FINAL SUMMARY REPORT

FUEL PIER INBOARD PILE REMOVAL AND DREDGING PROJECT NAVAL BASE POINT LOMA, CALIFORNIA



FEBRUARY, 2024

NAVAL FACILITIES ENGINEERING COMMAND, SOUTHWEST 750 PACIFIC HIGHWAY, SAN DIEGO, CALIFORNIA 92132



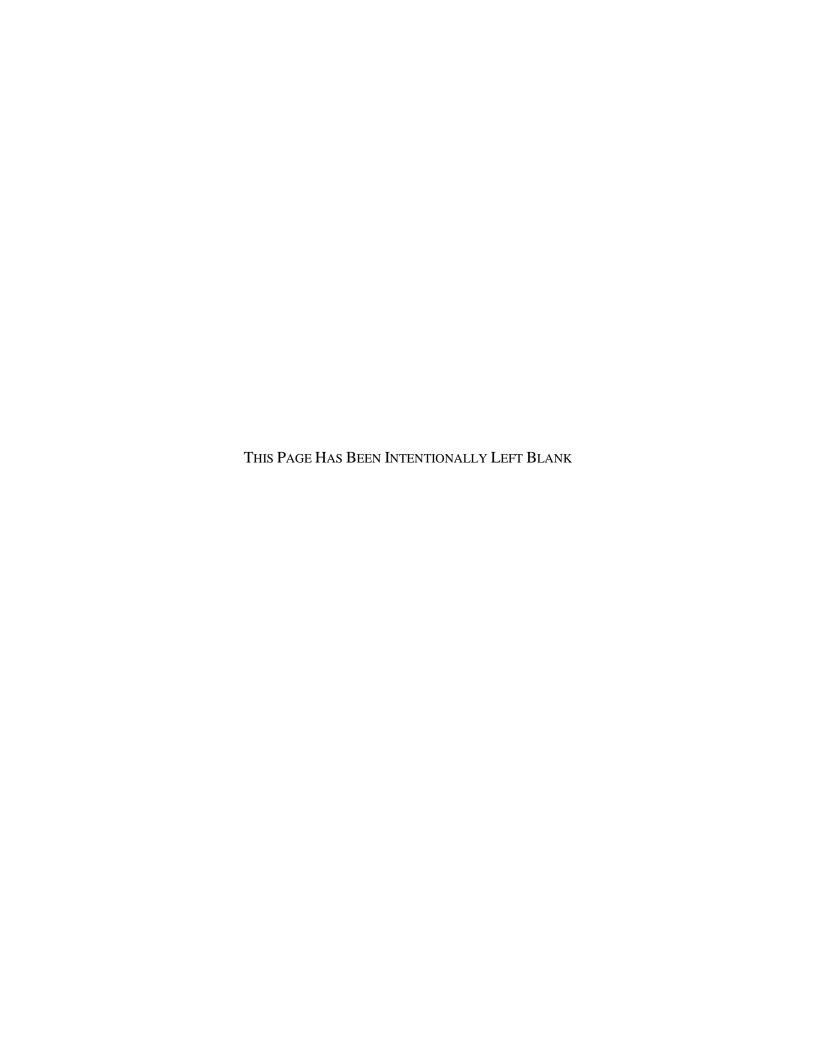


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1.0 INTRODUCTION

This summary report presents the findings of the protected species monitoring activities at the United States Department of the Navy (Navy) Fuel Pier Inboard Pile Removal and Dredging Project (Project) at Naval Base Point Loma (NBPL), California from November 1, 2022 through March 29, 2023. The Navy had expected the Project's activities to include underwater soundgenerating measures that would require monitoring procedures consistent, and compliant, with the Project's Incidental Harassment Authorization (IHA) Application (Naval Facilities Engineering Systems Command Southwest [NAVFACSW] 2021a) and the associated Acoustic and Marine Protected Species Monitoring Plan (NAVFACSW 2021b). An initial IHA was issued for the dates of January 15, 2022 through January 14, 2023 (National Marine Fisheries Service [NMFS] 2021a). Due to Project-related delays, work was anticipated to extend beyond January 14, 2023, and an IHA renewal was issued for the period between January 15, 2023 and January 14, 2024 (NMFS 2023). However, underwater sound-generating activities such as pile clipping, vibratory extraction, and chainsaws were not ultimately required, with all remnant piles removed via "deadpulling" which involved looping a strap over the top of the pile, and a crane applying upward force to pull the pile out. As such, no formal final IHA report is required to be submitted to NMFS. Nonetheless, the Navy is providing data collected as part of the informal consultation under the Endangered Species Act (ESA). An ESA Letter of Concurrence was issued on June 9, 2021 (NMFS 2021b) that identified specific monitoring requirements for ESA-listed species. Under the ESA informal consultation, green sea turtles (*Chelonia mydas*) were the main species of concern. Like the MMPA IHA, the informal consultation was re-initiated with a subsequent revised ESA Letter of Concurrence issued on July 22, 2022 (NMFS 2022). All monitoring procedures identified as part of the Letters of Concurrence were followed.

As a courtesy to NMFS relative to the MMPA IHA, the Navy is providing a summary report of the marine mammal activity observed in the Project area. Section 2.0 presents the protocols that were followed and Section 3.0 provides observational data collected over the 56 days of monitoring.

2.0 MONITORING PROTOCOLS

Data were collected by a single Protected Species Observer (PSO) at multiple locations along the quay wall and in Building 93 to the west of the Project site, as well as at Pier 99 to the southwest of the Project site (Figure 1). While two PSOs were required in the MMPA IHA, only a single PSO was required per the informal ESA consultation. Protocols identified as part of the ESA consultation were implemented for marine species monitoring, with a single PSO required for all in-water activities. Due to exclusion zones for Munitions and Explosives of Concern, dredging was only allowed after normal working hours, while pile removal occurred during the daytime only.

Introduction 1

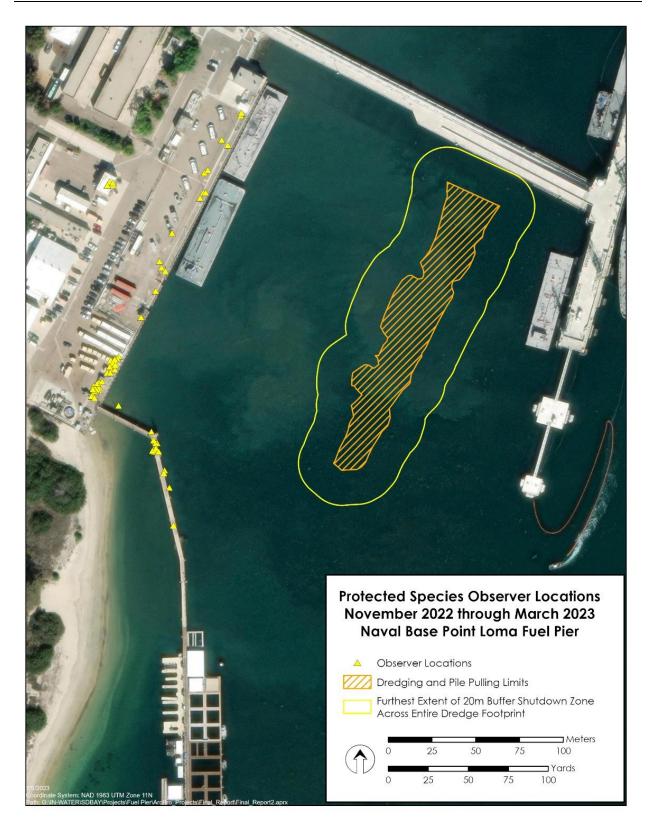


Figure 1. Project Area and Locations of Protected Species Observers during In-water Activities (November 2022–March 2023).

2 Monitoring Protocols

Per the ESA consultation, monitoring for green sea turtles was required during all in-water activities; however, all marine species were logged, regardless of the proximity to the Project area. The daily or nightly PSO observation position was based on the location where the ESA shutdown zones of 130 meters (m; 427 feet [ft]) or 20 m (66 ft) could best be observed. The PSO position could also shift during monitoring depending on barge movements. Monitoring protocols identified in the ESA consultation included:

General:

- The Navy will provide pre-construction environmental education to contract personnel to instruct on environmental resources within the Project footprint and avoidance and minimization measures and permit conditions to be implemented to protect resources during construction.
- All personnel associated with the Project shall be instructed of the potential presence of protected species and the need to maintain a 20-m (66-ft) buffer around all in-water activities to avoid collisions with sea turtles and marine mammals. All construction personnel are responsible for observing water-related activities for the presence of these species.
- All vessels associated with the Project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a 1.2-m (4-ft) clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- If a sea turtle or marine mammal is seen within the vicinity of active Project activities, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 20 m (66 ft) of a sea turtle or marine mammal. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or marine mammal is seen within a 20-m (66-ft) radius of the equipment. No discharge of dredge material at the disposal site will occur if a sea turtle or marine mammal is within 100 m (328 ft) of the dump scow. Activities may not resume until the protected species has departed the Project/disposal area of its own volition, or has not been sighted for 15 minutes.
- During Project implementation, the Navy will regularly monitor activities to ensure that no deviation from the proposed action is occurring.

Dredging:

- Monitoring will commence at least 15 minutes before dredging activity commences. If a sea turtle is seen in the Project area out to a distance of 130 m (427 ft) prior to, or during, maintenance dredging, the activity will not commence, or continue, until the animal has moved out of the area or at least 15 minutes has passed since the last sighting.
- To account for a reduction in visibility due to low ambient light levels, as best as possible, the Project area would be illuminated to allow the PSO to see any animals that may occur in the 130-m (427-ft) monitoring zone.

All activity and marine species data were logged using an electronic or hardcopy data collection sheet. If an electronic format was used to collect animal data, then real-time data was uploaded to the cloud for archiving purposes using ESRI Field Maps. Activity data was logged using a Project-specific data sheet in Excel and was archived each day for analysis. If hard copy datasheets were

Monitoring Protocols 3

used to collect data, then the data was transcribed to an electronic format and then uploaded at the end of the activities for the day.

Monitored activities included: 1) Divers cutting re-enforcing bar ("rebar") underwater with a torch, 2) Dredging, 3) Removal of piles via dead-pulling (using a chain that wrapped around the pile and applying upward pressure to pull the pile out of the sediment), 4) Pre-construction monitoring period ("Precon") of 15 minutes, 5) Intermediate time between activities ("Pre/Post"), and 6) Work shutdowns. All dedicated pile removal activities occurred during daylight hours, while all dredging occurred at night due to the potential for Munitions and Explosives of Concern (MEC). No MEC exclusion zones were in effect during pile removal. During dredging, the potential for MEC required personnel exclusions zones that required PSOs to stay at least 140 m (459 ft) from active dredging.

3.0 RESULTS

The data below provides a brief summary of the activities and marine species observations.

3.1 Activity Data

A total of 353 piles were removed over the course of 56 days of monitoring efforts, for an average of 6.3 piles per day. Dredging occurred on 21 of the 56 days (37.5%) while pile removal (including rebar removal) occurred on 35 of the 56 days (62.5%) (Table 1). Monitoring occurred over the course of just over 490 hours with the highest number of monitoring hours (~180 hours, 36.8%) for the Pre/Post phase (Table 2). A single shutdown of pile removal occurred when a female coastal bottlenose dolphin and a calf entered the 20 m (66 ft) shutdown zone. Average monitoring hours per day for each month of effort ranged from just under 7.5 hours per day (March 2023) to just under 10.5 hours per day (November 2022), with the overall average monitoring effort per day at roughly 8.76 hours per day (Table 2).

Piles Removed Diurnal Period Method **Dates** No. of Days Activity 11/1/2022 - 12/1/2022 9^1 20 Dredging Night Bucket Day 12/2/2022 - 2/7/2023 31 329 Pile Removal Dead Pull 1 0 Night Bucket 2/16/2023 Dredging 3/16/2023 - 3/17/2023 2 15 Pile Removal Day Dead Pull 3/27/2023 - 3/28/2023 2 N/A Rebar Removal Day Diver 353 **Total Days 56**

Table 1. In-Water Activities Monitored and Piles Removed.

Abbreviation: No. = Number.

Note: ¹Piles were inadvertently pulled while using the dredge bucket.

	No.		Tim	e of Each M	onitoring	Phase ¹			Avg.
Month	of Days	Diver Cutting Rebar	Dredging	Pile Pulling	Precon	Pre/Post	Shut-down	Total ¹	Hrs./ Day ¹
Nov. 2022	19	00:00:00	115:18:09	00:00:00	25:27:48	56:38:33	00:00:00	197:24:30	10:23:24
Dec. 2022	22	00:00:00	08:28:13	74:06:30	14:05:36	77:03:24	00:00:00	173:43:43	07:53:48
Jan. 2023	5	00:00:00	00:00:00	17:55:46	04:51:07	19:04:48	00:00:00	41:51:41	08:22:20
Feb. 2023	6	00:00:00	03:16:38	18:53:29	08:24:12	17:06:25	00:07:24	47:48:08	07:58:01
Mar. 2023	4	11:50:26	00:00:00	05:31:32	01:52:36	10:33:35	00:00:00	29:48:09	07:27:01
Total	56	11:50:26	127:03:00	116:27:17	54:41:19	180:26:45	00:07:24	490:36:11	8:45:39

Table 2. Summarized Protected Species Observer Observation Time by Month and Activity.

Abbreviations: Avg. = Average; Hrs. = Hours; No. = Number.

Note: ¹All times in hh:mm:ss.

3.2 Marine Species Data

A total of 56 individual marine mammals (not including resights) were observed with three readily identifiable species observed during all monitoring efforts (Table 3; Figure 2): California sea lion (*Zalophus californianus*), harbor seal (*Phoca vitulina*), and coastal bottlenose dolphin (*Tursiops truncatus*). While the protocols identified in the ESA consultation were implemented, no green sea turtles were observed during monitoring efforts. All tables and text in the following sections do not include resightings.

The species most observed was the California sea lion, with 45 (80.4%) of the 56 unique (not resightings) individuals observed (Table 3). The next most common species observed was the coastal bottlenose dolphin with five (8.9%) individuals, followed by the harbor seal with four individuals (7.1%) and the unidentified pinnipeds with two (3.6%) individuals (Table 4). Of the 56 total individuals across all species, five (11.2%) individuals were recorded at night: three individual California sea lions and two individual unidentified pinnipeds. Based on the substantial number of California sea lions in the Project area, the unidentified pinniped individuals were likely California sea lions.

Species	Diver Cutting Rebar	Dredging	Pile Pulling	Precon	Pre/Post	Shutdown	Total
California Sea Lion ¹	$0(2)^2$	4	16 (6)	9	16 (3)	0	45 (11)
Coastal Bottlenose Dolphin	0	0	2	0	1	2	5
Harbor Seal	0	1	0	1	2	0	4
Unidentified Pinniped	0	1	0	1	0	0	2
Total ¹	0 (2)	6	18 (6)	11	19 (3)	2	56 (11)

Table 3. Individuals Observed by Construction Activity.

Note: ¹Numbers in parentheses indicate resights; ²Animals first observed during Precon, and then later while the diver was cutting rebar.

¹ Nighttime corresponds to 15 minutes after sunset and 15 minutes before sunrise.

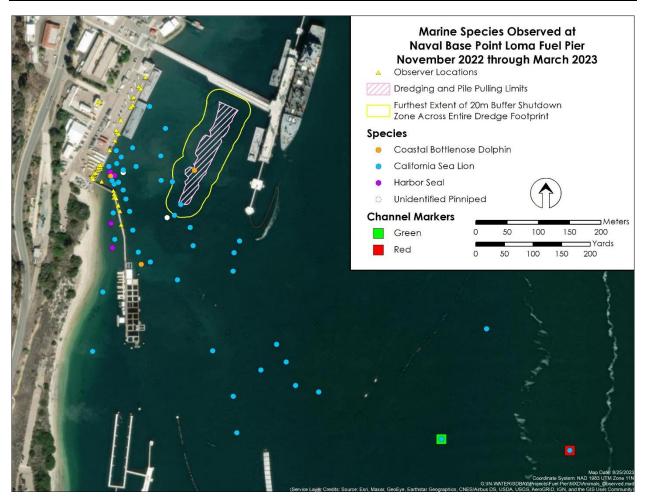


Figure 2. Marine Species Observed at NBPL Fuel Pier (November 2022–March 2023).

Table 4. Monthly Observations of Protected Species, Excluding Resights.

Month	California Sea Lion	Coastal Bottlenose Dolphin	Harbor Seal	Unidentified Pinniped	Total
Nov. 2022	4	0	0	2	6
Dec. 2022	34	2	4	0	40
Jan. 2023	2	0	0	0	2
Feb. 2023	1	3	0	0	4
Mar. 2023	4	0	0	0	4
Total	45 (80.4%)	5 (8.9%)	4 (7.1%)	2 (3.6%)	56

3.2.1 California Sea Lions

Table 5. California Sea Lion Observations, Excluding Resights.

Month	Monitoring Days	No. of Ind.	No. of Obs.	Mean	Min.	Max.	Avg. Indiv./ Day	Observer Hrs.	Ind./Observer Hrs.
Nov. 2022	19	4	4	1.0	1.0	1.0	0.2	197:24:30	0.020
Dec. 2022	22	34	31	1.1	1.0	2.0	1.6	173:43:43	0.196
Jan. 2023	5	2	2	1.0	1.0	1.0	0.4	41:51:41	0.048
Feb. 2023	6	1	1	1.0	1.0	1.0	0.2	47:48:08	0.021
Mar. 2023	4	4	4	1.0	1.0	1.0	1.0	29:48:09	0.134
Total	56	45	42	-	-	-	0.8	490:36:11	0.092

Abbreviations: Avg. = Average; Hrs. = Hours; Ind. = Individuals; Max. = Maximum; Min. = Minimum; No. = Number; Obs. = Observations.

Table 6. Age Class of California Sea Lions Observed by Month.

Month	Adult	Subadult	Unknown Age Class	Total
Nov. 2022	3	0	1	4
Dec. 2022	25	7	2	34
Jan. 2023	1	1	0	2
Feb. 2023	1	0	0	1
Mar. 2023	3	1	0	4
Total	33	9	3	45

Table 7. California Sea Lion Age and Sex Classes.

Sex Class	Adult	Subadult	Unknown	Total
Female	17	1	1	19
Male	10	0	0	10
Mixed	6	0	0	6
Unknown	0	8	2	10
Total	33	9	3	45

Table 8. Observations of California Sea Lion Primary Behaviors.

Behaviors Recorded	Adult	Subadult	Unknown	Total
Haul Out	12	2	0	14
Milling	3	0	0	3
Foraging	1	0	0	1
Swimming	17	7	3	27
Total	33	9	3	45

3.2.2 Coastal Bottlenose Dolphins

Table 9. Coastal Bottlenose Dolphin Observations, Excluding Resights.

Month	Monitoring Days	No. of Ind.	No. of Obs.	Mean	Min.	Max.	Avg. Indiv./Day	Observer Hrs.	Ind./ Observer Hrs.
Nov. 2022	19	0	0	0.0	0.0	0.0	0.0	197:24:30	0.000
Dec. 2022	22	2	1	2.0	2.0	2.0	1.6	173:43:43	0.012
Jan. 2023	5	0	0	0.0	0.0	0.0	0.0	41:51:41	0.000
Feb. 2023	6	3	2	1.5	1.0	2.0	0.2	47:48:08	0.063
Mar. 2023	4	0	0	0.0	0.0	0.0	0.0	29:48:09	0.000
Total	56	5	3	-	-	-	0.8	490:36:11	0.010

Abbreviations: Avg. = Average; Hrs. = Hours; Ind. = Individuals; Max. = Maximum; Min. = Minimum; No. = Number; Obs. = Observations.

Table 10. Age Class of Coastal Bottlenose Dolphins Observed by Month.

Month	Adult	Mixed	Unknown	Total
Nov. 2022	0	0	0	0
Dec. 2022	2	0	0	2
Jan. 2023	0	0	0	0
Feb. 2023	0	2	1	3
Mar. 2023	0	0	0	0
Total	2	2	1	5

Table 11. Coastal Bottlenose Dolphins Sex and Age Classes.

Sex Class	Adult	Mixed	Unknown	Total
Unknown	2	1	1	4
Female	0	1	0	1
Total	2	2	1	5

Table 12. Observations of Coastal Bottlenose Dolphins Primary Behaviors.

Behaviors Recorded	Adult	Mixed	Unknown	Total
Porpoising	2	0	0	2
Swimming	0	2	1	3
Total	2	2	1	5

3.2.3 Harbor Seals

Table 13. Harbor Seal Observations, Excluding Resights.

Month	Monitoring Days	No. of Ind.	No. of Obs.	Mean	Min.	Max.	Avg. Indiv./Day	Observer Hrs.	Ind./ Observer Hrs.
Nov. 2022	19	0	0	0.0	0.0	0.0	0.0	197:24:30	0.000
Dec. 2022	22	41	4	1.0	1.0	1.0	0.2	173:43:43	0.236
Jan. 2023	5	0	0	0.0	0.0	0.0	0.0	41:51:41	0.000
Feb. 2023	6	0	0	0.0	0.0	0.0	0.0	47:48:08	0.000
Mar. 2023	4	0	0	0.0	0.0	0.0	0.0	29:48:09	0.000
Total	56	4	4	-	-	-	1.0	490:36:11	0.008

Abbreviations: Avg. = Average; Hrs. = Hours; Ind. = Individuals; Max. = Maximum; Min. = Minimum; No. = Number; Obs. = Observations.

Note: ¹All were solitary adults of unknown sex class, recorded as swimming.

3.2.4 Unidentified Pinnipeds

Table 14. Unidentified Pinnipeds Observations.

Month	Monitoring Days	No. of Ind.	No. of Obs.	Mean	Min.	Max.	Avg. Indiv./Day	Observer Hrs.	Ind./ Observer Hrs.
Nov. 2022	19	2	2	1.0	1.0	1.0	1.0	197:24:30	0.010
Dec. 2022	22	0	0	0.0	0.0	0.0	0.0	173:43:43	0.000
Jan. 2023	5	0	0	0.0	0.0	0.0	0.0	41:51:41	0.000
Feb. 2023	6	0	0	0.0	0.0	0.0	0.0	47:48:08	0.000
Mar. 2023	4	0	0	0.0	0.0	0.0	0.0	29:48:09	0.000
Total	56	2	2	-	-	-	1.0	490:36:11	0.004

Abbreviations: Avg. = Average; Hrs. = Hours; Ind. = Individuals; Max. = Maximum; Min. = Minimum; No. = Number; Obs. = Observations.

3.2.5 Environmental Data

Table 15. Visibility during Protected Species Observations.

Species	Bad (<0.5 km)	Poor (0.5-1.5 km)	Moderate (1.5-10 km)	Good (10-20 km)	Excellent (>20 km)	Total
California Sea Lion	0	1	6	16	22	45
Coastal Bottlenose Dolphin	0	0	0	0	5	5
Harbor Seal	1	0	0	2	1	4
Unidentified Pinniped	0	0	0	2	0	2
Total	1	1	6	20	28	56

Abbreviation: km = kilometers.

Species	0	1	2	3	4	Total
California Sea Lion	4	39	1	0	1	45
Coastal Bottlenose Dolphin	0	3	0	2	0	5
Harbor Seal	0	4	0	0	0	4
Unidentified Pinniped	0	2	0	0	0	2
Total	4	48	1	2	1	56

Table 16. Beaufort Sea State Scale during Protected Species Observations.

Table 17. Sky Cover during Protected Species Observations.

Species	Clear	Partly Cloudy	Cloudy	Overcast	Hazy	Fog	Light Rain	Heavy Rain	Total
California Sea Lion	12	18	7	2	1	0	4	1	45
Coastal Bottlenose Dolphin	3	0	2	0	0	0	0	0	5
Harbor Seal	0	1	0	2	0	1	0	0	4
Unidentified Pinniped	1	0	1	0	0	0	0	0	2
Total	16	19	10	4	1	1	4	1	56

Table 18. Tidal State during Protected Species Observations.

Species	Ebb	Flood	Total
California Sea Lion	27	18	45
Coastal Bottlenose Dolphin	2	3	5
Harbor Seal	2	2	4
Unidentified Pinniped	2	-	2
Total	33	23	56

4.0 DISCUSSION

The monitoring effort summarized herein followed a monitoring effort at roughly the same location during the final phase of the construction of the new NBPL Fuel Pier as part of the final year of the NBPL Fuel Pier Replacement Project (P-151) (NAVFACSW 2018). The data described in NAVFACSW (2018) covers a similar seasonal period, October 2017 through early January 2018, totaling 49 days and 391 hours of observation time, and thus lends itself to comparison with the current monitoring efforts. However, these observations occurred during daytime only.

While the Fuel Pier Replacement Project covered a shorter time-period, monitors for that project recorded many more animals. Species observed included California sea lions (n=618 individuals), coastal bottlenose dolphins (n=13 individuals), and harbor seals (n=28 individuals). The same three species were observed during the present monitoring efforts; However, the numbers of individuals observed were fewer, with California sea lions (n=45 individuals), coastal bottlenose dolphins (n=5 individuals), harbor seals (n=4 individuals), and unidentified pinnipeds (n=2 individuals, but these were likely California sea lions). Explanations for these differences include the following. Firstly, the dredging that occurred as part of this Project necessitated night work, which constituted 21 out of the 56 days (37.5%) of the monitoring. All the marine mammals

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present with regularity within San Diego Bay are diurnal, thus it is likely that animals were simply inactive during these nighttime monitoring efforts and remained unobservable. Moreover, while there was only a single PSO during both monitoring efforts, acoustics were collected as part of the Fuel Pier Replacement Project (NAVFACSW 2018) which increased the number of personnel on site to aid the lead PSO in potential observations. The number of California sea lions observed during the Fuel Pier Replacement Project (NAVFACSW 2018) showed a drop-off in observations per observer hour from 2.9 and 1.75 in October and November respectively, to 0.30 and 0.85 in December and January, respectively. After adjusting of observer effort during the current monitoring efforts, California sea lion activity in the Project area observed in November 2022 (0.020) and December 2022 (0.196) seems to more closely mirror activity levels observed in December 2017 and January 2018 during the Fuel Pier Replacement Project (NAVFAC SW 2018). This data indicates that there continues to be a drop in the numbers of California sea lions in the winter months.

Observations of coastal bottlenose dolphins and harbor seals were low on an individuals per observer hour basis during the entire monitoring period for the Project (see Table 9 and Table 13, respectively). This was largely mirrored in the Fuel Pier Replacement Project (NAVFACSW 2018), albeit with increases in individuals per day in December for harbor seals, and slight increases in individuals per day in November and December.

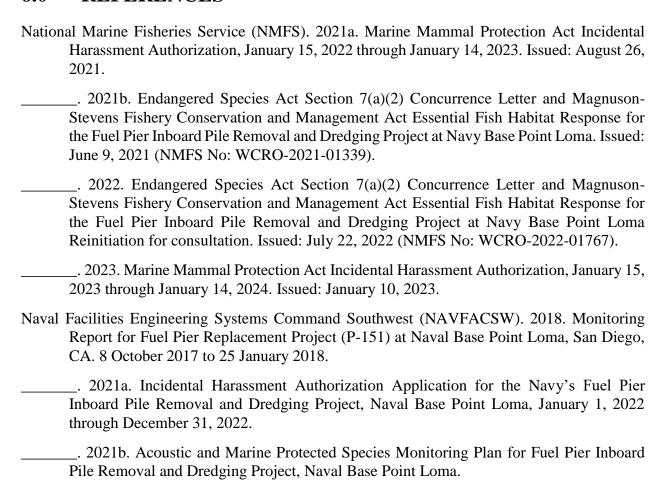
Observations relative to the Project activities were relatively consistent across activities (see Table 3). With so few data points for the coastal bottlenose dolphins and harbor seals, the California sea lions observations are the best indication of the impact of Project-related activities. When looking at the California sea lion data, there were 20 individuals (44.4%) observed during in-water activities (dredging or pile removal) and 25 individuals (55.6%) observed during non-activity monitoring (Precon or Pre/Post). While this does show some slight difference between activity and non-activity monitoring efforts, identifying definitive trends is not possible with so few observations throughout the duration of the Project. However, when looking at the raw numbers as they are presented in the data, it does appear that California sea lions were not impacted by the Project-related activities. Furthermore, as indicated by the fact that shutdowns occurred when marine mammals entered the designated 20 m (66 ft) shutdown zone, the best management practices that were established as part of the ESA consultation were successfully implemented.

5.0 CONCLUSION

Because no activities occurred that were covered in the IHA, no MMPA Level A or Level B "take" occurred during the Project-related activities. Furthermore, shutdown procedures were successfully implemented. While the marine species monitoring protocols were designed to reduce the potential for a Project-related impact to green sea turtles, no sea turtles were observed during any of the Project-related activities. Therefore, the Navy has determined that this Project did not have an impact on marine species in the vicinity of the Project.

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6.0 REFERENCES



References References