG	East Barge	0	0	.	Y(m)	.	Manatee, Sea Turtle
6/11/2015	SP	West Barge	3	0	PO	Y(m)	300	Manatee, Sea Turtle
6/12/2015	DM	West Barge	0	0	.	Y(t)	.	Sea Turtle
6/12/2015	OG	East Barge	0	0	.	.	.	
6/15/2015	OG	East Barge	0	0	.	.	.	Sea Turtle
6/15/2015	SP	West Barge	0	0	.	.	.	Sea Turtle
6/16/2015	OG	East Barge	0	0	.	.	.	
6/16/2015	SP	West Barge	0	0	.	.	.	Sea Turtle
6/18/2015	OG	East Barge	0	0	.	Y(t)	.	Sea Turtle
6/18/2015	SP	West Barge	0	0	.	Y(t)	.	Sea Turtle
6/19/2015	JD	East Barge	2	0	PO, DI	.	50	Manatee, Sea Turtle

Date	Obs	Observer Location	Bottlenose Dolphin			Shutdown	Nearest Distance (yards)	Other Species
			Max #	# of Calves	Behaviors			
6/19/2015	SP	West Barge	0	0	.	.	.	Sea Turtle
6/22/2015	JD	East Barge	6	2	PO	.	100	
6/22/2015	OG	West Barge	6	2	PO	.	100	Sea Turtle
6/23/2015	JD	East Barge	0	0	.	Y(t)	.	Sea Turtle
6/23/2015	OG	West Barge	0	0	.	Y(t)	.	Sea Turtle
6/24/2015	JD	East Barge	6	2	PO, TR	.	50	Manatee, Sea Turtle
6/24/2015	OG	West Barge	0	0	.	.	.	Sea Turtle
6/25/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
6/25/2015	BC	West Barge	0	0	.	.	.	
6/26/2015	JD	East Barge	1	0	PO	.	100	
6/26/2015	BC	West Barge	0	0	.	.	.	
6/29/2015	JD	East Barge	3	0	DI	Y(w)	100	Sea Turtle
6/29/2015	BC	West Barge	0	0	.	.	.	
6/30/2015	JD	East Barge	2	0	PO	.	150	Sea Turtle
6/30/2015	BC	West Barge	0	0	.	.	.	Sea Turtle
7/1/2015	JD	East Barge	0	0	.	.	.	
7/1/2015	BC	West Barge	0	0	.	.	.	
7/2/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
7/2/2015	BC	West Barge	0	0	.	.	.	Sea Turtle
7/10/2015	BC	West Barge	0	0	.	.	.	Sea Turtle
7/10/2015	OG	East Barge	0	0	.	.	.	Sea Turtle
7/24/2015	JD	East Barge	0	0	.	.	.	
7/24/2015	OG	West Barge	0	0	.	.	.	
7/27/2015	JD	West Barge	6	1	PO, FO	.	30	Sea Turtle
7/27/2015	BC	West Land	0	0	.	.	.	Sea Turtle
7/28/2015	JD	West Barge	0	0	.	.	.	
7/28/2015	BC	West Land	0	0	.	.	.	Manatee
7/30/2015	OG	West Barge	0	0	.	.	.	
7/30/2015	JD	East Barge	2	1	PO	.	.	
7/31/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
7/31/2015	OG	West Barge	0	0	.	.	.	
8/3/2015	JD	East Barge	7	1	PO	.	130	Manatee, Sea Turtle
8/3/2015	OG	West Land	0	0	.	.	.	
8/4/2015	JD	West Land	0	0	.	.	.	
8/4/2015	OG	West Barge	0	0	.	.	.	
8/5/2015	JD	East Barge	3	1	PO	.	50	Sea Turtle
8/5/2015	OG	West Barge	0	0	.	.	.	
8/6/2015	SP	Jetty	23	2	PO	.	100	Manatee, Sea Turtle
8/6/2015	JD	West Barge	17	4	PO, DI, FO	.	60	

Date	Obs	Observer Location	Bottlenose Dolphin			Shutdown	Nearest Distance (yards)	Other Species
			Max #	# of Calves	Behaviors			
8/6/2015	RL	Tower	13	7	PO, FO	.	300	
8/7/2015	JD	East Barge	3	0	DI	.	150	Sea Turtle
8/7/2015	SP	Tower	7	0	PO, SW	.	200	
8/7/2015	OG	Jetty	10	0	SW	.	200	
8/10/2015	JD	West Barge	1	0	PO	.	50	Sea Turtle
8/10/2015	SP	Tower	5	1	SW	.	300	
8/10/2015	OG	Jetty	0	0	.	.	.	
8/11/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
8/11/2015	OG	West Barge	0	0	.	.	.	Sea Turtle
8/12/2015	JD	East Barge	8	3	.	.	100	Sea Turtle
8/12/2015	SP	Tower	12	3	PO	.	175	Sea Turtle
8/12/2015	OG	Jetty	1	0	PO	.	.	Sea Turtle
8/13/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
8/13/2015	OG	West Barge	0	0	.	.	.	
8/14/2015	JD	East Barge	0	0	.	.	.	Sea Turtle
8/14/2015	OG	West Barge	0	0	.	.	.	Sea Turtle
8/17/2014	OG	East Barge	0	0	.	.	.	Sea Turtle
8/17/2014	RN	West Barge	0	0	.	.	.	Sea Turtle

Observer Codes: BC = Blair Calvo, DM = Dave Martin, JD = Joyce Doronila, OG = Oscar Garcia, RL = Rick Lewis, RN = Renaldo, SP = Steven Peavey.

Behavior Codes: DI = Diving, FO = Foraging, MI = Milling, PO = Porpoising, SP = Spyhopping, SW = Swimming, TR = Traveling.

THIS PAGE IS INTENTIONALLY BLANK

Appendix C. Marine Mammal Observer data sheets for 29 May 2015.

Project name: WHARF CHARLIE C-2

Lead observer: DAVE MARTIN

Page 1 of 1

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: DAVON FIELD OFFICE 813-393-8187

Date: 5-29-15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	12:15 5:06	E END of Barge	LT Wind LT chop clear		yds	1 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:47 5:09	ll	ll		yds	1 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:46 :	ll	ll	DOLPHIN	150 yds south	2 1 2 2 calves	toward or away parallel none Behavior Code: PO	5 W of Barge
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:37 :	ll	ll	DOLPHIN BOTTLE	200 yds SW	3 1 3 1 calves	toward or away parallel none Behavior Code: TA SW	Feeding FO
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:59 :	ll	ll	DOLPHIN	150 yds E	1 1 1 1 calves	toward or away parallel none Behavior Code: TA NE	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:30 :	ll	ll	DOLPHIN	125 yds E	4 1 4 1 calves	toward or away parallel none Behavior Code: FO E	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:30				yds	1 1 calves	toward or away parallel none Behavior Code:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013
NAVFAC SOUTHEAST POC: Jered Jackson. Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: WHARF CHARLIE C-2

Lead observer: Steven Peavey

Page 1 of 1

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: DAIRY FIELD OFFICE 813-393-8187

Date: 5/29/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	10:30 AM 11:10	west END barge	Sunny NE wind 7mph.		yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:15 pm :		"		yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:35 :	out of area		Dolphin	100 yds	6 / 6 / 6 2 calves	toward or away parallel none Behavior Code:	Br. PO-FO
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:50 :				yds	1 / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:20 :			Sea Turtle	yds	1 / 1 / 1 calves	toward or away parallel none Behavior Code:	SP
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:30 :			Dolphin	200 yds	3 / 6 / 6 2 calves	toward or away parallel none Behavior Code:	PO
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:00 :			Dolphin	400 yds	4 / 6 / 6 1 calves	toward or away parallel none Behavior Code:	PO

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013
 NAVFAC SOUTHEAST POC: Jered Jackson. Email at jered.jackson@navv.mil or Phone at 904-542-6308

Project name: WIDGE CHANNEL G-2

Lead observer: Steven Peavey

Page 1 of 1

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 5/29/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	4:30 : :		Partly cloudy NE wind 10mph	Dolphin	500 yds	3/6/5 0 calves	toward or away parallel none Behavior Code:	PO
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	: : 5:00				yds	/ / ___ calves	toward or away parallel none Behavior Code:	
* Finish Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	5:30 : :				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:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

THIS PAGE IS INTENTIONALLY BLANK

Appendix D. Marine Mammal Observer data sheets for 10 June 2015.

Project name: WHARF CHARLIE C-2

Lead observer: OSCAR Garcia

Page 1 of 2

Project location: NAVAL STATION MAYAGUEZ, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 6/10/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	7:40	ENNO BOUCE	overcast 2-3mph wind		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:55				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:30				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:00			Dolphin	yds	1 / 1 / 1 / 1 — calves	toward or away parallel none Behavior Code:	PO
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:50	U			yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:05			Dolphin	yds	6 / 7 / 9 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:20				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson. Email at iered.jackson@navv.mil or Phone at 904-542-6308

Project name: WHALE CHARGE G-2

Lead observer: OSCAR GARCIA

Page 2 of 2

Project location: NAVAL STANLEY MARINA, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 6/10/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	12:30 :				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:10 3:10				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:30 5:25				yds	/ / — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	6:00 :				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:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

VAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: WHARF CHARLIE C-2

Lead observer: Stevan Peavey

Page 1 of 2

Project location: NAVAL STATION MANAPORT, FL

Lead observer contact info: DAVON FIELD OFFICE 813-393-8187

Date: 6/10/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	7:40 :	W END template	overcast	⊗	yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	7:55 :		swind 2-3 mph	⊗	yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:30 :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:50 :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:05 :			Dolphin	yds	7 / 10 / 10 2 calves	toward or away parallel none Behavior Code:	P.O. F.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:05 :			Turtle	22 yds	1 / 1 / 1 / 1 calves	toward or away parallel none Behavior Code:	S.P.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:20 :				yds	1 / 1 calves	toward or away parallel none Behavior Code:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson. Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: WIDGE CHARIE G-2

Lead observer: Steven Peavey

Page 2 of 2

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 6/10/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	11:35 :		E wind smph	Dolphins	300 yds	31616 2 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:30 :				yds	/ / __ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:10 3:10				yds	/ / __ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:30 5:28				yds	/ / __ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	6:00 :				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:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013
NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix E. Marine Mammal Observer data sheets for 6 August 2015.

Project name: WARRIOR CHARGE G-2

Lead observer: Steven Peavey

Page 1 of 3

Project location: NAVAL SEAPORT MAINTENANCE, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 8-6-15

3 observer watching

Effort Info				Sighting info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	9:20 :	Due East of C-II on rocks	Clear wind 5-10 mph from W		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:40 :	of South Bank	water surface ruff		yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:35 :			turtle 500 yds	6 yds From Rock	1 / 1 / 1 / 1 0 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:30 :			turtle From pile driving for pile	100 yds	1 / 1 / 1 / 1 0 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:35 :			turtle	3 yds	1 / 1 / 1 / 1 — calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:55 :			Manatee	3 yds	1 / 1 / 1 / 1 0 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	1:15 :			Turtle	12 yds	1 / 1 / 1 / 1 0 calves	toward or away parallel none Behavior Code:	P.O.

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: WHARF CHARLIE C-2

Lead observer: Steven Perry

Page 2 of 3

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 8-6-15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	1:35 :	Due East C-II on rocks	Clear	Dolphin	250 yds	8/10/5 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:40 :	S. bank	10-15 w wind	Dolphin	200 yds	10/15/12 calves	toward or away parallel none Behavior Code:	P.O. F.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	2:50 :			Turtle	10 yds	1/1/1 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:20 :		15 mph W wind	Turtle	35 yds	2/2/2 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:25 :			Dolphin	175 yds	1/1/1 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:30 :			Dolphin	225 yds	1/1/1 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:40 :			Dolphin	300 yds	3/5/4 calves	toward or away parallel none Behavior Code:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson. Email at jered.jackson@navv.mil or Phone at 904-542-6308

Project name: WHARF CHARLIE C-2

Lead observer: Steven Peavy

Page 3 of 3

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 8-6-15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	4:00 : :			Dolphin	350 yds	14 / 14 / 14 1 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	4:25 : :			Turtles	20 yds	2 / 2 / 2 1 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	4:30 : :				yds	/ / __ calves	toward or away parallel none Behavior Code:	
Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown	5:00 : :				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:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson. Email at iered.jackson@navv.mil or Phone at 904-542-6308

Project name: WAVE LARVAE G-2

Lead observer: Joyce Daronila

Page 1 of 2

Project location: NAVAL SEAVER MARETT, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 8/6/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	9 : 00 :	barge	partly cloudy		yds	/ / _ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9 : 40 :				yds	/ / _ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10 : 50 :	barge	mostly sunny	Dolphin	200 yds	2 / 4 / 3 2 calves	toward or away parallel none Behavior Code:	PO
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10 : 45 :	W end barge	mostly sunny	Dolphin	250 yds	2 / 3 / 6 1 calves	toward or away parallel none Behavior Code:	DI
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12 : 20 :				yds	/ / _ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12 : 35 :				yds	/ / _ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12 : 45 :	W end barge	partly cloudy	Dolphin	250 yds	2 / 2 / 3 0 calves	toward or away parallel none Behavior Code:	PO

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: WHARF CHARLIE C-2

Lead observer: Joyce Droni/a

Page 2 of 2

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 8/0/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	1 : 30 :	N end barge	partly cloudy	Dolphin	60 yds	2 / 2 / 3 0 calves	toward or away parallel none Behavior Code:	FO + D1
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3 : 35 :	N end barge		Dolphin	150 yds	2 / 3 / 5 1 calves	toward or away parallel none Behavior Code:	PI
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5 : 00 :				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:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013
NAVFAC SOUTHEAST POC: Jered Jackson. Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: WARRIOR CHARGE G-2

Lead observer: Rick Lewis

Page 1 of 1

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 8-6-15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	11:39	R Lewis	CLEAR LIGHT WIND FEW CLOUDS	Dolphin	1700 yds	1 1 1 — calves	toward or away parallel none Behavior Code:	Rolling Mod in 250' FROM EAST to 1500 DMBARGE
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:10	R Lewis	" "	" "	1900 yds	1 1 1 — calves	toward or away parallel none Behavior Code:	Feeding 250' Exiting EAST
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:25	R Lewis	" "	" "	300 yds	1 1 1 — calves	toward or away parallel none Behavior Code:	IN FRONT OF BOAT ROCKS Feeding OFF PAINT
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	3:30	R Lewis	" "	" "	250 yds	7 10 7 7 calves	toward or away parallel none Behavior Code:	where cove enters main waterway Feeding EXIT AREA
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	5:00 PM	R Lewis	" "	" "	yds	1 1 — calves	toward or away parallel none Behavior Code:	All dolphins LEFT AREA
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:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Appendix F. Marine Mammal Observer data sheets for 12 August 2015.

Project name: WHARF CHARLIE C-2

Lead observer: Joyce Doronila

Page 1 of 2

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 8/12/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	7:45 : :	barge	mostly cloudy		yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:00 : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:50 : :	F end barge		Dolphin	200 yds	2/3/5 calves	toward or away parallel none Behavior Code:	PO
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	9:10 : :			Turtle	50 yds	1/2/2 calves	toward or away parallel none Behavior Code:	PO
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:25 : :	barge		Dolphin	100 yds	1/1/1 0 calves	toward or away parallel none Behavior Code:	PO
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:35 : :				yds	/ / calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:50 : :				yds	/ / calves	toward or away parallel none Behavior Code:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson. Email at iered.jackson@navv.mil or Phone at 904-542-6308

Project name: WIDE AREA G-2

Lead observer: Joyce Dononila

Page 2 of 2

Project location: Naval Station Mayport, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 8/12/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	1 : 10 : :	W end Wargr		Dolphin	150 yds	2 / 2 / 2 1 calves	toward or away parallel none Behavior Code:	PO
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4 : 30 : :				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:	

*Note location of observer and any marine mammal sightings with date/time on project map

Project name: WHARF CHARLIE C-2

Lead observer: Steven Peavey

Page 1 of 2

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: ORION FIELD OFFICE 913-393-8187

Date: 8-12-15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	10:25 :	Tower			yds	1 / 1 _ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:50 :				yds	1 / 1 _ calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:10 :		Clear 15 mph W	Dolphin	275 yds	4 / 6 / 5 1 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:15 :		W-NW	Dolphin	350 yds	3 / 4 / 4 + calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:17 :			Turtle	10 yds	1 / 1 / 1 _ calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:55 :			Dolphin	175 yds	1 / 1 / 1 0 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	12:00 :			Dolphin	200 +250 yds	4 / 5 / 5 1 calves	toward or away parallel none Behavior Code:	P.O.

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson. Email at iered.jackson@navy.mil or Phone at 904-542-6308

Project name: WIDE AREA G-2

Lead observer: Steven Peasley

Page 2 of 2

Project location: NAVAL SEAVER MARINE, FL

Lead observer contact info: ORION FIELD OFFICE 813-393-8187

Date: 8-12-15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	2:40 :	TOWER	15-20 mph W.	Turtle	8 yds	11111 — calves	toward or away parallel none Behavior Code:	P.O
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:00 :				yds	11 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:20 :			Turtle	3 yds	21212 — calves	toward or away parallel none Behavior Code:	FE
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:30 :			Turtle	5 yds	11111 — calves	toward or away parallel none Behavior Code:	EE
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	11 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	11 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	: :				yds	11 — calves	toward or away parallel none Behavior Code:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013
 NAVFAC SOUTHEAST POC: Jered Jackson, Email at jered.jackson@navy.mil or Phone at 904-542-6308

Project name: WHARF CHARLIE C-2

Lead observer: OSCAR GONZALEZ

Page 1 of 1

Project location: NAVAL STATION MAYPORT, FL

Lead observer contact info: DAVON FIELD OFFICE 813-393-8187

Date: 8/12/15

Effort Info				Sighting Info*				
Event	Time of Event (start and end)	Observer*	Visibility Info (e.g. wind, glare, swell)	Species	Distance to Animal (from Observer)	# 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	7:45	Rocks E Bank			yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	8:00				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	10:38		clear	Dolphin	yds	1 / 1 / 1 0 calves	toward or away parallel none Behavior Code:	P.O.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	11:10			Turtle	3 yds	1 2 1 — calves	toward or away parallel none Behavior Code:	P.O. F.E.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:00		cloudy	Turtle	6 yds	2 / 2 / 2 — calves	toward or away parallel none Behavior Code:	P.O. F.E.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:20			Turtle	3 yds	1 / 1 / 1 — calves	toward or away parallel none Behavior Code:	P.O. F.E.
Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown	4:30				yds	1 / 1 — calves	toward or away parallel none Behavior Code:	

*Note location of observer and any marine mammal sightings with date/time on project map

Sighting Form revised January 10, 2013

NAVFAC SOUTHEAST POC: Jered Jackson. Email at iered.jackson@navv.mil or Phone at 904-542-6308

THIS PAGE IS INTENTIONALLY BLANK