

Wharf Bravo Recapitalization at Naval Station Mayport

Marine Mammal Observer Report Covering the Period of 13 March 2017 to 12 January 2018

The recapitalization of Wharf Bravo at Naval Station Mayport (NS Mayport) entails the installation of 880 single sheet piles, divided between two phases; Phase I consists of 590 steel sheet piles installed by vibratory hammer over 73 days and Phase II consists of 290 sheet piles installed over 37 days. The incidental harassment authorization (IHA; 81 FR 52637) authorized the take of 219 bottlenose dolphins during Phase I and 111 dolphins during Phase II. During the current reporting period, Phase II was completed in 34 days, but delays have caused the commencement of Phase I to be delayed until March 2018. This report is therefore exclusive to Phase II¹.

In-water pile driving for Phase II began on 21 June 2017 and concluded on 14 August 2017. Marine mammal observers were provided by Orion Marine Group. They were given the IHA and marine mammal observer plan for this project. They also received marine mammal observer training from NAVFAC Southeast on 18 May 2017 and 21 June 2017.

Two marine mammal observers (MMOs) were present for all in-water pile driving. One was stationed at the actual pile driving site on Wharf Bravo 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 in a tower near the mouth of the Turning Basin 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.

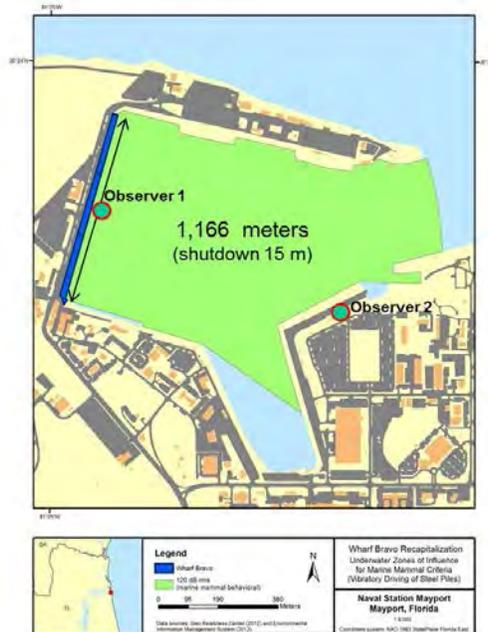


Figure 1. Positions of the observers at the barge and tower.

OBSERVATIONS

¹ It should be noted that the NS Mayport construction team switched the nomenclature of the two phases, referring to Phase II as Phase I since it was accomplished first. For the purpose of this report, though, the nomenclature is consistent with the IHA issued in 81 FR 52637.

The maximum numbers of bottlenose dolphins observed from the Tower during pile driving activities each day are presented in **Table 1**. The Tower observer was able to view a much larger area than the Wharf Wall observer, so that observer's records were used to sum the total number of Level B bottlenose dolphin takes during Phase II of the Wharf Bravo recapitalization.

A summary of the observer dataset is presented in **Appendix A** and scans of the individual data sheets are provided in **Appendices B through II** (double letter "I", not a Roman numeral two).

A total of 60 bottlenose dolphins were incidentally harassed by vibratory pile driving. No impact pile driving was performed during this reporting period.

Phase II pile driving took place over 34 days and at least one bottlenose dolphin was harassed on 15 (44%) of those days. Although zero takes occurred on the other 19 days, it is noted that bottlenose dolphins were observed in the area on 11 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 115 bottlenose dolphins, so it appears the number of takes requested for Phase II (n=111) was appropriate.

Vibratory pile driving shut down on four days (July 5, July 6, July 13, and July 26). The July 13 shutdown was due to a bottlenose dolphin approaching the shutdown zone. The other three shutdown events were due to manatees approaching their designated shutdown zone.

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

| Date | Max # | Date | Max # | Date | Max # |
|-----------|-------|-----------|-------|--------------|-----------|
| 6/21/2017 | 3 | 7/12/2017 | 0* | 7/28/2017 | 0* |
| 6/22/2017 | 5 | 7/13/2017 | 1 | 8/1/2017 | 0* |
| 6/23/2017 | 0 | 7/14/2017 | 0* | 8/2/2017 | 0* |
| 6/26/2017 | 0 | 7/17/2017 | 8 | 8/3/2017 | 0* |
| 6/28/2017 | 4 | 7/18/2017 | 0* | 8/4/2017 | 0* |
| 6/29/2017 | 3 | 7/19/2017 | 3 | 8/5/2017 | 0 |
| 6/30/2017 | 0* | 7/20/2017 | 3 | 8/7/2017 | 0 |
| 7/5/2017 | 0 | 7/21/2017 | 1 | 8/8/2017 | 0 |
| 7/6/2017 | 10 | 7/24/2017 | 0 | 8/10/2017 | 0* |
| 7/7/2017 | 3 | 7/25/2017 | 0* | 8/14/2017 | 0 |
| 7/10/2017 | 3 | 7/26/2017 | 1 | | |
| 7/11/2017 | 7 | 7/27/2017 | 5 | TOTAL | 60 |

* = Dolphins were observed on these days, but they were not in the zone of influence during pile driving activities.

Prepared by:
Jered Jackson (jered.jackson@navy.mil)

Appendix A. Marine mammal observer data collected between 21 June and 14 August 2017.

| Date | Obs | Observer Location | Bottlenose Dolphin | | | Shutdown | Nearest Distance (yards) | Other Species Observed |
|-----------|-----|-------------------|--------------------|-------------|-----------|----------|--------------------------|------------------------|
| | | | Max # | # of Calves | Behaviors | | | |
| 6/21/2017 | CP | Tower | 3 | 0 | SW | | 800 | |
| 6/21/2017 | SW | Dock | . | . | . | | . | |
| 6/22/2017 | SW | Tower | 5 | 0 | N/R | | 1275 | |
| 6/22/2017 | BR | Dock | 0 | 0 | . | | 30 | 1 Sea Turtle |
| 6/23/2017 | SW | Dock | . | . | . | | . | |
| 6/23/2017 | BR | Tower | . | . | . | | 60 | 5 Manatees |
| 6/26/2017 | BR | Tower | . | . | . | | 45 | 1 Manatee |
| 6/26/2017 | SW | Dock | . | . | . | | . | |
| 6/28/2017 | BR | Tower | 4 | 0 | DI | | 85 | 1 Manatee |
| 6/28/2017 | DR | Dock | 4 | 0 | SW/PO | | 100 | 1 Manatee |
| 6/29/2017 | DR | Dock | 3 | 0 | PO/SW | | 100 | |
| 6/29/2017 | BR | Tower | 3 | 0 | CD | | 100 | |
| 6/30/2017 | BR | Dock | . | . | . | | . | |
| 6/30/2017 | SW | Tower | . | . | . | | . | |
| 7/5/2017 | ED | Tower | . | . | . | Yes | 0 | 7 Manatees |
| 7/5/2017 | DR | Dock | . | . | . | Yes | 0 | 6 Manatees |
| 7/6/2017 | DR | Dock | . | . | . | Yes | 10 | 1 Manatee |
| 7/6/2017 | ED | Tower | 10 | 1 | SW/FO/PL | Yes | 1000 | 1 Manatee |
| 7/7/2017 | BR | Dock | . | . | . | | 48 | 1 Sea Turtle |
| 7/7/2017 | ED | Tower | 3 | 0 | SW/PL | | 900 | 1 Manatee |
| 7/10/2017 | DR | Dock | . | . | . | | 50 | 1 Sea Turtle |
| 7/10/2017 | ED | Tower | 3 | 0 | SW/PO | | 700 | 1 Manatee |
| 7/11/2017 | DR | Dock | 3 | 0 | SW/PO | | 800 | |
| 7/11/2017 | ED | Tower | 7 | 0 | N/R | | 800 | 1 Manatee |
| 7/12/2017 | BR | Dock | . | . | . | | 50 | 2 Sea Turtles |
| 7/12/2017 | ED | Tower | . | . | . | | 1000 | 2 Manatees |
| 7/13/2017 | ED | Tower | 1 | 0 | SW/PO | Yes | 15 | |
| 7/13/2017 | BR | Dock | 1 | 0 | SW | Yes | 15 | |
| 7/14/2017 | BR | Dock | . | . | . | | . | |
| 7/14/2017 | ED | Tower | . | . | . | | . | |
| 7/17/2017 | ED | Dock | 5 | 0 | FO/SW | | 700 | 1 Sea Turtle |
| 7/17/2017 | DR | Tower | 8 | 1 | PO/FO | | 900 | 1 Manatee |
| 7/18/2017 | DR | Tower | . | . | . | | . | |
| 7/18/2017 | ED | Dock | . | . | . | | . | |
| 7/19/2017 | DR | Tower | 3 | . | PO | | 800 | 1 Manatee |
| 7/19/2017 | ED | Dock | 2 | . | N/R | | 25 | |
| 7/20/2017 | ED | Dock | . | . | . | | . | |

| Date | Obs | Observer Location | Bottlenose Dolphin | | | Shutdown | Nearest Distance (yards) | Other Species Observed |
|-----------|-----|-------------------|--------------------|-------------|-----------|----------|--------------------------|------------------------|
| | | | Max # | # of Calves | Behaviors | | | |
| 7/20/2017 | BR | Tower | 3 | . | . | | 106 | |
| 7/21/2017 | BR | Dock | . | . | . | | . | |
| 7/21/2017 | ED | Tower | 1 | . | . | | 900 | 1 Manatee |
| 7/24/2017 | BR | Tower | . | . | . | | . | |
| 7/24/2017 | ED | Dock | . | . | . | | . | |
| 7/25/2017 | BR | Dock | . | . | . | | . | |
| 7/25/2017 | ED | Tower | . | . | . | | . | |
| 7/26/2017 | ED | Dock | . | . | . | Yes | 17 | 1 Manatee |
| 7/26/2017 | BR | Tower | 1 | 0 | SP | | 550 | |
| 7/27/2017 | BR | Dock | . | . | . | | . | |
| 7/27/2017 | ED | Tower | 5 | 1 | SW/PL/PO | | 700 | |
| 7/28/2017 | ED | Dock | . | . | . | | . | |
| 7/28/2017 | JC | Tower | . | . | . | | . | |
| 8/1/2017 | JC | Tower | . | . | . | | . | |
| 8/1/2017 | ED | Dock | . | . | . | | . | |
| 8/2/2017 | BR | Dock | . | . | . | | . | |
| 8/2/2017 | ED | Tower | . | . | . | | . | |
| 8/3/2017 | ED | Dock | . | . | . | | . | |
| 8/3/2017 | BR | Tower | . | . | . | | . | |
| 8/4/2017 | ED | Tower | . | . | . | | . | |
| 8/4/2017 | BR | Dock | . | . | . | | . | |
| 8/5/2017 | BR | Tower | . | . | . | | . | 1 Manatee |
| 8/5/2017 | ED | Dock | . | . | . | | . | |
| 8/7/2017 | ED | Dock | . | . | . | | . | |
| 8/7/2017 | BR | Tower | . | . | . | | . | |
| 8/8/2017 | BR | Dock | . | . | . | | . | |
| 8/8/2017 | ED | Tower | . | . | . | | . | |
| 8/10/2017 | ED | Dock | . | . | . | | . | |
| 8/10/2017 | BR | Tower | . | . | . | | . | |
| 8/14/2017 | ED | Dock | . | . | . | | . | |
| 8/14/2017 | JC | Tower | . | . | . | | . | |

Observer Codes: BR= Bernardo Real, CP=Chris Phillips, DR=Deland Rodriguez, ED= Eric Denova, JC=Jacob Crews, SW=Steven Watts.

Behavior Codes: CD=Change Direction, DI=Diving, FO=Foraging, N/R=Not Recorded, PL=Play, PO=Porpoising, SP=Spyhopping, SW=Swimming.

Appendix B. Marine Mammal Observer data sheets for 21 June 2015.

Project name: WHARF BRAVO

Lead observer: Chris Phillips

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Project location: MAYPORT / BRAVO TOWER

Lead observer contact info: COMPANY RADIO

Date: 6-21-17

| 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 | 4 : 45 : : | Chris | glare | Dolphins | 800 yds | 3 / / — calves | toward or away parallel none Behavior Code: <u>SW</u> | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 : 10 : : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 : 40 : : | | | | 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: | |

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

Project name: Wharf Bravo
 Project location: mainport / Wharf Bravo / Dock

Lead observer: Steven Watts
 Lead observer contact info: 904 760-1167 / company Radio

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 Date: 6/20/17
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| 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 | 4 : 45 : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 : 10 : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 : 40 : | | | | 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: | |

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Appendix C. Marine Mammal Observer data sheets for 22 June 2017.

Project name: Wharf Bravo Lead observer: Steven Watts Page _____ of _____
 Project location: Mayport/Bravo-1 tower Lead observer contact info: 904-760-1671 Date: 6-22-17

| 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 | 8:35 : : | Steven | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8:53 3:30 5:15 | Steven | clear | Dolphin | 1275 yds | 5 / / — calves | toward or away parallel none Behavior Code: | 3-5 more Dolphins At 1:30pm 900 yds out |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:45 : : | | | | 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: | |

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Project name: Wharf Bravo

Lead observer: Bernardo Real

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Project location: on the Dock

Lead observer contact info: _____

Date: 0-22-17

4/22/17

| 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 | 2:00 | Bernardo Real | Wind | sea Turtle | 30 yds | / / 1 Turtle calves | toward or away parallel none Behavior Code: CD | changed directions |
| Soft Start - Vibratory - Impact | 3:30 | | | | | | | |
| Sighting - Delay - Shutdown | 5:15 | | | | | | | |
| Start Monitoring - End Monitoring | 5:45 | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Soft Start - Vibratory - Impact | : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Sighting - Delay - Shutdown | : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring | : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Soft Start - Vibratory - Impact | : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Sighting - Delay - Shutdown | : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring | : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Soft Start - Vibratory - Impact | : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Sighting - Delay - Shutdown | : | | | | yds | / / — calves | toward or away parallel none Behavior Code: | |

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Appendix D. Marine Mammal Observer data sheets for 23 June 2017.

Project name: Wharf Bravo 1 Lead observer: Steven Watts Page _____ of _____
 Project location: Wharf Mayport/Wharf Bravo Dock Lead observer contact info: 904769-1671 Date: 6-23-17

| 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 | 8:33 8:48 | Steven | glare | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:40 | Steven | clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:00 3:15 | Steven | clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:05 | Steven | clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:35 | | | | 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: | |

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Project name: WHARF BRAVO

Lead observer: Bernardo Real

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Project location: WHARF BRAVO I / TOWER

Lead observer contact info: 386-717-1574

Date: 6-23-17

| 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 | 8:30 8:48 | Bernardo Real | Clear | | yds | / / — calves | toward or away parallel none Behavior Code: | NO SIGHTING |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:25 | Bernardo Real | Clear | manatee | 60 yards from tower around 400 ft from dock | / / 1 manatee | toward or away parallel none Behavior Code: SP | looking above water stayed in the same spot for about 5 minutes |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:20 | Bernardo Real | Clear | | yds | / / — calves | toward or away parallel none Behavior Code: | NO SIGHTING |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:00 1:30 | Bernardo Real | Wind | manatee | 50 yds from tower | / / 3 manatee calves | toward or away parallel none Behavior Code: SP | 3 manatees by boat ramp just looking above water |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:00 4:05 | Bernardo Real | mostly cloudy wind | manatee | 90 yards to rock wall | / / 1 manatee calves | toward or away parallel none Behavior Code: CD | changing direction towards rock wall/slip |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:35 | | | | 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: | |

Appendix E. Marine Mammal Observer data sheets for 26 June 2017.

Project name: Wharf Bravo Lead observer: Stefen Watts Page _____ of _____
 Project location: Mayport Wharf Bravo 2 tower Lead observer contact info: B ~~Stefen~~ 904-760-1671 Date: 6-26-17

| 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 | 9:45 10:40 11:12 | Bernardo Real | Clear | manatee | 46 yds | / / 1 manatee calves | toward or away parallel none Behavior Code: SP | manatee appeared the end of the boat ramp (not vibratory) (no take) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:17 : : | Bernardo Real | Clear | | yds | / / ___ calves | toward or away parallel none Behavior Code: | NO SIGHTING |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:57 : : | Bernardo Real | Clear | | yds | / / ___ calves | toward or away parallel none Behavior Code: | NO SIGHTING |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:20 : : | Bernardo Real | cloudy/rain thunder | | yds | / / ___ calves | toward or away parallel none Behavior Code: | NO SIGHTING |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:50 : : | Bernardo Real | | | 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: | |

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Project name: Wharf Bravo

Lead observer: Steven Watts

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Project location: Margart / Wharf Bravo Dock

Lead observer contact info: 904-760-1671

Date: 6-26-17

| 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 | 9:45 | Steven | glare | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:10 | Steven | glare | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:17 | Steven | clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:57 | Steven | clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:20 | Steven | cloudy | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:50 | | | | 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: | |

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 28 June 2017.

Project name: Wharf Drive

Lead observer: Declan Rodriguez

Page 1 of 2

Project location: mainport wharf drive 2/ tower

Lead observer contact info: 954-290-1010

Date: 6-28-17

| 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 | 7 : 55 | Bernardo Rea | cloudy | | yds | / / calves | toward or away parallel none Behavior Code: | no sightings |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8 : 28 | Bernardo Rea | cloudy | | yds | / / calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10 : 44 | Bernardo Rea | wind | manatee | 40 yds | / / 1 manatee calves | toward or away parallel none Behavior Code: SP | manatee at boat ramp just looking above water (no take) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11 : 34 | Bernardo Rea | wind | | yds | / / calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1 : 16 | Bernardo Rea | wind | Dolphins | 85 yds | / / 4 dolphins calves | toward or away parallel none Behavior Code: Di | when i saw them they were headed towards break swimming in same spot |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 : 30 | Bernardo Rea | cloudy | | yds | / / calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3 : 00 | Bernardo Rea | | | yds | / / calves | toward or away parallel none Behavior Code: | |

dolphins left the site

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Project name: Whisper Bay

Lead observer: JD

Page _____ of _____

Project location: 10' depth / 2' - 3' ...

Lead observer contact info: 301 706 2000

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 | 7:00 : | Dock Declan | cloudy wind | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8:00 : | Dock Declan | cloudy wind | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:00 : | Dock Declan Declan | cloudy | Manatee (notake) | 250 yds | 1 / 1 / 1 - calves | toward or away parallel none Behavior Code: | SW no take |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:35 : | Dock Declan | cloudy | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:00 : | Dock Declan | wind | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:18 : | Dock Declan | wind | dolphin no take | 700+ yds (by tower) | 1 / 1 - calves | toward or away parallel none Behavior Code: | SW no take |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:30 : | Dock Declan Declan | wind | dolphin same pod | 100 yds | 2 / 3 / 1 - calves | toward or away parallel none Behavior Code: | SW PO |

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Project name: other side

Lead observer: _____

Page _____ of _____

Project location: _____

Lead observer contact info: _____

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 | 2 : 29 : : | Dock Dolphin 200-100 | wind | | yds | / / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 : 55 : : | Dock Dolphin 200-100 | wind | | 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: | |

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Appendix G. Marine Mammal Observer data sheets for 29 June 2017.

Project name: Wharf Bravo Lead observer: [Signature] Page: _____ of _____
 Project location: Mayport / Wharf Bravo Lead observer contact info: 934 296 0164 Date: 6/29/17

Dock

| 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 | 6:15 : | Devin [Signature] | glare | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:40 : | Coch [Signature] | glare | dolphin | 700 ⁺ yds | 21313 - calves | toward or away parallel none Behavior Code: | po sw |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : 5:15 | Devin [Signature] | wind | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:50 : | Devin [Signature] | swell | | 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: | |

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Project name: wharf bravo

Lead observer: Declaro Rodriguez

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Project location: mainport wharf bravo 2 / tower

Lead observer contact info: _____

Date: 6-29-17

| 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 | 8:15 : | Bernardo Real | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:35 : | Bernardo Real | cloudy | Dolphins | 100 yds | / / 3 dolphins Calves | toward or away parallel none Behavior Code: CD | bow them heading towards between the rock and tower (middle) 4-5 minutes later bow them dropping towards the boat |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 14:30 : | Bernardo Real | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:00 : | Bernardo Real | | | yds | / / — calves | toward or away parallel none Behavior Code: | 30 minutes after shutdown |
| 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: | |

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Appendix H. Marine Mammal Observer data sheets for 30 June 2017.

Project name: Wharf Dravo

Lead observer: Bernardo Real

Page _____ of _____

Project location: Navport Wharf Dravo I/tower

Lead observer contact info: 386-748-1874

Date: 6-30-17

| 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 | 8:05 | Bernardo Real | Clear | | yds | / / — calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 9:30 | Bernardo Real | Clear | Dolphin | 600 yds | / / 1 dolphin — calves | toward or away parallel none Behavior Code: CD | changed directions towards main gate (no take) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:30 | Bernardo Real | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:46 | Bernardo Real | clear | Dolphin | 600 yds | / / 1 dolphin — calves | toward or away parallel none Behavior Code: CD | heading towards the ship (no take) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:00 | Bernardo Real | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:30 1:45 | Steven Watts | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:03 | Steven Watts | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |

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Project name: Wharf Bravo
 Project location: MANAFT Wharf Bravo 2/TOWER

Lead observer: Bernardo Real
 Lead observer contact info: 362-248-1874

Page _____ of _____
 Date: 6-30-17

| 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 | 2:02 | Bernardo Real | Clear | | yds | / / — calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:26 | Bernardo Real | Clear | SEA TURTLE | 600 K10 yds | / / 1 SEA TURTLE | toward or away parallel none Behavior Code: SP | swimming by divers LAD take) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 6:00 | Bernardo Real | Clear | | yds | / / — calves | toward or away parallel none Behavior Code: | 30 minutes after end monitoring |
| 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: | |

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Project name: Wharf Bravo

Lead observer: Bernardo Real

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Project location: Mayport/Tower

Lead observer contact info: 386 748 1574

Date: 6/30/17

| 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 | 8 :05 : : | Eric Denora Tower | clear | | yds | 1 1 — calves | toward or away parallel none Behavior Code: | watched for 15 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 9 :30 : : | Eric Denora Tower | clear | Dolphin | 1000 yds | 1 1 1 1 — calves | toward or away parallel none Behavior Code: SW | Swimming away from basin (NO Vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10 :44 : : | Tower | clear | Dolphin | 600 yds | 1 1 1 1 — calves | toward or away parallel none Behavior Code: SW | Swimming in the mid of Basin (NO Takes) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10 :50 : : | Tower | clear | Dolphins | 1000 yds | 3 1 4 1 4 1 calves | toward or away parallel none Behavior Code: SW | Just stay around the Basin exit. (last 30 min watch) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11 :00 ^{Am} : : | Tower | clear | | yds | 1 1 — calves | toward or away parallel none Behavior Code: | watched for 30 min |
| 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: | |

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Project name: Wharf Bravo

Lead observer: Steven

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Project location: Mayport/Tower

Lead observer contact info: Rodriguez

Date: 6/30/17

| 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 | 2:02 : | Tower | clear | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:17 : | Tower | clear | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | start of vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:25 : | Tower | clear | Dolphin | 900 yds | 1 1 1 - calves | toward or away parallel none Behavior Code: sw | Swimming not sure if it left (NO TAKE) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:45 : | Tower | clear | Dolphin | 1100 yds | 1 1 1 - calves | toward or away parallel none Behavior Code: | same one from 3:25 (no take) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:00 : | Tower | clear | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | 30 min watch |
| 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: | |

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Appendix I. Marine Mammal Observer data sheets for 5 July 2017.

Project name: Wharf Bravo
 Project location: Mayport / Tower

Lead observer: Declan
 Lead observer contact info: Radio

Page 1 of _____
 Date: 7/5/17

| 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 | 7:55 | Eric Denora Tower | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:08 | Tower | clear | Manatee | 900 yds | 1 / 1 / 1 — calves | toward or away parallel <u>none</u> Behavior Code: UN/SW | Staying within the Control Dock near Tower. (No vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:20 | Tower | clear | Manatee | 1000 yds | 1 / 1 / 1 — calves | toward or away parallel <u>none</u> Behavior Code: UN | might be the same one from 10:08 (No vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:10 | Tower | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | 30 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:50 | Tower | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:00 | Tower | clear | Manatee | 200 yds | 1 / 1 / 1 — calves | toward or away parallel none Behavior Code: SW | swimming away (No vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:25 | Tower | clear | Manatee's | 0 yds | 4 / 4 / 4 — calves | toward or away parallel none Behavior Code: SW | Right on the sheet metal |

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Project name: Wharf Bravo
 Project location: Mayport/Tower

Lead observer: Declan
 Lead observer contact info: Radio

Page 2 of 2
 Date: 7/5/17

| 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 | 3 :30 : : | <u>Eric Denora</u> Tower | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | started Back up Manatees left |
| Start Monitoring - End Monitoring Soft Start - <u>Vibratory</u> - Impact <u>Sighting</u> - Delay - Shutdown | 3 :50 : : | Tower | clear | Manatees | 1000yds | 3 / 3 / 3 — calves | toward or away parallel none Behavior Code: 6W | leaving The Basin |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - <u>Shutdown</u> | 4 :50 : : | Tower | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - <u>End Monitoring</u> Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 :20 : : | Tower | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | 30 min watch |
| 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: WMAFF BRAVO

Lead observer: ~~XXXXXXXXXX~~ Declan Rodriguez

Page 1 of

Project location: MONPORT WMAFF BRAVO I/ DOCK

Lead observer contact info: 954 296 0164

Date: 7-5-7

| 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 | 7:45 : | Dock Declan Rodriguez | | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 9:41 : | Declan Rodriguez Dock | glare | manatee no take | 100 yds | 1 / 1 / 1 — calves | toward or away <u>parallel</u> none Behavior Code: <u>SW</u> | <u>SW</u> <u>no vibratory</u> |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:52 : | Declan Rodriguez Dock | glare wind | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:02 : | Declan Rodriguez Dock | glare wind | Manatee | 150 yds | 1 / 11 — calves | toward or away parallel none Behavior Code: <u>SW</u> | <u>NO vibratory</u> |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:27 : | Declan Rodriguez Dock | glare wind | manatee | 0-10 yds | 1 / 14 <u>0</u> calves | toward or away parallel none Behavior Code: <u>SW</u> | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : 4:50 | Declan Rodriguez Dock | | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:50 5:20 | Declan Rodriguez Dock | | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |

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Appendix J. Marine Mammal Observer data sheets for 6 July 2017.

Project name: Bravo Wharf
 Project location: Bravo Wharf 1 Dock

Lead observer: Declan Rodriguez
 Lead observer contact info: 954 266 0164

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 Date: 6/6/17

| 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 | 7:45 : | Declan Rodriguez Dock | glare | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8:00 : | Declan Rodriguez Dock | glare | Manatee | 10-20 yds | / // 1 calves | toward or away parallel none Behavior Code: SW | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8:50 : | Declan Rodriguez Dock | glare | Manatee | 15 yds | / // — calves | toward or away parallel none Behavior Code: SW | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:45 5:10 | Declan Rodriguez Dock | wind | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:00 : | Dock | | | 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: | |

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Project name: Wharf Bravo

Lead observer: Declin

Page 1 of

Project location: Mayport/Tower

Lead observer contact info: Radio

Date: 7/6/17

| 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 | 7 :50 : | Eric Denora Tower | clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | 15min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8 :02 : | Tower | clear | Manatee | 10 yds | 1 / 1 / 1 1 calves | toward or away parallel none Behavior Code: | Shut Down for manatee |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8 :50 : | Tower | clear | Dolphins | 800 yds | 2 / 4 / 4 0 calves | toward or away parallel none Behavior Code: SW/FO | A pod of Dolphins look to be feeding (NO vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 9 :02 : | Tower | clear | Dolphins | 1000 yds | 3 / 3 / 3 1 calves | toward or away parallel none Behavior Code: SW/FO | Are feeding on school of fish near Basin entrance. (No vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 9 :42 : | Tower | clear | Dolphins | 800 yds | 2 / 2 / 2 — calves | toward or away parallel none Behavior Code: SW/FO | Swimming out of Basin. might be same one's from 9:02 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 9 :55 : | Tower | clear | Manatee | 1000 yds | 1 / 1 / 1 — calves | toward or away parallel none Behavior Code: SW | Just staying within the docks near tower |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10 :16 : | Tower | clear | Dolphins | 1000 yds | 5 / 7 / 7 1 calves | toward or away parallel none Behavior Code: PL/SW | Might be a combo from 8:50 and 9:02, but not sure |

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Project name: Wharf Bravo

Lead observer: Declin

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Project location: Maxport/Tower

Lead observer contact info: Radio

Date: 7/6/17

| 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 :15 : | <u>Eric Denora</u> Tower | <u>clear</u> | | yds | <u>1 / 1</u> — calves | toward or away parallel none Behavior Code: | <u>Vibratory started back up.</u> |
| Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown | 12 :00 : | Tower | <u>clear</u> | | yds | <u>1 / 1</u> — calves | toward or away parallel none Behavior Code: | <u>30 min watch</u> |
| Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown | 12 :35 : | Tower | <u>clear</u> | | yds | <u>1 / 1</u> — calves | toward or away parallel none Behavior Code: | <u>15 min watch</u> |
| Start Monitoring – End Monitoring Soft Start – Vibratory – impact Sighting – Delay – Shutdown | 4 :40 : | Tower | <u>clear</u> | <u>Dolphin</u> | <u>1000</u> yds | <u>1 1 1 1</u> — calves | toward or away parallel none Behavior Code: | <u>last 30 min watch (No Takes)</u> |
| Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown | 4 :55 : | Tower | <u>clear</u> | <u>Dolphins</u> | <u>700</u> yds | <u>2 1 2 1 2</u> — calves | toward or away parallel none Behavior Code: | <u>last 30 min watch One of the Dolphin is the same from 4:40 (No Takes)</u> |
| Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown | 5 :10 : | Tower | <u>clear</u> | | yds | <u>1 / 1</u> — calves | toward or away parallel none Behavior Code: | <u>last 30 min</u> |
| Start Monitoring – End Monitoring Soft Start – Vibratory – Impact Sighting – Delay – Shutdown | : : | | | | yds | <u>1 / 1</u> — calves | toward or away parallel none Behavior Code: | |

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Appendix K. Marine Mammal Observer data sheets for 7 July 2017.

Project name: WINDF BRAVO Lead observer: Bernardo Real Page _____ of _____
 Project location: MOBILE WINDF BRAVO 2 DOCK Lead observer contact info: 386-747-1574 Date: 7-7-17

| 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 | 9 : 05 | Bernardo Real | Clear | | yds | / / — calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10 : 30 | Bernardo Real | Clear | SEA TURTLE | 48 yds | / / 1 TURTLE | toward or away parallel none Behavior Code: SP | stick its head out of water |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12 : 00 | Bernardo Real | Clear | | yds | / / — calves | toward or away parallel none Behavior Code: | lunch break |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12 : 36 | Bernardo Real | Clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 14 : 50 | Bernardo Real | Clear windy | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 : 18 | Bernardo Real | Clear windy | | 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: | |

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Project name: Wharf Bravo
 Project location: Mayport/Tower

Lead observer: Bernardo Real
 Lead observer contact info: Radio

Page 1 of
 Date: 7/7/17

| Effort Info | | | | Sighting Info | | | | |
|---|-------------------------------|--------------------------|---|---------------------------------|--|--|---|--|
| Event | Time of Event (start and end) | Eric Denova 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 | 9:05 : | Tower | clear | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:30 : | Tower | clear | Manatee | 900 yds | 1 1 1 1 - calves | toward or away parallel none Behavior Code: | Seen in the Docks near The tower on 10/20/2017 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:30 : | Tower | clear | Dolphin | 1000 yds | 1 1 1 1 - calves | toward or away parallel none Behavior Code: SW | No Vibratory (No Takes) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:00 : | Tower | clear | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | last 30 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:40 : | Tower | clear | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:25 : | Tower | clear | Dolphins | 900 yds | 3 13 13 - calves | toward or away parallel none Behavior Code: PL/SV | A pod going to vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:10 : | Tower | clear | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | last 30 min |

Appendix L. Marine Mammal Observer data sheets for 10 July 2017.

Project name: Wharf Bravo
 Project location: Wharf Bravo 1
Dock

Lead observer: Declan Rodriguez
 Lead observer contact info: 954 296 0164

Page 1 of
 Date: 7/10/17

| 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 | 8 :30 : | Declan Rodriguez Dock | glare | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10 :05 : | Dock Declan Rodriguez | glare | turtle | 50 yds | / // — calves | toward or away parallel none Behavior Code: sw | no take no vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - ! | 3 :00 : | Dock Declan Rodriguez | wind clouds | rain | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - | 4 :00 : | Dock Declan Rodriguez | wind clouds | rain | 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: | |

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Project name: Wharf Bravo

Lead observer: Declin

Page 1 of

Project location: Mayport/Tower

Lead observer contact info: Radio

Date: 7/10/17

| 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 | 7:55 : | Eric Denova Tower | clear | | yds | 1 1 — calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 9:45 : | Radio Tower | clear | Manatee | 400 yds | 1 1 1 — calves | toward or away parallel none Behavior Code: | Near Dock by Tower |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:05 : | Tower | clear | | yds | 1 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:40 : | Tower | slight wind & rain | | yds | 1 1 — calves | toward or away parallel none Behavior Code: | lunch vary light rain drops |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:05 : | Tower | cloudy & windy | Dolphins | 700 yds | 1 2 2 — calves | toward or away parallel none Behavior Code: sw/PP | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:20 : | Tower | cloudy & windy | Dolphin | 1000 yds | 1 1 1 1 — calves | toward or away parallel none Behavior Code: sw/sw | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:00 : | Tower | cloudy & windy | Dolphins | 800 yds | 1 2 2 — calves | toward or away parallel none Behavior Code: | Most likely same ones from 1:20, leaving Basin |

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Project name: Wharf Bravo

Lead observer: Declin

Page 2 of _____

Project location: Mayport/Tower

Lead observer contact info: Radio

Date: 7/10/17

| 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 | 2:58 : | Eric Denova Tower | cloudy wind | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | shutdown for lightning |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay | 3:25 : | Tower | cloudy wind | Dolphins | 900 yds | 1 / 1 / 1 / 1 — calves | toward or away parallel none Behavior Code: SW | still shutdown |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:05 : | Tower | cloudy wind | Dolphin | 1000 yds | 1 / 1 / 1 / 1 — calves | toward or away parallel none Behavior Code: SW | still shutdown |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:10 : | Tower | | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | Day ended due to weather |
| 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: | |

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Appendix M. Marine Mammal Observer data sheets for 11 July 2017.

Project name: Wharf Bravo Lead observer: Declan Rodriguez Page 1 of
 Project location: Wharf Bravo 1 Lead observer contact info: 954 296 0164 Date: 7/11/17
Dock

| 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 | 7 : 35 : | Dock Declan Rodriguez | glare | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 : 50 : | Dock Declan Rodriguez | wind | dolphin | 600 yds | 1/3/2 — calves | toward or away parallel none Behavior Code: SW PO | not doing sit back |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4 : 45 5 : 00 | Dock Declan Rodriguez | Clouds | | 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: | |

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Project name: Wharf Bravo

Lead observer: Declin

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Project location: Mayport/Tower

Lead observer contact info: Radio

Date: 7/11/17

| 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 | 1 :00 : | Eric Donovan Tower | clear | Dolphin Dolphin | 700 yds | 1 1 1 - calves | toward or away parallel none Behavior Code: | No Vibratory (No Takes) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1 :05 : | Tower | clear | Dolphin | 1000 yds | 1 1 1 1 - calves | toward or away parallel none Behavior Code: | This one is not the one from 1:00. (No Takes) No Vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 :25 : | Tower | clear | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | start of vibratory No Sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 :36 : | Tower | clear | Dolphins | 800 yds | 3 1 4 1 4 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4 :44 4 :55 | Tower | clear | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | last 30 min |
| 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: | |

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Project name: Wharf Bravo

Lead observer: Declin

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Project location: Mayport Tower

Lead observer contact info: Radio

Date: 7/11/17

| Effort Info | | | | Sighting Info | | | | |
|---|-------------------------------|--------------------------|---|---------------|--|--|--|---|
| Event | Time of Event (start and end) | Eric Demova 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 | 7:35 : | Tower | | | yes | 1 1 - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8:01 : | Tower | clear | Manatee | 900 yds | 1 1 1 1 - calves | toward or away parallel none Behavior Code: | Tower Docks |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 9:40 : | Tower | clear | Dolphin | 900 yds | 1 1 1 1 - calves | Toward or away parallel none Behavior Code: SW | Seems to be staying in the same area. |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:35 : | Tower | clear | Dolphin | 800 yds | 1 1 1 1 - calves | toward or away parallel none Behavior Code: | Might be the same one from 9:40 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:35 : | Tower | clear | Dolphin | 1000 yds | 1 1 1 1 - calves | Toward or away parallel none Behavior Code: | Just came into the Basin. |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:05 : | Tower | clear | | yes | 1 1 - calves | toward or away parallel none Behavior Code: | Break |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:35 : | Tower | clear | | yes | 1 1 - calves | toward or away parallel none Behavior Code: | 15 min watch " |

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Appendix N. Marine Mammal Observer data sheets for 12 July 2017.

Project name: Wharf bravo

Lead observer: Bernardo Reau

Page 1 of 1

Project location: MONROE WHARF PILE V DOCK

Lead observer contact info: 386-747-1574

Date: 7-12-17

| 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 | 8 : 15 | Bernardo Reau | Glare | | yds | / / ___ calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1 : 30 | Dock Eric Denova | clear | Sea Turtle | 50 yds | 1 / / / / ___ calves | toward or away parallel none Behavior Code: | leaving work area |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3 : 15 | Dock Eric Denova | clear | Sea Turtle | 50 yds | 1 / / / / ___ calves | toward or away parallel none Behavior Code: | In the middle of steel sheets |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 : 20 | Dock Eric Denova | clear | | yds | / / ___ calves | toward or away parallel none Behavior Code: | 30 min watch |
| 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: | |

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Project name: Wharf Bravo

Lead observer: Bernardo Real

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Project location: Mayport/Tower

Lead observer contact info: Radio

Date: 7/12/17

| 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 | 7:50 : | Eric Denova Tower | clear | | vd: | 1 / 1 - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8:30 : | Tower | clear | Manatee | 1000 vds | 1 / 1 / 1 - calves | toward or away parallel none Behavior Code: SW | By the Boat ramp near the Tower dock |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:22 : | Tower | clear | Manatee | 1000 vds | 1 / 1 / 1 - calves | toward or away parallel none Behavior Code: | Might be the same one from 8:30 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:05 : | Tower | clear | dolphin | 1000 vds | 1 / 13 - calves | toward or away parallel none Behavior Code: SW PO | NOT during vibratory (NDV) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:38 : | Tower | clear | dolphin | 1000 vds | 4 / 6 / 5 - calves | toward or away parallel none Behavior Code: PO SW | NDV |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:01 : | Tower | clear | dolphin | 1000 vds | 2 / 3 / 3 calves | toward or away parallel none Behavior Code: POSW | Might be the ^{NDV} same as 2:30 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:50 : | Tower | clear | | vd: | 1 / 1 - calves | toward or away parallel none Behavior Code: | 30 min watch " |

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Appendix O. Marine Mammal Observer data sheets for 13 July 2017.

Project name: Wharf Bravo
 Project location: Maryport/Tower

Lead observer: Eric Denora
 Lead observer contact info: Radio

Page 1 of _____
 Date: 7/13/17

| 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 | 7 :35 : | Eric Denora Tower | clear | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 7 :40 : | Eric Denora Tower | clear | Dolphin | 900 yds | 4 / 6 / 15 0 calves | toward or away parallel none Behavior Code: Fo | Feeding by dock (No Takes) ^{not during vibratory} |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 :30 : | Declan Rodriguez Tower | clear | Dolphin | 800 yds | 1 / 11 0 calves | toward or away parallel none Behavior Code: SW PO | Fo Feeding by tower |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3 :00 : | Declan Rodriguez Tower | clear | Dolphin | 15 yds | 1 / 11 calves | toward or away parallel none Behavior Code: SW PO | Same dolphin → Swam into shutdown zone |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8 :42 : | Declan Rodriguez Tower | clear | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 30 minute watch |
| 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: | !! |

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Project name: Lindorf Bravo

Lead observer: Fernando Real

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Project location: Marina Lindorf Bravo 1 / Dock

Lead observer contact info: 386-747-1594

Date: 7-13-17

| 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 | 7:35 : | Dock Bernardo Real | Glare | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:30 : | Dock Eric Denova | clear + windy | Dolphin | 900 yds | 1 / 1 / 1 / 1 — calves | toward or away parallel none Behavior Code: SW | By Black Bang |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:55 : | Dock Eric Denova | clear | Dolphin | 60 yds | 1 / 1 / 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:00 : | Dock Eric Denova | clear | Dolphin | 15 yds | 1 / 1 / 1 / 1 — calves | toward or away parallel none Behavior Code: | Shut-down |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:50 : | Dock Eric Denova | clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | last 30 min |
| 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: | |

Appendix P. Marine Mammal Observer data sheets for 14 July 2017.

Project name: Wharf Bravo

Lead observer: Bernardo Real

Page 1 of 1

Project location: mainport wharf bravo 3/dock

Lead observer contact info: 386-747-1576

Date: 7-14-17

| 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 | 9 : 15 | Bernardo Real | Clear | | yds | / / — calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12 : 00 | Bernardo Real | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12 : 35 | Bernardo Real | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3 : 05 | Bernardo Real | clear/wind | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3 : 30 | Bernardo Real | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | 30 minutes after vibratory |
| 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: | |

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Project name: Wharf Bravo
 Project location: Maxpect/Tower

Lead observer: Bernardo Real
 Lead observer contact info: 386 747-1514

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 Date: 7/14/17

| 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 | 9:35 : | Eric Denova Tower | clear | | yes | 1 1 - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:20 : | Eric Denova Tower | clear | Dolphins | 1000 yds | 2 1 2 2 - calves | toward or away parallel none Behavior Code: SW | Just came into Basin (No Vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:00 : | Eric Denova Tower | clear | | yes | 1 1 - calves | toward or away parallel none Behavior Code: | Break |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:35 : | Eric Denova Tower | clear | | yes | 1 1 - calves | toward or away parallel none Behavior Code: | Watch Watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:15 : | Eric Denova Tower | clear | Dolphin | 900 yds | 1 1 1 1 - calves | toward or away parallel none Behavior Code: | Came into Basin and then left the Basin (No Vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:45 : | Eric Denova Tower | clear | Dolphins | 700 yds | 2 1 2 2 - calves | toward or away parallel none Behavior Code: | A new pod of Dolphins swimming in the mid of Basin (No Vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:30 : | Eric Denova Tower | clear | | yes | 1 1 - calves | toward or away parallel none Behavior Code: | last 30 min watch |

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Appendix Q. Marine Mammal Observer data sheets for 17 July 2017.

Project name: Wharf Bravo
 Project location: Mayport/Dock

Lead observer: Eric Denova
 Lead observer contact info: 386 490 6033

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 Date: 7/17/17

| 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 | 7:45 : | Dock Eric Denova | Glare | | yds | 1 1 — calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 7:45 7:55 : | Dock Eric Denova | Glare | Sea Turtle | 30 yds | 1 1 1 1 — calves | toward or away parallel none Behavior Code: FO | Feeding on Algae (No Vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:45 : | Dock Eric Denova | cloudy | Dolphins | 700 yds | 3 1 4 1 3 — calves | toward or away parallel none Behavior Code: FO/SW | Tower seen about 5-6 but I only seen 3 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:30 : | Dock Eric Denova | cloudy + Windy | | yds | 1 1 — calves | toward or away parallel none Behavior Code: | lightning shut down |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 30:20 : | Dock Eric Denova | cloudy + Windy | | yds | 1 1 — calves | toward or away parallel none Behavior Code: | Ended Due to weather |
| 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: | |

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Project name: Wharf Bravo
 Project location: Mayport / Wharf Bravo-1

Lead observer: Eric
 Lead observer contact info: Radio

Page 1 of
 Date: 7/17/17

| 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 | 7 : 45 : | Declan Rodriguez Tower | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 9 : 47 : | Declan Rodriguez Tower | good | manatee | 1000 yds | 1 / 11 calves | toward or away parallel none Behavior Code: SW | at the tugboat docks |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10 : 47 : | Declan Rodriguez Tower | clouds | dolphin | 900 yds | 3 / 5 / 4 calves | toward or away parallel none Behavior Code: PO | not during vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11 : 35 : | Declan Rodriguez Tower | clouds | dolphin | 900 yds | 6 / 8 / 7 calves | toward or away parallel none Behavior Code: PO FO | Feeding By the barge |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 : 25 : | Declan Rodriguez Tower | clouds | dolphin | 1000 yds | 1 / 12 calves | toward or away parallel none Behavior Code: PO | Spotted during a T1 shutdown |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3 : 30 : | Declan Rodriguez Tower | clouds | | yds | 1 / calves | toward or away parallel none Behavior Code: | Been shut-down for while due to lightning |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |

Appendix R. Marine Mammal Observer data sheets for 18 July 2017.

Project name: Wharf Bravo Lead observer: Declar Rodriguez Page 1 of
 Project location: Mayport/Wharf Bravo - 1 Lead observer contact info: 954 296 0164 Date: 7-18-17
Rock

| 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 | 10:00 : | Declar Rodriguez Tower | cloudy | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:28 : | Declar Rodriguez Tower | cloudy | dolphin | 1000 yds | 1 13 2 calves | toward or away parallel none Behavior Code: FO PO | Feeding by post entrance no vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:53 : | Declar Rodriguez Tower | cloudy | dolphin | 1000 yds | 1 13 0 calves | toward or away parallel none Behavior Code: PO | SW no vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:02 : | Declar Rodriguez Tower | cloudy | dolphin | 900 yds | 1 12 2 calves | toward or away parallel none Behavior Code: PO | different dolphins no vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:25 : | Declar Rodriguez Tower | cloudy | dolphin | 700 yds | 1 14 1 calves | toward or away parallel none Behavior Code: PO | the new pod again no vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:00 : | Declar Rodriguez Tower | cloudy | | yds | 1 1 - calves | toward or away parallel none Behavior Code: | 25 minute watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yes | 1 1 - calves | toward or away parallel none Behavior Code: | |

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Project name: Wharf Bravo

Lead observer: Eric Denora

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Project location: Mayport/Dock

Lead observer contact info: 386 490 6033

Date: 7/18/17

| 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 : 00 : | Dock Eric Denora | clear | | yds | / / ___ calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 : 20 : | Dock Eric Denora | clear | | yds | / / ___ calves | toward or away parallel none Behavior Code: | 30 min watch |
| 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: | |

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Appendix S. Marine Mammal Observer data sheets for 19 July 2017.

Project name: Bravo Wharf 1
 Project location: Mayport / Bravo Wharf-1 Tower

Lead observer: Eric
 Lead observer contact info: Radio

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 Date: 7/19/17

| 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 | 8:00 : | Declan Rodriguez Tower | Cloudy | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | 5 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:10 : | Declan Rodriguez Tower | cloudy | manatee | 1000 yds | 1 / 1 2 calves | toward or away parallel none Behavior Code: SW | Staying by tug boat dock slips |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:10 : | Declan Rodriguez Tower | cloudy | dolphin | 900 yds | 1 / 12 - calves | toward or away parallel none Behavior Code: PO | NO vibratory |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:35 : | Declan Rodriguez Tower | cloudy | dolphin | 800 yds | 2 / 3 / 3 0 calves | toward or away parallel none Behavior Code: PO | Same group 3 Vibratory started now |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:35 : | Declan Rodriguez Tower | cloudy | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | 30 minute watch |
| 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: | " |

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Project name: Wharf Bravo

Lead observer: Eric Denova

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Project location: Mayport/Dock

Lead observer contact info: 386 440 6033

Date: 7/19/17

| 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 | 7:45 : | Eric Denova Dock | cloudy | | yds | 1 / 1 ___ calves | toward or away parallel none Behavior Code: | 15 min Watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:37 : | clear | Dolphins | 25 | yds | 2 / 2 / 2 ___ calves | toward or away parallel none Behavior Code: | There was Vibratory on |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:35 : | clear | | | yds | 1 / 1 ___ calves | toward or away parallel none Behavior Code: | 30 min Watch |
| 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: | |

Appendix T. Marine Mammal Observer data sheets for 20 July 2017.

Project name: Wharf Bravo
 Project location: Mayport / Dock

Lead observer: Eric Denova
 Lead observer contact info: 386 490 6033

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 Date: 7/20/17

| 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 :35 : | Dock Eric Denova | clear glare | | yds | / / ___ calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 :25 : | Dock Eric Denova | cloudy + windy | | yds | / / ___ calves | toward or away parallel none Behavior Code: | 15 + watch |
| 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: | |

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Project name: Winnif Bravo

Lead observer: erick Demora

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Project location: NAVSTA Winnif Bravo E / tower

Lead observer contact info: _____

Date: 7-20-17

| 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 | 10:35 : | Bernardo Real | clear | | yds | 1 / — calves | toward or away parallel none Behavior Code: | no sightings |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:05 : | Bernardo Real | clear | | yds | 1 / — calves | toward or away parallel none Behavior Code: | lunch break |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:55 : | Bernardo Real | clear | | yds | 1 / — calves | toward or away parallel none Behavior Code: | no sightings |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:12 : | Bernardo Real | clear windy | Dolphin | 100 yds | 3 3 dolphins 2 calves 1 pup | toward or away parallel none Behavior Code: SP | Swimming toward deck and tower not really any 180 direction |
| — - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:50 : | Bernardo Real | clear | | yds | 1 / — calves | toward or away parallel none Behavior Code: | start of 30 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 6:20 : | Bernardo Real | clear | | yds | 1 / — calves | toward or away parallel none Behavior Code: | 30 minutes after violation |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / — calves | toward or away parallel none Behavior Code: | |

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Appendix U. Marine Mammal Observer data sheets for 21 July 2017.

Project name: Wharf Bravo Lead observer: Bernardo Real Page _____ of _____
 Project location: NAVFOR Wharf Bravo 3 / Dock Lead observer contact info: 386-747-1574 Date: 7-21-17

| 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 : 06 | Bernardo Real | clear | | yds | / / ___ calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11 : 34 | Bernardo Real | clear | | 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: | |

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Project name: Wharf Bravo

Lead observer: Bernardo Real

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Project location: Mayport/Bravo Tower

Lead observer contact info: Radio

Date: 7/20/17

| 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 | 11:00 : | Eric Genova Tower | clear | | yds | 1 / - calves | toward or away parallel none Behavior Code: | 15 watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 12:00 : | Eric Genova Tower | clear | Dolphin | 900 yds | 1 / 1 / 1 / 1 - calves | toward or away parallel none Behavior Code: SW | leaving the Basin |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:05 : | Eric Genova Tower | clear | Manatee | 800 yds | 1 / 1 / 1 / 1 - calves | toward or away parallel none Behavior Code: SW | Swimming around Control Tower Dock (No Vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:15 : | Eric Genova Tower | clear | Dolphins | 1000 yds | 4 / 4 / 4 / 4 - calves | toward or away parallel none Behavior Code: FO/SW | Feeding at the entrance to basin (No Vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:45 : | Eric Genova Tower | clear | | yds | 1 / - calves | toward or away parallel none Behavior Code: | last 30 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / - calves | toward or away parallel none Behavior Code: | |

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Appendix V. Marine Mammal Observer data sheets for 24 July 2017.

Project name: Wharf Bravo

Lead observer: Bernardo Real

Page 1 of 2

Project location: Marport Wharf Bravo 1 / tower

Lead observer contact info: 386-747-1574

Date: 7-24-17

| 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 : 54 | Bernardo Real | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3 : 30 | Bernardo Real | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | TZ |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5 : 10 | Bernardo Real | clear | | 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: | |

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Project name: Wharf Bravo

Lead observer: Eric Denova

Page 1 of

Project location: Mayport/Dock

Lead observer contact info: 386 4826032

Date: 7/24/17

| 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 | 10:30 : | Dock Eric Denova | glare | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:30 : | Dock Eric Denova | clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | T1 Winds |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:10 : | Dock Eric Denova | clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | last 30 min |
| 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: | |

Appendix W. Marine Mammal Observer data sheets for 25 July 2017.

Project name: Wharf Bravo
 Project location: Bravo Mayport/Dock

Lead observer: Amardo Real
 Lead observer contact info: 386-769-1574

Page 1 of 1
 Date: 7/25/17

| 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 | 9:12 11:00 | Dock | Glare | | yds | / / calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:30 | Dock | cloudy | | yds | / / calves | toward or away parallel none Behavior Code: | 30 min watch |
| 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: | |

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Project name: Wharf Bravo

Lead observer: ERIC DENOVA

Page 1 of _____

Project location: Mayport / Tower

Lead observer contact info: _____

Date: 7/25/17

| 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) yds | # 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 | 7:35 | Tower Eric Denova | cloudy | | | / / | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:00 | Tower Eric Denova | clear | Dolphin | 1000 yds | 1 / 1 / 1 | toward or away parallel none Behavior Code: SW | leaving basin (No Vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:40 | Tower Eric Denova | clear | Dolphin | 900 yds | 1 / 1 / 1 | toward or away parallel none Behavior Code: SW | (No Vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:30 | Tower Eric Denova | clear | | | / / | toward or away parallel none Behavior Code: | last 30 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yds | / / | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yds | / / | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yds | / / | toward or away parallel none Behavior Code: | |

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Appendix X. Marine Mammal Observer data sheets for 26 July 2017.

Project name: Wharf Bravo
 Project location: Mayport/Dock

Lead observer: Eric Denora
 Lead observer contact info: 386 490-6033

Page 1 of _____
 Date: 7/26/17

| 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 | 9:45 : | Dock Eric Denora | Glare | | yds | / / - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:05 : | Dock Eric Denora | Glare | Manatee | 17 yds | (/ / /) - calves | toward or away parallel none Behavior Code: | was swimming away a few min before vibratory started, I told them to hold off for a few |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:50 : | Dock Eric Denora | cloudy | | yds | / / - calves | toward or away parallel none Behavior Code: | last 30 min |
| 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: | |

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Project name: Wharf Bravo

Lead observer: ERICK DELOVA

Page _____ of _____

Project location: Monfort Wharf Bravo 1 Tower

Lead observer contact info: _____

Date: 7-26-17

| 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 | 10:03 | Bernardo Reel Tower | Clear G-lare | | ~100 | 1 / 1 calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:24 | Bernardo Reel Tower | windy cloudy | Dolphin | 200 495 1,400 | 1 / 1 2 dolphins | toward or away parallel none Behavior Code: SP | swimming towards site leaving area (no vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:05 | Bernardo Reel Tower | Clear | Dolphin | 200 495 700 | 1 / 1 1 Dolphin | toward or away parallel none Behavior Code: SP | swimming away from not really changing directions |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:37 | Bernardo Reel Tower | Clear | Dolphin | 100 495 550 | 1 / 1 1 Dolphin | toward or away parallel none Behavior Code: SP | heading towards pile drive post leaving passer crane Same from 3:05 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:00 | Bernardo Reel Tower | Clear | | 90 | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | 90 | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | 90 | 1 / 1 calves | toward or away parallel none Behavior Code: | |

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Appendix Y. Marine Mammal Observer data sheets for 27 July 2017.

Project name: Winnif Bravo Lead observer: Bernardo Real Page of
 Project location: Navport Winnif Bravo I / docks Lead observer contact info: 386-747-1574 Date: 7-27-17

| 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 | 8:50 | Bernardo Real DOCK | clear | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:04 | Bernardo Real DOCK | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | This was not a shutdown pile driving was suspended to unload sheet pile |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:10 | Bernardo Real | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | TI |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |

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Project name: Wharf Bravo

Lead observer: Bernardo Real

Page 1 of

Project location: Mayport/Tower

Lead observer contact info: Radi'o

Date: 7/27/17

| 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 | 8:50 : | Eric Denova Tower | cloudy | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown | 9:00 : | Eric Denova Tower | cloudy | Dolphins | 800 yds | 3 / 4 / 3 0 calves | toward or away parallel <u>none</u> Behavior Code: SW | Just swimming in the same area most likely left basin (No vibratory) |
| Start Monitoring - End Monitoring Soft Start - vibratory - impact Sighting - Delay - Shutdown | 9:25 : | Eric Denova Tower | cloudy | Dolphins | 700 yds | 3 / 5 / 3 1 calves | toward or away parallel <u>none</u> Behavior Code: PI/PO | Same pod from 9:00 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown | 10:04 : | Eric Denova Tower | cloudy | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | This was not a shutdown. Pile Driving was temporarily suspended to unload a shoot pile truck |
| Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown | 1:10 : | Eric Denova Tower | cloudy | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | T1 |
| Start Monitoring - End Monitoring Soft Start - vibratory - impact Sighting - Delay - Shutdown | 3:00 : | Eric Denova Tower | cloudy | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 1st 30 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |

Appendix Z. Marine Mammal Observer data sheets for 28 July 2017.

Project name: Wharf Beavo
 Project location: Mayport / Dock

Lead observer: Eric Denova
 Lead observer contact info: 386 490 6033

Page 1 of
 Date: 7/28/17

| 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 | 8:30 : | Eric Denova Eric Denova Dock | Glare | | yd | 1 1 - calves | toward or away parallel none Behavior Code | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:00 : | Eric Denova Eric Denova Dock | clear | Dolphins | 500 yd | 4 1 4 - calves | toward or away parallel none Behavior Code SW | Two different different pods (No vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:00 : | Eric Denova Dock | clear | Dolphins | 700 yd | 2 1 2 - calves | toward or away parallel none Behavior Code SW | Two different pods (No vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:40 : | Eric Denova Dock | clear | | yd | 1 1 - calves | toward or away parallel none Behavior Code | T1 @ started back up at 3:40 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:55 : | Eric Denova Dock | | | yd | 1 1 - calves | toward or away parallel none Behavior Code | last 30 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yd | 1 1 - calves | toward or away parallel none Behavior Code | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yd | 1 1 - calves | toward or away parallel none Behavior Code | |

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Project name: Wharf Bravo

Lead observer: Eric Denora

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Project location: Mayport Tower

Lead observer contact info: _____

Date: July 28/2017

| 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 | 6 : 30 | Jacob/Tower | Clear | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 15 min. Watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8 : 45 | Jacob/Tower | Clear | Dolphin | 1,000 yds | 5 / 5 / 5 1 calves | toward or away parallel none Behavior Code: sw sw/ed | (no vibratory) to feeding at entrance of cove |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 : 51 | Jacob/Tower | Cloudy | Dolphin | 1,000 yds | 5 / 5 / 5 1 calves | toward or away parallel none Behavior Code: sw | (no vibratory) same group as 8:45 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 : 52 | Jacob/Tower | Cloudy | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | Delay for T1 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4 : 55 | Jacob/Tower | Cloudy | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 30 min watch |
| 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: | |

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Appendix AA. Marine Mammal Observer data sheets for 1 August 2017.

Project name: Whale Bravo

Lead observer: Eric DeGrua

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Project location: Mayport bridge/tower

Lead observer contact info: _____

Date: 8/1/17

| 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 | 7 : 40 | Judy Tower | | | yds | / / - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - vibratory - impact Sighting - Delay - Shutdown | 12 : 55 | Judy Tower | cloudy | Dolphin | 1,050 yds | 4 / 4 / 4 - calves | toward or away parallel none Behavior Code: SW | Came in and then left (vibratory!) |
| Start Monitoring - End Monitoring Soft Start - vibratory - impact Sighting - Delay - Shutdown | 4 : 30 | Jacob Tower | | | yds | / / - calves | toward or away parallel none Behavior Code: | last 30 min watch |
| 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: | |

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Project name: Wharf Bravo

Lead observer: Eric Denora

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Project location: Mayport / Dock

Lead observer contact info: 386 490 6033

Date: 8/1/17

| 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 | 7:40 : | Eric Denora Dock | Overcast Cloudy | | yd | 1 / 1 calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory Impact Sighting - Delay - Shutdown | 4:35 : | Eric Denora Dock | Clear | | yd | 1 / 1 calves | toward or away parallel none Behavior Code: | last 30 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory Impact Sighting - Delay - Shutdown | : : | | | | yd | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory Impact Sighting - Delay - Shutdown | : : | | | | yd | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory Impact Sighting - Delay - Shutdown | : : | | | | yd | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory Impact Sighting - Delay - Shutdown | : : | | | | yd | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory Impact Sighting - Delay - Shutdown | : : | | | | yd | 1 / 1 calves | toward or away parallel none Behavior Code: | |

Appendix BB. Marine Mammal Observer data sheets for 2 August 2017.

Project name: WHALE BRAVO Lead observer: Bernardo Real Page _____ of _____
 Project location: MANIFT BRAVO 1/TOWER Lead observer contact info: 386-747-1571 Date: 8-2-17

| 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 | 10:20 | Bernardo Real | clear WHALE | | yes | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:20 | Bernardo Real | | | yes | 1 / 1 - calves | toward or away parallel none Behavior Code: | T1 |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 - calves | toward or away parallel none Behavior Code: | |

Sighting Form revised January 10, 2013
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Project name: Wharf Bravo

Lead observer: Bernardo Real

Page 1 of

Project location: Mayport / Tower

Lead observer contact info: Radio

Date: 8/2/17

| 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 | 10:00 10:20 | Eric Denova Tower | Clear | | Yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:05 : | Eric Denova Tower | cloudy | Dolphins | 900 yds | 3 / 3 / 3 — calves | toward or away parallel none Behavior Code: SW | staying in the same area (No vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:20 : | Eric Denova Tower | cloudy | | Yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | T-1 Delay |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:00 : | Eric Denova Tower | cloudy | | Yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | 30 min watch Ended Due to weather |
| 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: | |

Appendix CC. Marine Mammal Observer data sheets for 3 August 2017.

Project name: Wharf Bravo

Lead observer: Eric Denova

Page 1 of

Project location: Mayport/Dock

Lead observer contact info: 386 490 6033

Date: 8/3/17

| 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 | 7:50 : | Eric Denova Dock | Glare | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 11:00 : | Eric Denova Dock | cloudy | Dolphins | 700 yds | 2 / 2 / 2 - calves | toward away parallel none Behavior Code: Sw | Never came in closer (No vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:50 : | Eric Denova Dock | cloudy windy | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | last 30 min |
| 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: | |

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Project name: Wharf Bravo

Lead observer: B. Eric DeNava

Page 1 of 2

Project location: Mayport Wharf Bravo 1 / Tower

Lead observer contact info: _____

Date: 8-8-17

| 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 | 8:20 | Bernardo Real Tower | Clear | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | no sighting |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 10:08 | Bernardo Real Tower | Cloudy | Dolphin | 900 yds from pile drive | 1 / 1 1 Dolphin | toward or away parallel none Behavior Code: CD | changing directions towards main base (no vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2:40 | Bernardo Real Tower | Clear | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yes | 1 / 1 calves | toward or away parallel none Behavior Code: | |

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Appendix DD. Marine Mammal Observer data sheets for 4 August 2017.

Project name: Wharf Bravo

Lead observer: ~~XXXXXXXXXX~~ Bernardo Real

Page 1 of

Project location: Mayport/Tower

Lead observer contact info: Radio

Date: 8/4/17

| 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 Sight Start - Vibratory Impact Sighting - Delay - Shutdown | 10:15 : | Eric DeNova Tower | cloudy | | 750 | 1 / 1 calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Sight Start - Vibratory Impact Sighting - Delay - Shutdown | 10:25 : | Eric DeNova Tower | cloudy | Dolphins | 800 yds | 2 / 2 / 2 calves | toward or away parallel none Behavior Code: | (No Vibratory) Most likely the same two from 10:25 (No Vibratory) |
| Start Monitoring - End Monitoring Sight Start - Vibratory Impact Sighting - Delay - Shutdown | 1:05 : | Eric DeNova Tower | clear | Dolphins | 1000 yds | 2 / 2 / 2 calves | toward or away parallel none Behavior Code: | 30 min Watch |
| Start Monitoring - End Monitoring Sight Start - Vibratory Impact Sighting - Delay - Shutdown | 1:25 : | Eric DeNova Tower | clear | | 750 | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Sight Start - Vibratory Impact Sighting - Delay - Shutdown | : : | | | | 750 | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Sight Start - Vibratory Impact Sighting - Delay - Shutdown | : : | | | | 750 | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Sight Start - Vibratory Impact Sighting - Delay - Shutdown | : : | | | | 750 | 1 / 1 calves | toward or away parallel none Behavior Code: | |

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Project name: NAVFAC DRAW

Lead observer: Bernardo Real

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Project location: NAVYPORT DRAW 1 / Tower

Lead observer contact info: 380-747-1574

Date: 8-4-17

| 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 | 10:15 | Bernardo Real Beck | Chicore | | vis | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1:07 | Bernardo Real Beck | | | vis | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | vis | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | vis | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | vis | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | vis | 1 / 1 — calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | vis | 1 / 1 — calves | toward or away parallel none Behavior Code: | |

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Appendix EE. Marine Mammal Observer data sheets for 5 August 2017.

Project name: Wharf Bravo

Lead observer: eric denbua

Page _____ of _____

Project location: mainport bravo 1/tower

Lead observer contact info: _____

Date: 8-5-17

| 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 : 10 : | ERIC DENBUA TOWER | | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 1 : 50 : | ERIC DENBUA TOWER | WINDY CLOUDY | manatee | 500 yds FROM PILE DRIVING | 1 / 1 2 calves | toward or away parallel none Behavior Code: SP | manatee entered the deck in front of tower (no vibratory) |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3 : 45 : | ERIC DENBUA TOWER | | | 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: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |

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

Project name: Wharf Bravo

Lead observer: Eric Denova

Page 1 of 1

Project location: Maxport/Dock

Lead observer contact info: 386.490.6033

Date: 8/5/17

| 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 | 9:45 | Eric Denova Dock | Cloudy | | yds | 1 / - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 3:45 | Eric Denova Dock | cloudy | | yds | 1 / - calves | toward or away parallel none Behavior Code: | last 30 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | | | | | yds | 1 / - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | | | | | yds | 1 / - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | | | | | yds | 1 / - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | | | | | yds | 1 / - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | | | | | yds | 1 / - calves | toward or away parallel none Behavior Code: | |

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Appendix FF. Marine Mammal Observer data sheets for 7 August 2017.

Project name: Wharf Bravo
 Project location: Mayport/Dock

Lead observer: Eric Denova
 Lead observer contact info: 3864906033

Page _____ of _____
 Date: 8/7/17

| 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 | 3:05 : | Eric Denova Dock | Glare | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 15 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:00 : | Eric Denova | Glare | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 30 min |
| 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: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |

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Project name: Wharf draw

Lead observer: ERIC DENOVA

Page _____ of _____

Project location: MAJOR WHARF DRAW

Lead observer contact info: 386-490-6033

Date: 8-7-17

| 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 | 3:00 : | Bernardo Reel Tower | Clear | | yds | 1 / calves | toward or away parallel none Behavior Code: | 15 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 5:00 : | Bernardo Reel Tower | Clear | | yds | 1 / calves | toward or away parallel none Behavior Code: | 30 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |

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Appendix GG. Marine Mammal Observer data sheets for 8 August 2017.

Project name: WRECK DRIFT

Lead observer: Bernardo Real

Page _____ of _____

Project location: MOYRIST DRIFT L / ROCK

Lead observer contact info: 386-747-1674

Date: 8-8-17

| 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 | 7:30 : | Bernardo Real DOCK | clear | | yds | 1 / calves | toward or away parallel none Behavior Code: | 15 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8:50 : | Bernardo Real DOCK | clear | | yds | 1 / calves | toward or away parallel none Behavior Code: | 30 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / calves | toward or away parallel none Behavior Code: | |

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Project name: Wharf Beavo
 Project location: Maxport/Tower

Lead observer: Bernardo Real
 Lead observer contact info: 386-747-1574

Page _____ of _____
 Date: 8/8/17

| 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 | 7:30 : | Eric Denora Tower | Clear | | yd: | 1 / 1 - calves | toward or away parallel none Behavior Code: | 15 min |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 8:50 : | Eric Denora | Clear | | yd: | 1 / 1 - calves | toward or away parallel none Behavior Code: | 30 min |
| 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: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | : : | | | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |

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Appendix HH. Marine Mammal Observer data sheets for 10 August 2017.

Project name: Wharf Brava

Lead observer: Eric Denava

Page 1 of 1

Project location: Maxpool / Dock

Lead observer contact info: 386 440 6033

Date: 8/10/17

| 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 | 1 :05 : | Eric Denava Dock | Clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | 15 min Watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 :30 : | Eric Denava Dock | Clear | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | 30 min Watch |
| 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: | |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | • • | | | | yds | 1 / 1 — calves | toward or away parallel none Behavior Code: | |

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

Project name: Wharf Bravo

Lead observer: Eric DeNova

Page 1 of 1

Project location: Mayport/Tower

Lead observer contact info: Radio

Date: 8/10/17

| 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 Silt Start - Vibratory - Impact Sighting - Delay - Shutdown | 1 :05 | Bernardo Real Tower | Clear | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Silt Start - Vibratory - Impact Sighting - Delay - Shutdown | 1 :47 | Bernardo Real | Clear | Dolphin | 1000 yds | 1 / 1 / 1 - calves | toward or away parallel none Behavior Code: SW | Entered Basin then left (No Vibrator) |
| Start Monitoring - End Monitoring Silt Start - Vibratory - Impact Sighting - Delay - Shutdown | 2 :30 | Bernardo Real | Clear | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | 30 min watch |
| Start Monitoring - End Monitoring Silt Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 - calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Silt Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Silt Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Silt Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Silt Start - Vibratory - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |

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

Appendix II. Marine Mammal Observer data sheets for 14 August 2017.

Project name: Wharf Bravo
 Project location: Mayport/Dock

Lead observer: Eric Denova
 Lead observer contact info: 386 490 6033

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 Date: 8/14/17

| 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 Sight Start - Visibility - Impact Sighting - Delay - Shutdown | 3:00 : | Eric Denova Dock | clear | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Sight Start - Visibility - Impact Sighting - Delay - Shutdown | 3:50 : | Eric Denova Dock | clear | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | 30 min watch |
| Start Monitoring - End Monitoring Sight Start - Visibility - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Sight Start - Visibility - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Sight Start - Visibility - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Sight Start - Visibility - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |
| Start Monitoring - End Monitoring Sight Start - Visibility - Impact Sighting - Delay - Shutdown | : | | | | yds | 1 / 1 calves | toward or away parallel none Behavior Code: | |

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Project name: Wharf Bravo

Lead observer: Eric Osenera

Page 1 of 1

Project location: Maxpoet / Dock

Lead observer contact info: _____

Date: 8/14/17

| 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 | 3:00 | Jacob Tower | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | 15 min watch |
| Start Monitoring - End Monitoring Soft Start - Vibratory - Impact Sighting - Delay - Shutdown | 4:00 | Jacob | clear | | yds | / / — calves | toward or away parallel none Behavior Code: | 30 min watch |
| 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: | |