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U.S. Army Corps of Engineers  
Attn: Ms. Natalie Martinez-Takeshita  
915 Wilshire Blvd, Suite 930  
Los Angeles, CA 90017-3401

### **San Luis Breakwater Repair Project Incidental Harassment Authorization (IHA) Preliminary Monitoring Report**

Dear Ms. Martinez-Takeshita:

#### **PURPOSE AND INTRODUCTION**

The Army Corps of Engineers (Corps) is completing the Port San Luis Breakwater Repair Project (Project). The Project includes breakwater repairs, minor excavation of sediment adjacent to the breakwater to provide equipment access, placement of the excavated material, and restoration and establishment of eelgrass to offset impacts. The Corps retained Connolly-Pacific Company (C-P) to complete the repairs under Contract No. W912PL-21-C-0033. Merkel & Associates Inc. (M&A) was retained by C-P to conduct marine mammal monitoring in support of the work in compliance with conditions of the Incidental Harassment Authorization (IHA) issued for the project. The IHA is valid from April 1, 2022, through March 31, 2023. Work is being conducted over two seasons. The first season work was initiated on June 22, 2022 and continued through October 13, 2022. The second season work is anticipated to begin in May/June of 2023 and continue for approximately 3 – 5 months. This is contingent upon request for, and approval of, a one-time, one-year renewal of the IHA as detailed in Section 8 of the IHA.

Work completed during the 2022 season included excavation of the access corridor along the inside margin of the breakwater, placement of material within the reuse area designed to support eelgrass restoration, and breakwater repairs out to approximately Station 8+50. During the 2023 season, it is anticipated that work will be completed from Station 8+50 to the end of the project near Station 18+00.

Marine mammal monitoring was conducted by 5 M&A protected species observers (PSO) on 80 days between June 22 and October 12, during the period of in-water work. Of these days, 34 involved excavation and placement of sediment to gain access to complete rock work and 46 involved rock placement work. Appendix 1 provides details of this monitoring, including: dates and times of monitoring, construction activities occurring during monitoring, PSO locations during monitoring, and environmental conditions during monitoring.

During the course of monitoring, a total of 628 data entries were made with 1,332 marine mammals being recorded by the observers. A total of six species were observed during the surveys. This included two cetacean species (humpback whale and bottlenose dolphin), three pinnipeds including two phocids (harbor seal and elephant seal), and one Otariid (California sea lion). Finally, one species from the order carnivora (California sea otter) was observed (Table 1). Observations ranged from individual marine mammals to two groups of approximately 40 sea lions. Appendix 2 provides details of all marine mammal observations during monitoring.

Included in the observations were observations of 10 dead and 3 sick/injured California sea lions. There were no fatalities or injuries attributed to the work activities, rather, most of the animals were identified as victims of shark bites. In addition to animals at or near the work area, there was one other reported injured sea lion at the docks at the Port San Luis Hartford Pier that showed shark bite injuries. These were not included in the present summary.

**Table 1. Summary of Marine Mammals Observed**

Species Observed	Number Observed
California Sea Lion	1,111
California Sea Otter	121
Bottle Nose Dolphin	58
Humpback Whale	25
Harbor Seal	15
Elephant Seal	1
Unidentified Marine Mammal	1

#### MONITORING METHODS

Marine mammal monitoring was conducted by a dedicated PSO that conducted continuous monitoring during all construction activities, as well as during a period of 30 minutes prior to and following construction activities conducted on a daily basis. All work was conducted during daylight hours. Monitoring was aided by binoculars, a spotting scope, and a range finder with integrated compass. Data were collected on pre-prepared data sheets.

Work was conducted by Merkel & Associates, retained by the Contractor to work directly with the Army Corps of Engineers project biologist, Natalie Martinez-Takeshita, to support compliance with environmental requirements for the project. The PSO was provided authority to stop work to achieve compliance with the requirements of permit conditions and specifically conditions of the IHA.

The PSO was positioned on the Derrick Barge Long Beach (DBLB) from which work was conducted. The DBLB has a length of 255 feet and a beam of 76 feet. The barge sits approximately 8 feet above the water. The PSO moved freely around the vessel allowing observations to be made from multiple locations, including some elevated positions. For purposes of monitoring, there were eight positions from which observations were made and reported. These included eight defined locations: port stern (PS), stern (S), starboard stern (SS), mid-starboard (MS), starboard bow (SB), bow (B), port bow (PB), and mid-port (MP).



*View of placement area from Starboard Stern of the DB Long Beach*

The positioning of the barge for rock placement was consistently oriented stern to the rock and was then moved along the breakwater in this consistent orientation to conduct the work. Rock work commenced on the inshore end of the breakwater and progressed towards the seaward end in accordance with the intent of starting away from the primary California sea lion haul-out areas located near the head of the breakwater. For purposes of establishing shutdown zones, the work area was defined as a 60-meter diameter area at the stern of the DBLB that covered the overwater swing radius of the crane, the rock placement area, and the end of the material barge side-tied to the DBLB (Figure 1). Around this work area, the 10-meter minimum shutdown area was defined. From the work area, concentric radii circles were buffered out to define the 25-, 50-, 100- and 200-meter distances from the work area. In addition, compass directions were added to the graphic to allow rapid blunder checks of bearings derived from the range finder.

Because the barge orientation from the work area was fixed, observations made from each of the monitoring locations had fixed bearing and distances from the work area. The PSOs made observations of mammal distance and bearings from their observation points, and the distance and bearing of the animal to the work area was later calculated from the geometry of the bearing and distances from the PSO to the animal and the PSO to the work area. While this subsequent analysis provides a better estimate of the distance between animal and work, it did lead to a very small number of errors in the estimation of shutdown distances. In one case a shutdown was triggered before it was actually required by the IHA, and in two instances, shutdowns should have been triggered but were not because the distance between the observer and the animal was greater than the shutdown distance, but the distance between animal and work was slightly less than the shutdown distance. These cases are noted below.

Finally, disturbance levels were recorded for animals hauled out within the work area and minimum shutdown area using the three Levels of Pinniped Behavioral Disturbance table included within the IHA (Table 2). This behavioral disturbance classification was not applied to animals that were in the water as none of the definitions fit animals that are in the water.

**Table 2. IHA Defined Levels of Pinniped Behavioral Disturbance**

Level	Type of response	Definition
1	Alert	Seal head orientation or brief movement in response to disturbance, which may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, changing from a lying to a sitting position, or brief movement of less than twice the animal's body length.
2	Movement	Movements in response to the source of disturbance, ranging from short withdrawals at least twice the animal's body length to longer retreats over the beach, or if already moving a change of direction of greater than 90 degrees.
3	Flush	All retreats (flushes) to the water.

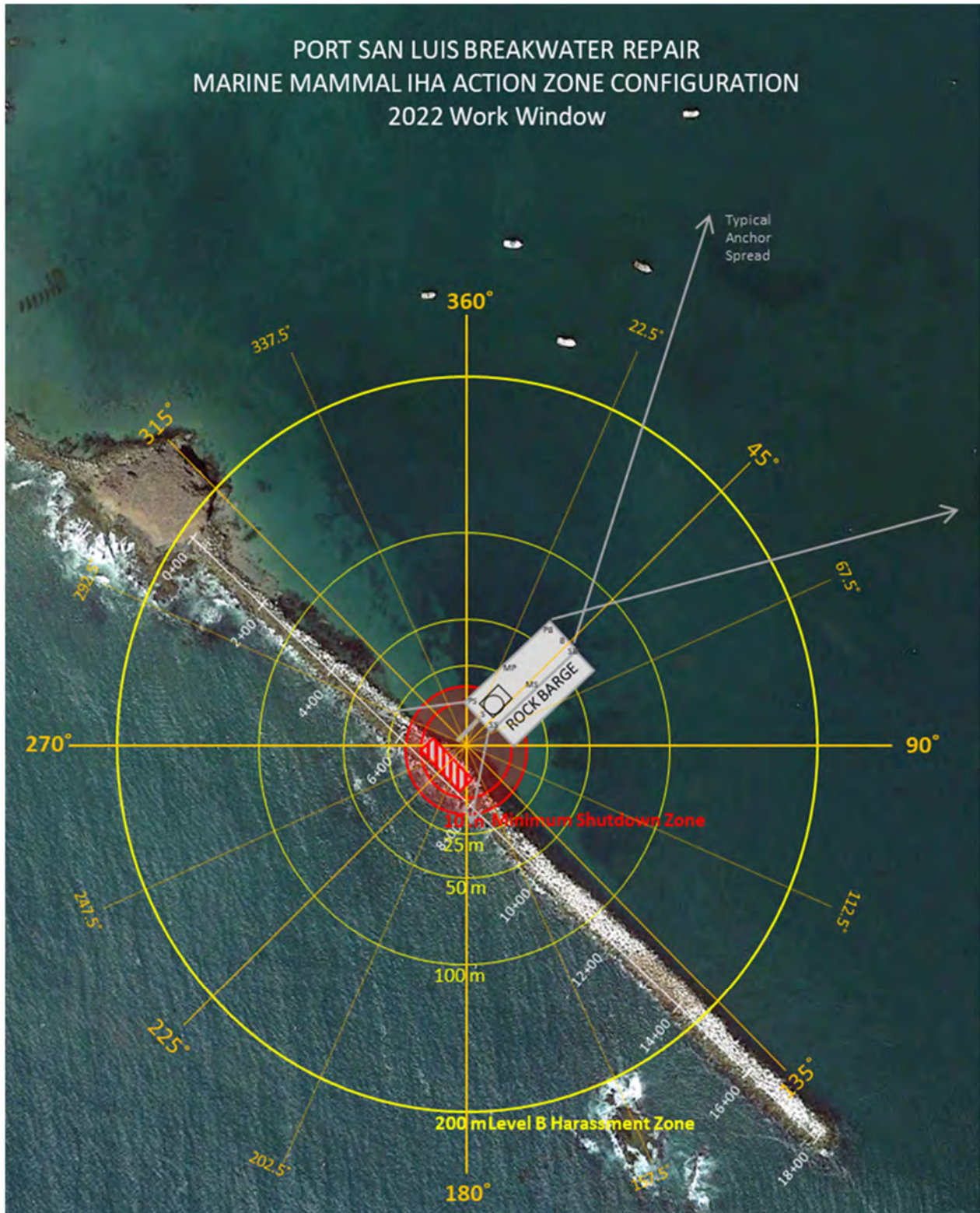


Figure 1. Barge Configuration for Rock Placement identifying Shutdown Zones



**MONITORING RESULTS**

California sea lions (CSL) dominated the mammal observations made with a mix of adult, juvenile, and unknown age groups (Table 3). The animals observed were dominated by adults, however juvenile animals, mixed groups, and unknown age classes were also represented. The second most abundant animal observations were of California sea otter (CSO). Bottlenose dolphin were the third most abundant, although these were typically in small groups such that only 14 observations were made through the period of work.

**Table 3. Age class distribution of mammals observed**

Row Labels	Adult	Juvenile	Mixed	Unknown	Grand Total
Humpback Whale	19	1		5	25
Bottlenose Dolphin	44	1		13	58
Elephant Seal		1			1
Harbor Seal	14			1	15
California Sea Lion	530	226	249	93	1098
Dead California Sea Lion	8			2	10
Sick California Sea Lion	1	1		1	3
CSO	105	2		14	121
Unknown				1	1
<b>Grand Total</b>	<b>721</b>	<b>232</b>	<b>249</b>	<b>130</b>	<b>1332</b>

During the course of monitoring, multiple project activities were undertaken including periods of no in-water work (on-board meetings, lunch time breaks, attaching buckets, cable and line repairs, weighing rocks, standby time, equipment mobilization and repairs, etc.). There were also daily pre- and post-construction mammal surveys and work activities that can be attributed to sediment excavation and placement to access the breakwater repairs, actual rock handling and placement, and finally vessel or equipment positioning. Individual summaries of activities are included in Appendix 2, while the field note details are included within the data sheets in Appendix 3. Table 4 summarizes the distribution of observed animal counts across periods of work activities.

**Table 4. Mammal Counts during different periods of activities.**

Nature of Activities	Counts of Mammals by Activities									Total
	HBW	BD	ES	HS	CSL	Dead CSL	Sick CSL	CSO	Unk	
No in-water work	2	17		1	66	1	1	20		108
Pre/Post-Construction Survey	4	6		5	275	1		20		311
Rock Placement	17	3	1	6	365	4	1	33		430
Excavation/Placement	2	26		3	366	3	1	37	1	438
Vessel or Equipment Positioning		6			28	1		11		45
<b>Grand Total</b>	<b>25</b>	<b>58</b>	<b>1</b>	<b>15</b>	<b>1,098</b>	<b>10</b>	<b>3</b>	<b>121</b>	<b>1</b>	<b>1,332</b>

Of the animals observed during the monitoring period, a total of 998 were observed within 200 meters of the project activities, the Level B Harassment Zone (Table 5). Of these, 33 were bottlenose dolphins. A total of 22 bottlenose dolphin entered the 200-meter Level B Harassment Zone during active construction activities. All entry was during sediment excavation and placement work. Shutdown of operations occurred with each of the during construction encroachments for an aggregate of 6 minutes of shutdown, as these animals were typically passing through but not lingering in the area.

**Table 5. Count of Mammals inside 200-meter Level B Harassment Zone by Construction Activity**

Nature of Activity	Count of Animals Inside 200m Level B Harassment Zone							Total
	BD	HS	CSL	Dead CSL	Sick CSL	CSO	Unk.	
No in-water work	6		65	1	1	12		85
Pre/Post-Construction Survey	5	5	245	1		18		274
Rock Placement		6	224	3	1			234
Sediment Excavation/Placement	22	3	342	3	1	7	1	379
Vessel or Equipment Positioning			25	1		1		27
<b>Grand Total</b>	<b>33</b>	<b>14</b>	<b>901</b>	<b>9</b>	<b>3</b>	<b>38</b>	<b>1</b>	<b>999</b>

A total of 38 California sea otters were observed inside the 200-meter Level B Harassment Zone. Of these, 8 entered during active construction work. An all shutdown occurred for 5 of these otter occurrences within the 200-meter Level B Harassment Zone. On July 29<sup>th</sup>, two otters were floating together at an estimated distance of 193 meters from the work. However, the PSO measured the

distance to the animal from a different vantage point on the barge at 250 meters. It was in post-calculation of distance and bearing of the animal to the work area that the shorter distance was determined. No disturbance of these animals was noted. A second occurrence of non-shutdown occurred on September 30. At that time, the otter was spotted at 80 meters from activities to reposition a barge. Work stoppage would have been unsafe due to winds and the free barges. As such, the repositioning was allowed to be completed. The animal did not alter behavior during the move. Work stoppages led to a total of 17 minutes of stand down time.

No modifications of activities occurred for harbor seal, California sea lion within the 200-meter Level A Harassment Zone but outside of the 10-meter minimum shutdown zone.

A total of 51 marine mammals were observed within 10 meters of the crane work area, the Minimum Shutdown Zone (Table 6). For animals for which take has been authorized (harbor sea, Steller sea lion, and California sea lion), shutdowns were limited to animals entering the 10-meter Minimum Construction Shutdown Zone during active construction in the water. This occurred for a total of 30 California sea lions including three dead sea lions and one sick/injured sea lion.

**Table 6. Count of Mammals inside 10-meter Minimum Shutdown Zone**

Nature of Activity	Count of Mammals in 10-m Minimum Shutdown Zone					Total
	CSL	Dead CSL	Sick CSL	CSO	Unknown	
No in-water work	14			1		15
Pre/Post-Construction Survey	6					6
Rock Placement		2				2
Sediment Excavation/Placement	25	1	1		1	28
<b>Grand Total</b>	<b>45</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>51</b>

A total of 25 separate incursions events (some included multiple animals) into the shutdown zone occurred; and in 24 instances, an all stop was called by the PSO. In one instance on July 8, the PSO believed the animal to be greater than 10 meters from the shutdown zone based on the measured distance and bearing from the observer. However, in post-process analysis, the geometry suggested the animal was within 5 meters of the work area, rather than the 15 measured by the PSO from their vantage point. In addition, one shutdown occurred with a dead animal outside of the minimum shutdown zone in order to provide PSO time to investigate the dead animal and determine if it was related to the project work. This shutdown was a 12-minute stop work. In total, the 25 shutdowns occurred for a total down time of 101 minutes. The shutdowns ranged in length from 1 minute to 25 minutes. Shutdowns occurred for the time it took for animals to clear the area or for the time the PSO was engaged in investigation of and coordination on sick or dead animals in the area. In most cases, sick and dead animals were tracked into the area from well outside of the work zone. In most cases, they suffered from or likely succumbed to shark bites, as discussed below. None of the injuries or losses of marine mammals are attributed to the construction activities.

On September 16, 2022, one CSL moved onto the rock directly within the rock placement area during a lunch break. This animal remained in the rock placement area through lunch. The PSO contacted Keith Merkel for direction on what course of action to take. The PSO was advised to approach the animal slowly and see if it leaves the rock and the work zone. This was done by skiff and the animal flushed to the water, without physical contact. This was recorded as a Level 3 pinniped behavioral disturbance.

One unknown marine mammal was recorded on July 28 entering into the 10-meter Minimum Shutdown Zone. This animal was spotted by the crane operator, who stopped work, and notified the PSO that did not see the animal. The animal is presumed to be a California sea lion, but may have been a harbor seal. The crane operator reported that he saw something briefly but could not identify it and said it looked like a “seal”. However, “seal” is the standard terminology for all pinnipeds to the construction crew, so the animal was reported as unknown. This animal was not observed to surface, and after a 15-minute shutdown period, work resumed.

### MARINE MAMMAL INCIDENTS

No marine mammal injuries or fatalities were attributed to the breakwater work during the 2022 field season. However, marine mammal incident forms were prepared for 13 dead or sick/injured sea lions. While the reports do not document incidents with the present work, they do serve to document how sick and dead animals were handled as they entered the work area, or what notifications and actions were taken for animals outside of the work zone but picked up in monitoring activities. These incident reports are found within Appendix 4 and are summarized in Table 7.

Not all injured sea lions were documented in the incident reports. Those that were included were those that were likely to succumb to injuries, or those for which behavior was modified from that expected. The injured sea lions tended to swim into the work area and hang close to the operations and in once case died after moving into the area.

The area of work occurs on the California central coast in an area with considerable great white shark activity and many of the sea lions at the site have evidence of past encounters with sharks including old bite mark scars and mission flipper tips. The animals for which incident reports were prepared show fresh shark injuries, advanced decomposition, or no injuries at all but a high degree of lethargy.

Three of the sick animals (potentially only two as one may have been the same animal viewed the next day) appeared to seek out proximity to the work vessels, staying close to the barge for an extended period. One of these eventually swam into an open tire bumper where it expired without any physical trauma or harassment actions.



*Shark posting at Port San Luis*



**Table 7. Dead, Sick/Injured California Sea Lions Reported in Monitoring Program**

Date	Status	Notes
6/23/2022	Sick, unknown	CSL with no obvious injury but bobbing and sickly. NMFS West Coast Region Stranding Coordinator, Justin Visbicke was contacted. PSO was advised there was no need to call wildlife rescue if animal was in water and swimming.
6/24/2022	Sick, juvenile	Bobbing, sickly CSL. Potentially same one as the prior day. Swam away.
7/10/2022	Dead, adult female	Dead CSL observed on sediment barge. Picked up in clam bucket. Animal was in a state of early decomposition with odor, and skin lesions. The condition of the carcass suggested it to be a few days old.
7/11/2022	Sick then Dead, adult female	Observed a lethargic, floating CSL for about 30 minutes as it milled around and approached bow. CSL swam into tire bumper at waterline. It was not trapped. PSO was told by crew that it appeared dead. Confirmed death and disposed of body offshore after direction received from NMFS stranding coordinator.
7/11/2022	Dead, adult unknown gender	Observed dead CSL floating along breakwater. Advanced decomposition. Not project related. Animal was not relocated a few minutes later.
7/27/2022	Dead, adult unknown gender	Deceased and floating in from outside of work area.
8/4/2022	Dead, unknown age class, unknown gender	Dead, no obvious injuries, appears to have been dead a while, non-project related.
8/6/2022	Dead, unknown age class, unknown gender	Observed floating body. Took skiff to examine. ID'd CSL, heavily decayed, unrelated to project. Body ¼ completely decayed and bird crap on body.
8/16/2022	Dead, unknown age class, unknown gender	Dead CSL. Heavily decayed. Non-project-related.
8/19/2022	Sick, adult female	Lethargic; large area of skin tissue and fat missing from dorsoventral area.
8/26/2022	Dead, adult, unknown gender	Dead. Non-work -related, heavily decayed. No head, no hindquarters, dead for weeks.
9/17/2022	Dead Adult, unknown gender	Dead. Non-work -related, heavily decayed. No head, hind quarters, dead for weeks.
9/19/2022	Dead, adult, unknown gender	Dead. Heavy decay; large tumor present. Non-project related.

## 2022 CONSTRUCTION SEASON TAKE SUMMARY

A total of 639 marine mammals encroached within the 200-meter IHA Level B Harassment Zone during periods of active construction. Construction shutdowns occurred when bottlenose dolphin and California sea otter entered the 200-meter Level B Harassment Zone, and these are not believed to have been subject to any harassment take. Most of the California sea lions and all of the harbor seals entering the 200-meter Level B Harassment Zone were in the water and exhibited no identified behavioral disturbance. Dead sea lions were, in all cases, considered to be unrelated to the project work and are not considered to have been harassed or otherwise taken. One sea lion was approached within the work zone by skiff and flushed to the water. This constitutes the only observed behavioral response and was considered a Level 3 harassment.

In addition to shutdowns within the 200-meter Level B Harassment Zone for species for which take was not authorized. There were 25 additional shutdown periods for animals encroaching into the 10-meter minimum shutdown zone, or shutdowns allowing the PSO to investigate sick or dead animals. In total, there were 34 PSO initiated shutdowns totaling 139 minutes.

Table 8 summarizes the count of mammals, by species that were subject to potential exposure to harassment due to project work activities during the 2022 work window. Included in this total are animals for which no behavioral effects were observed and one individual CSL that was considered to have a level three behavioral disturbance.

**Table 8. Count of Mammals inside 200-meter Level B Harassment Zone During Active Work**

Nature of Activity	Unmitigated Count of Animals Inside 200m Level B Harassment Zone				Total
	HS	CSL	Sick CSL	Unknown	
Rock Placement	6	224	1		231
Sediment Excavation/Placement	3	342	1	1	347
Vessel or Equipment Positioning		25			25
<b>Grand Total</b>	<b>9</b>	<b>591</b>	<b>2</b>	<b>1</b>	<b>603</b>

The Authorized Incidental Take for the project, as summarized in Table 1 of the IHA, is provided in Table 9. The Take occurring in 2022 is summarized numerically and as a percentage of the authorized take in Table 10.

**Table 9. Authorized Level B Incidental Take under the project IHA**

Common name	Scientific name	Stock	Level A harassment	Level B harassment
Harbor seal	<i>Phoca vitulina</i>	California	0	1,797
Steller sea lions	<i>Eumetopias jubatus</i>	Eastern DPS	0	3,355
California sea lion	<i>Zalophus californianus</i>	U.S.	0	52,557

**Table 10. 2022 Level B Harassment Take Levels**

Common name	Authorized Level B harassment	2022 Level B Harassment	Level A harassment	2022 % of Authorized
Harbor seal	1,797	10*	0	0.55%
Steller sea lions	3,355	0	0	
California sea lion	52,557	593	0	1.11%

\*Unknown was attributed to Harbor Seal as it is the lowest authorized take level

Authorized Level B harassment levels are substantially higher than the 2022 take levels. This is not completely unexpected as the project work was initially planned and was executed to advance from the root area of the breakwater that supports very little marine mammal work towards the head of the breakwater that is more heavily used by marine mammals on the rocks. It is expected that the 2023 construction period will experience more substantial Level B Harassment take, and much higher numbers of sea lions. Because animals haul out at the head of the breakwater, it is also anticipated that there will be a shifting pattern from animals in the water, nearly exclusively as was seen in 2022, to a mix of sea lions on the breakwater and in the water. It is also anticipated that the number of instances of sea otter encroachment into the 200-meter Level B Harassment Zone will decline, but bottlenose dolphins will increase.

This preliminary report is to support a request for continued work to complete the breakwater repairs in 2023. If you have any questions regarding the results of this investigation, please contact me.

Sincerely,



Keith W. Merkel  
Principal Consultant

**APPENDIX 1. DATES AND TIMES OF MARINE MAMMAL MONITORING**



**Appendix 1. Dates and Time of Marine Mammal Monitoring for the Port San Luis Breakwater Repair Project**

DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
06-22-2022	07:17 – 15:04	Weather: 80-40%cc Wind: 1-3 BS Temperature: 53-64°F Sea State: 0-1 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
06-23-2022	06:51 – 17:54	Weather: 80-15%cc Wind: 0-3 BS Temperature: 58-64°F Sea State: 0-0 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
06-24-2022	06:48 – 16:06	Weather: 90-20%cc Wind: 0-3 BS Temperature: 50-61°F Sea State: 0-1 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
06-25-2022	06:23 – 18:40	Weather: 100-15%cc Wind: 0-2 BS Temperature: 53-60°F Sea State: 0-1 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
06-26-2022	06:19 – 17:20	Weather: 100-0%cc Wind: 0-3 BS Temperature: 54-66°F Sea State: 0-3 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge
06-27-2022	06:10 – 16:50	Weather: 100-0%cc Wind: 1-2 BS Temperature: 55-64°F Sea State: 0-1 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge
06-28-2022	06:12 – 16:57	Weather: 100-0%cc Wind: 0-1 BS Temperature: 55-69°F Sea State: 0-1 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge

DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
06-29-2022	06:12 – 17:27	Weather: 15-5%cc Wind: 0-3 BS Temperature: 55-63°F Sea State: 0-2 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
06-30-2022	06:13 – 17:19	Weather: 100-0%cc Wind: 0-4 BS Temperature: 54-62°F Sea State: 0-3 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-01-2022	06:11 – 17:21	Weather: 80-0%cc Wind: 1-4 BS Temperature: 53-60°F Sea State: 0-4 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-02-2022	06:14 – 14:00	Weather: 90-5%cc Wind: 1-4 BS Temperature: 54-58°F Sea State: 0-4 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-06-2022	06:11 – 17:20	Weather: 90-0%cc Wind: 2-4 BS Temperature: 59-66°F Sea State: 0-3 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-07-2022	06:18 – 16:50	Weather: 90-0%cc Wind: 2-6 BS Temperature: 58-66°F Sea State: 0-5 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-08-2022	06:14 – 17:22	Weather: 100-60%cc Wind: 2-3 BS Temperature: 55-66°F Sea State: 1-1 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-09-2022	06:11 – 17:32	Weather: 100-10%cc Wind: 1-4 BS Temperature: 55-66°F Sea State: 0-4 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge

DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
07-10-2022	06:17 – 17:27	Weather: 100-0%cc Wind: 1-3 BS Temperature: 57-69°F Sea State: 1-1 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge
07-11-2022	06:08 – 17:38	Weather: 100-50%cc Wind: 1-2 BS Temperature: 54-69°F Sea State: 1-1 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge
07-12-2022	06:13 – 17:27	Weather: 100-50%cc Wind: 1-3 BS Temperature: 55-62°F Sea State: 0-2 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge
07-13-2022	06:18 – 17:20	Weather: 100-10%cc Wind: 1-4 BS Temperature: 57-61°F Sea State: 1-3 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-14-2022	06:17 – 16:57	Weather: 100-10%cc Wind: 2-4 BS Temperature: 57-62°F Sea State: 1-3 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-15-2022	06:17 – 17:27	Weather: 30-0%cc Wind: 1-4 BS Temperature: 55-65°F Sea State: 1-4 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-17-2022	06:18 – 17:28	Weather: 100-50%cc Wind: 1-4 BS Temperature: 53-64°F Sea State: 1-3 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-20-2022	06:11 – 17:15	Weather: 100-0%cc Wind: 1-4 BS Temperature: 55-69°F Sea State: 1-4 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge

DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
07-22-2022	06:15 – 17:10	Weather: 100-10%cc Wind: 1-4 BS Temperature: 54-71°F Sea State: 1-2 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge
07-23-2022	06:16 – 17:21	Weather: 80-10%cc Wind: 1-5 BS Temperature: 54-62°F Sea State: 1-5 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-24-2022	06:18 – 17:18	Weather: 100-5%cc Wind: 1-4 BS Temperature: 54-59°F Sea State: 0-3 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-25-2022	06:20 – 17:38	Weather: 100-10%cc Wind: 1-3 BS Temperature: 54-60°F Sea State: 0-2 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
07-26-2022	06:30 – 17:23	Weather: 100-0%cc Wind: 1-4 BS Temperature: 56-62°F Sea State: 1-3 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge
07-27-2022	06:15 – 17:42	Weather: 100-0%cc Wind: 1-5 BS Temperature: 56-66°F Sea State: 1-5 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge
07-28-2022	06:13 – 17:44	Weather: 100-25%cc Wind: 1-3 BS Temperature: 57-66°F Sea State: 1-3 BS	Excavation / Placement	Not Applicable	Jennifer Klaib	Barge
07-29-2022	06:18 – 14:00	Weather: 100-90%cc Wind: 1-2 BS Temperature: 56-64°F Sea State: 1-2 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge



DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
08-04-2022	06:14 – 15:55	Weather: 100-60%cc Wind: 0-4 BS Temperature: 58-61°F Sea State: 1-3 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
08-05-2022	06:13 – 16:06	Weather: 100-40%cc Wind: 1-5 BS Temperature: 58-65°F Sea State: 1-4 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
08-06-2022	06:15 – 12:02	Weather: 100-10%cc Wind: 2-3 BS Temperature: 60-64°F Sea State: 1-3 BS	Excavation / Placement	Not Applicable	Jessica Lotts	Barge
08-10-2022	06:22 – 13:30	Weather: 100-10%cc Wind: 1-3 BS Temperature: 58-69°F Sea State: 1-2 BS	Breakwater Repairs	11 A-16 to Barge	Jessica Lotts	Barge
08-11-2022	06:16 – 17:29	Weather: 100-10%cc Wind: 1-2 BS Temperature: 57-68°F Sea State: 1-2 BS	Breakwater Repairs	22 A-8 to Barge	Jessica Lotts	Barge
08-12-2022	06:15 – 16:25	Weather: 100-0%cc Wind: 1-4 BS Temperature: 58-71°F Sea State: 1-2 BS	Breakwater Repairs	30 Reset	Jennifer Klaib	Barge
08-13-2022	06:20 – 17:25	Weather: 0-0%cc Wind: 1-4 BS Temperature: 57-73°F Sea State: 1-2 BS	Breakwater Repairs	21 A-16 Reset 17 A-8 Reset	Jennifer Klaib	Barge
08-14-2022	06:15 – 17:25	Weather: 100-0%cc Wind: 1-4 BS Temperature: 57-65°F Sea State: 1-2 BS	Breakwater Repairs	15 A-16 Reset 28 A-8 Reset	Jennifer Klaib	Barge

DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
08-15-2022	06:16 – 17:28	Weather: 100-0%cc Wind: 1-3 BS Temperature: 54-61°F Sea State: 1-2 BS	Breakwater Repairs	8 A-16 Reset 38 A-8 Reset 21 A-8 to Barge 5 A-8 from Barge	Jessica Lotts	Barge
08-16-2022	06:13 – 16:43	Weather: 100-50%cc Wind: 1-2 BS Temperature: 52-62°F Sea State: 1-2 BS	Breakwater Repairs	8 A-16 Reset 30 A-8 Reset	Jessica Lotts	Barge
08-17-2022	06:21 – 16:38	Weather: 100-100%cc Wind: 1-3 BS Temperature: 54-56°F Sea State: 0-0 BS	Breakwater Repairs	13 A-16 Reset 30 A-8 Reset	Edward Ervin	Barge
08-18-2022	06:21 – 17:05	Weather: 100-5%cc Wind: 1-3 BS Temperature: 53-57°F Sea State: 1-3 BS	Breakwater Repairs	8 A-16 Reset 21 A-8 Reset	Edward Ervin	Barge
08-19-2022	06:22 – 16:20	Weather: 100-0%cc Wind: 1-2 BS Temperature: 54-64°F Sea State: 1-1 BS	Breakwater Repairs	8 A-16 Reset 19 A-8 Reset	Edward Ervin	Barge
08-20-2022	06:23 – 16:20	Weather: 100-100%cc Wind: 1-1 BS Temperature: 57-63°F Sea State: 1-1 BS	Breakwater Repairs	4 A-16 Reset 4 A-8 Reset 12 A-8 from Barge	Edward Ervin	Barge
08-22-2022	06:21 – 16:20	Weather: 100-10%cc Wind: 1-1 BS Temperature: 53-61°F Sea State: 1-1 BS	Breakwater Repairs	5 A-16 Reset 18 A-8 Reset 6 A-8 from Barge	Edward Ervin	Barge
08-23-2022	06:14 – 17:15	Weather: 100-0%cc Wind: 1-2 BS Temperature: 56-65°F Sea State: 1-3 BS	Breakwater Repairs	5 A-16 Reset 16 A-8 Reset 7 A-8 from Barge	Jessica Lotts	Barge

DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
08-24-2022	06:14 – 17:25	Weather: 100-40%cc Wind: 2-4 BS Temperature: 55-65°F Sea State: 2-3 BS	Breakwater Repairs	4 A-8 Reset 6 A-8 from Barge	Jessica Lotts	Barge
08-25-2022	06:14 – 17:24	Weather: 100-90%cc Wind: 1-2 BS Temperature: 53-64°F Sea State: 2-3 BS	Breakwater Repairs	2 A-16 Reset 21 A-8 Reset 14 A-8 from Barge	Jessica Lotts	Barge
08-26-2022	06:13 – 17:00	Weather: 100-40%cc Wind: 1-3 BS Temperature: 54-66°F Sea State: 2-3 BS	Breakwater Repairs	11 A-16 Reset 24 A-8 Reset 9 A-8 to Barge	Jessica Lotts	Barge
08-28-2022	06:11 – 14:55	Weather: 100-10%cc Wind: 1-2 BS Temperature: 56-63°F Sea State: 1-2 BS	Breakwater Repairs	13 A-16 Reset 20 A-8 Reset	Jessica Lotts	Barge
08-29-2022	06:13 – 17:21	Weather: 25-0%cc Wind: 1-3 BS Temperature: 53-65°F Sea State: 2-3 BS	Breakwater Repairs	8 A-16 Reset 17 A-8 Reset 4 A-8 from Barge	Jessica Lotts	Barge
08-30-2022	06:14 – 17:30	Weather: 25-0%cc Wind: 1-4 BS Temperature: 53-71°F Sea State: 1-4 BS	Breakwater Repairs	4 A-16 Reset 7 A-8 Reset 10 A-8 to Barge	Jessica Lotts	Barge
08-31-2022	06:11 – 16:56	Weather: 10-0%cc Wind: 1-3 BS Temperature: 55-70°F Sea State: 1-3 BS	Breakwater Repairs	11 A-16 Reset 29 A-8 Reset 6 A-8 from Barge	Jessica Lotts	Barge
09-01-2022	06:10 – 15:14	Weather: 10-5%cc Wind: 1-2 BS Temperature: 57-68°F Sea State: 1-2 BS	Breakwater Repairs	2 A-16 Reset 17 A-8 Reset 9 A-8 from Barge	Jessica Lotts	Barge

DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
09-02-2022	06:11 – 10:05	Weather: 100-100%cc Wind: 1-1 BS Temperature: 56-58°F Sea State: 2-2 BS	Breakwater Repairs	2 29 A-16 Reset A-8 Reset	Jessica Lotts	Barge
09-07-2022	06:13 – 14:18	Weather: 100-0%cc Wind: 1-2 BS Temperature: 61-79°F Sea State: 1-3 BS	Breakwater Repairs	4 8 A-16 Reset A-8 Reset	Jessica Lotts	Barge
09-08-2022	06:13 – 17:00	Weather: 100-20%cc Wind: 1-2 BS Temperature: 58-69°F Sea State: 1-2 BS	Breakwater Repairs	8 A-8 Reset	Jessica Lotts	Barge
09-09-2022	06:11 – 17:00	Weather: 50-90%cc Wind: 1-1 BS Temperature: 64-74°F Sea State: 1-2 BS	Breakwater Repairs	5 9 A-16 Reset A-8 Reset	Jessica Lotts	Barge
09-10-2022	06:14 – 16:25	Weather: 90-90%cc Wind: 2-2 BS Temperature: 66-76°F Sea State: 2-2 BS	Breakwater Repairs	0	Jessica Lotts	Barge
09-11-2022	06:12 – 17:15	Weather: 100-50%cc Wind: 1-2 BS Temperature: 69-76°F Sea State: 1-2 BS	Breakwater Repairs	13 40 A-16 Reset A-8 Reset	Jessica Lotts	Barge
09-12-2022	06:13 – 17:30	Weather: 20-40%cc Wind: 1-2 BS Temperature: 60-64°F Sea State: 1-2 BS	Breakwater Repairs	11 29 A-16 Reset A-8 Reset	Jessica Lotts	Barge
09-13-2022	06:12 – 17:00	Weather: 100-0%cc Wind: 1-4 BS Temperature: 60-68°F Sea State: 1-4 BS	Breakwater Repairs	9 19 A-16 Reset A-8 Reset	Jessica Lotts	Barge



DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
09-14-2022	06:14 – 17:07	Weather: 0-0%cc Wind: 2-5 BS Temperature: 58-67°F Sea State: 1-4 BS	Breakwater Repairs	9 29 A-16 Reset A-8 Reset	Jessica Lotts	Barge
09-16-2022	06:12 – 15:15	Weather: 30-0%cc Wind: 2-5 BS Temperature: 56-67°F Sea State: 1-4 BS	Breakwater Repairs	0	Jessica Lotts	Barge
09-17-2022	06:13 – 16:37	Weather: 100-10%cc Wind: 1-4 BS Temperature: 55-63°F Sea State: 1-3 BS	Breakwater Repairs	9 12 A-16 Reset A-8 Reset	Jessica Lotts	Barge
09-18-2022	06:11 – 16:15	Weather: 20-85%cc Wind: 1-4 BS Temperature: 55-63°F Sea State: 1-5 BS	Breakwater Repairs	3 7 5 A-16 Reset A-8 Reset A-8 to Barge	Jessica Lotts	Barge
09-19-2022	07:29 – 13:45	Weather: 100-100%cc Wind: 1-2 BS Temperature: 61-65°F Sea State: 2-4 BS	Breakwater Repairs	2 6 A-16 Reset A-8 Reset	Jessica Lotts	Barge
09-20-2022	06:14 – 16:50	Weather: 40-10%cc Wind: 1-1 BS Temperature: 58-65°F Sea State: 1-1 BS	Breakwater Repairs	3 4 A-16 Reset A-8 Reset	Jessica Lotts	Barge
09-21-2022	06:20 – 16:20	Weather: 50-10%cc Wind: 1-2 BS Temperature: 60-65°F Sea State: 1-1 BS	Breakwater Repairs	4 14 A-16 Reset A-8 Reset	Dante DeLany	Barge
09-27-2022	06:30 – 17:15	Weather: 100-0%cc Wind: 1-1 BS Temperature: 60-65°F Sea State: 1-1 BS	Breakwater Repairs	19 A-8 to Barge	Dante DeLany	Barge

DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
09-28-2022	06:15 – 16:45	Weather: 100-0%cc Wind: 1-1 BS Temperature: 55-65°F Sea State: 1-1 BS	Breakwater Repairs	5 A-16 Reset 6 A-8 Reset 38 A-8 to Barge	Dante DeLany	Barge
09-30-2022	06:15 – 16:00	Weather: 100-0%cc Wind: 1-1 BS Temperature: 56-67°F Sea State: 1-1 BS	Stone Weight Verification Breakwater Repairs	5 A-16 Reset	Jennifer Klaib	Barge
10-01-2022	06:15 – 17:20	Weather: 100-100%cc Wind: 1-1 BS Temperature: 57-65°F Sea State: 1-1 BS	Breakwater Repairs	3 A-16 Reset 12 A-8 Reset	Jennifer Klaib	Barge
10-02-2022	06:15 – 17:20	Weather: 100-0%cc Wind: 1-3 BS Temperature: 58-65°F Sea State: 1-3 BS	Breakwater Repairs	4 A-16 Reset 8 A-8 Reset 10 A-8 to Barge 6 A-8 from Barge	Jennifer Klaib	Barge
10-03-2022	06:15 – 17:15	Weather: 0-0%cc Wind: 0-3 BS Temperature: 52-77°F Sea State: 0-3 BS	Breakwater Repairs	8 A-16 Reset 15 A-8 Reset 9 A-8 from Barge	Jennifer Klaib	Barge
10-04-2022	06:15 – 15:00	Weather: 0-10%cc Wind: 0-1 BS Temperature: 47-75°F Sea State: 1-2 BS	Breakwater Repairs	8 A-8 Reset	Kyler Sloan	Barge
10-06-2022	08:30 – 18:00	Weather: 100-10%cc Wind: 0-1 BS Temperature: 53-78°F Sea State: 1-2 BS	Breakwater Repairs	1 A-16 Reset 11 A-8 Reset	Kyler Sloan	Barge
10-07-2022	06:12 – 14:05	Weather: 100-0%cc Wind: 1-2 BS Temperature: 55-59°F Sea State: 1-2 BS	Breakwater Repairs	8 A-8 Reset	Jessica Lotts	Barge

DATE	TIMES	ENVIRONMENTAL CONDITIONS (Start-End)	CONSTRUCTION ACTIVITY	ROCK WORK # and Type	PSO	PSO LOCATION
10-12-2022	07:30-09:30	Weather: 100-100%cc Wind: 2-2 BS Temperature: 56-57°F Sea State: 2-2 BS	Witness Rock Placement		Jessica Lotts	Barge

**APPENDIX 2. MONITORING SUMMARY TABLE**

DATE	TIME	Type of Activity	PSO	#	ID*	AGE	SEX	PSO LOCATION	PSO SPECIFIC POSITION	DISTANCE OBSERVER TO MAMMAL (meters)	BEARING OBSERVER TO MAMMAL (degrees)	DISTANCE MAMMAL TO ROCK SETTING (meters)	BEARING MAMMAL TO ROCK SETTING (degrees)	DISTANCE TO HARRASSMENT ZONE (meters)	MITIGATION	TIME IN SHUTDOWN ZONE (minutes)	BEHAVIORAL DISTURBANCE LEVEL	NOTES
6/22/2022	7:33	No in-water work	Jessica Lotts	2	CSL	Unknown	Unknown	Crane Barge	PB	50	32	109	228	109	NA	NA	NA	Swam parallel with barge toward rocks
6/22/2022	7:47	No in-water work	Jessica Lotts	2	CSL	Unknown	Unknown	Crane Barge	SS	30	112	35	274	35	NA	NA	NA	Swam toward barge bow then to sea
6/22/2022	7:50	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	30	100	49	237	49	NA	NA	NA	Swam from barge to rocks
6/22/2022	9:07	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	35	92	55	241	55	NA	NA	NA	Swam from rocks to harbor
6/22/2022	9:08	Sediment Excavation/Placement	Jessica Lotts	10	CSL	Unknown	Unknown	Crane Barge	MS	50	110	65	263	65	NA	NA	NA	Fast travel away from barge
6/22/2022	9:37	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	100	90	119	260	119	NA	NA	NA	Swam from stern to mid ship, milled then swam toward rocks
6/22/2022	10:03	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	10	112	30	161	Inside	SHUT DOWN	4		Popped up 10 m from barge then swam to sea
6/22/2022	11:13	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	PS	20	330	20	150	20	NA	NA	NA	
6/22/2022	14:36	No in-water work	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	MP	20	20	49	239	49	NA	NA	NA	Foraging
6/22/2022	14:59	No in-water work	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	S	300	10	308	191	308	NA	NA	NA	Foraging
6/23/2022	7:06	No in-water work	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	MS	80	110	93	274	93	NA	NA	NA	Foraging
6/23/2022	7:23	No in-water work	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	30	92	50	234	50	NA	NA	NA	Swam from sea into harbor
6/23/2022	7:40	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	SB	180	45	242	225	242	NA	NA	NA	Foraging by placement barge
6/23/2022	7:54	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	PB	170	40	230	222	230	NA	NA	NA	Foraging
6/23/2022	8:06	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	B	30	47	90	223	90	NA	NA	NA	Milling
6/23/2022	8:19	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	PB	180	60	238	235	238	NA	NA	NA	Swam from harbor to sea; foraged off bow
6/23/2022	8:34	No in-water work	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MP	10	32	40	254	40	NA	NA	NA	Swam parallel with barge
6/23/2022	8:35	No in-water work	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	MP	10	34	40	249	40	NA	NA	NA	Swimming away from ship
6/23/2022	9:08	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	SB	30	108	80	152	80	NA	NA	NA	Swimming perpendicular from ship to harbor
6/23/2022	9:22	Sediment Excavation/Placement	Jessica Lotts	2	CSL	Unknown	Unknown	Crane Barge	MS	15	120	32	168	32	NA	NA	NA	Swimming along rock edge
6/23/2022	13:06	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	SB	20	71	80	91	80	NA	NA	NA	Swam parallel with barge toward rocks
6/23/2022	13:48	Sediment Excavation/Placement	Jessica Lotts	1	Sick CSL	Unknown	Unknown	Crane Barge	SS	10	10	19	225	Inside	SHUT DOWN	8		Possible CSL (no obvious injury but bobbing and sickly). Justin Visvicke advised there was no need to call wildlife rescue as long as animal was in water and swimming.
6/23/2022	14:03	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	SS	10	115	16	225	Inside	SHUT DOWN	4		Swam parallel to barge toward rocks, then out to sea

DATE	TIME	Type of Activity	PSO	#	ID*	AGE	SEX	PSO LOCATION	PSO SPECIFIC POSITION	DISTANCE OBSERVER TO MAMMAL (meters)	BEARING OBSERVER TO MAMMAL (degrees)	DISTANCE MAMMAL TO ROCK SETTING (meters)	BEARING MAMMAL TO ROCK SETTING (degrees)	DISTANCE TO HARRASSMENT ZONE (meters)	MITIGATION	TIME IN SHUTDOWN ZONE (minutes)	BEHAVIORAL DISTURBANCE LEVEL	NOTES
6/23/2022	14:34	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	SS	10	110	17	225	Inside	SHUT DOWN	4		Swam parallel to barge toward rocks, then out to sea
6/23/2022	14:50	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	PS	10	121	10	301	Inside	SHUT DOWN	2		Swam along rock, passed bucket then swam out to sea
6/23/2022	14:58	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	SS	70	45	80	225	80	NA	NA	NA	Milling
6/23/2022	15:10	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	20	122	35	166	35	NA	NA	NA	Swam from rocks toward sea
6/23/2022	15:22	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	SS	100	135	100	309	100	NA	NA	NA	Swam perpendicular to ship along rock
6/23/2022	16:00	Sediment Excavation/Placement	Jessica Lotts	2	CSO	Unknown	Unknown	Crane Barge	MS	180	82	201	257	201	NA	NA	NA	Swam along barge then out to sea
6/23/2022	16:25	No in-water work	Jessica Lotts	2	CSO	Unknown	Unknown	Crane Barge	SS	60	130	62	300	62	NA	NA	NA	Drifting along rocks foraging
6/23/2022	16:39	No in-water work	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	SS	100	125	102	299	102	NA	NA	NA	Swam along rocks toward sea
6/23/2022	16:49	No in-water work	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	PB	200	68	256	241	256	NA	NA	NA	Milling
6/23/2022	17:26	No in-water work	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	SS	120	132	121	307	121	NA	NA	NA	Swam parallel with barge toward rocks
6/24/2022	7:10	No in-water work	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	PS	160	58	160	238	160	NA	NA	NA	Milling
6/24/2022	8:56	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	40	110	45	277	45	NA	NA	NA	Milling
6/24/2022	12:06	Sediment Excavation/Placement	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	PS	200	20	200	200	200	NA	NA	NA	Wrapped in kelp bundle
6/24/2022	12:56	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	240	200	231	44	231	NA	NA	NA	Hauled out on rocks
6/24/2022	12:57	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	300	195	291	44	291	NA	NA	NA	Hauled out on rocks
6/24/2022	13:19	Vessel or Equipment Positioning	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	PB	160	53	220	230	220	NA	NA	NA	Milling, foraging
6/24/2022	14:05	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	100	157	94	324	94	NA	NA	NA	Swam parallel to barge toward rocks
6/24/2022	14:37	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MP	200	45	230	225	230	NA	NA	NA	Back floating, foraging, drifting
6/24/2022	14:38	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MP	250	295	241	231	241	NA	NA	NA	Back floating, foraging, drifting
6/24/2022	15:40	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	250	197	241	44	241	NA	NA	NA	Foraging
6/24/2022	15:42	No in-water work	Jessica Lotts	1	Sick CSL	Juvenile	Unknown	Crane Barge	MS	10	120	29	176	29	NA	NA	NA	Bobbing, sickly CSL. Potentially same one as yesterday. Swam away at 15:46.
6/24/2022	16:23	No in-water work	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PB	185	330	209	243	209	NA	NA	NA	Foraging
6/25/2022	6:32	No in-water work	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	10	215	2	35	2	NA	NA	NA	Swam parallel with barge toward rocks

DATE	TIME	Type of Activity	PSO	#	ID*	AGE	SEX	PSO LOCATION	PSO SPECIFIC POSITION	DISTANCE OBSERVER TO MAMMAL (meters)	BEARING OBSERVER TO MAMMAL (degrees)	DISTANCE MAMMAL TO ROCK SETTING (meters)	BEARING MAMMAL TO ROCK SETTING (degrees)	DISTANCE TO HARRASSMENT ZONE (meters)	MITIGATION	TIME IN SHUTDOWN ZONE (minutes)	BEHAVIORAL DISTURBANCE LEVEL	NOTES
6/25/2022	6:52	No in-water work	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	150	160	146	337	146	NA	NA	NA	Swam toward rocks
6/25/2022	7:32	Sediment Excavation/Placement	Jessica Lotts	9	CSL	Adult	Mixed	Crane Barge	SS	500	182	493	44	493	NA	NA	NA	Hauled out on rocks
6/25/2022	8:40	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	40	125	51	267	51	NA	NA	NA	Swam parallel with barge toward rocks
6/25/2022	10:22	Vessel or Equipment Positioning	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PB	220	332	244	240	244	NA	NA	NA	Floating, foraging
6/25/2022	12:50	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	70	158	64	319	64	NA	NA	NA	Swam parallel with barge toward rocks
6/25/2022	13:07	Sediment Excavation/Placement	Jessica Lotts	3	CSL	Adult	Unknown	Crane Barge	SS	500	190	492	44	492	NA	NA	NA	Hauled out on rocks
6/25/2022	13:29	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	70	189	62	40	62	NA	NA	NA	Swam parallel with rocks toward sea
6/25/2022	14:19	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	MS	50	138	55	288	55	NA	NA	NA	Swam parallel with barge away from rocks
6/25/2022	14:29	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	50	207	41	41	41	NA	NA	NA	Milling
6/25/2022	15:15	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	80	170	69	335	69	NA	NA	NA	Swam parallel with barge toward rocks
6/26/2022	12:59	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	PS	60	110	60	290	60	NA	NA	NA	Swam slowing away
6/27/2022	7:07	No in-water work	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	PB	30	300	60	224	60	NA	NA	NA	Logging, milling
6/27/2022	8:02	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	B	3	210	57	226	Inside	SHUT DOWN	9		Swam across bow
6/27/2022	8:42	Vessel or Equipment Positioning	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	SB	90	94	139	243	139	NA	NA	NA	Swimming
6/27/2022	9:28	Vessel or Equipment Positioning	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	S	75	74	84	250	84	NA	NA	NA	Swimming
6/27/2022	15:01	Vessel or Equipment Positioning	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	B	90	83	142	239	142	NA	NA	NA	Swimming
6/28/2022	7:10	No in-water work	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	SB	90	360	141	254	141	NA	NA	NA	Finning
6/28/2022	8:08	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	PS	40	170	40	350	40	NA	NA	NA	Swimming, hauled out, foraging, swimming
6/28/2022	10:53	Vessel or Equipment Positioning	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	PB	80	349	124	263	124	NA	NA	NA	Swimming
6/28/2022	11:00	Vessel or Equipment Positioning	Jennifer Klaib	4	CSL	Adult	Unknown	Crane Barge	PS	50	180	50	360	50	NA	NA	NA	Resting
6/28/2022	13:04	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	PS	60	310	60	130	60	NA	NA	NA	Logging, resting

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6/28/2022	14:36	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	PS	40	260	40	80	40	NA	NA	NA	Logging, resting, foraging. Potential resight of CSL from 13:04.
6/28/2022	15:33	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	PS	30	270	30	90	30	NA	NA	NA	Swimming away from barge
6/29/2022	6:24	No in-water work	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	30	205	21	38	21	NA	NA	NA	Hauled out on rocks
6/29/2022	7:14	No in-water work	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	SS	70	192	62	41	62	NA	NA	NA	Hauled out on rocks
6/29/2022	9:39	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	100	225	100	45	100	NA	NA	NA	Milling, logging
6/29/2022	9:53	Sediment Excavation/Placement	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	PS	40	185	40	5	40	NA	NA	NA	Swam parallel with rocks then turned and swam away
6/29/2022	10:35	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	70	160	66	333	66	NA	NA	NA	Swam parallel with barge then turned to swim up rocks, ocean bound
6/29/2022	10:37	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	35	270	35	90	35	NA	NA	NA	Logging close to shutdown zone, but never crossed
6/29/2022	12:23	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	60	165	52	324	52	NA	NA	NA	Swam parallel with barge toward harbor
6/29/2022	12:34	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	225	195	216	44	216	NA	NA	NA	Grooming
6/29/2022	12:50	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	40	275	40	95	40	NA	NA	NA	Swam parallel with rocks out to sea
6/29/2022	14:17	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	B	40	160	56	235	56	NA	NA	NA	Milling at barge, then swam toward rocks
6/29/2022	14:23	Vessel or Equipment Positioning	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	B	50	2	102	237	102	NA	NA	NA	Floating
6/29/2022	15:22	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	40	276	40	96	40	NA	NA	NA	Hauled out on rocks
6/29/2022	15:37	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	20	252	12	58	Inside	SHUT DOWN	1		Swam under bucket path along rocks towards sea, stopped and milled by rocks right off bow, swam toward harbor
6/29/2022	15:42	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	20	252	12	58	Inside	SHUT DOWN	2		Resight of CSL from 15:37. Halted work until 15:44 when animal left HZ.
6/29/2022	15:58	Sediment Excavation/Placement	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	SS	70	350	76	52	76	NA	NA	NA	Floating
6/29/2022	16:43	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PB	280	282	252	235	252	NA	NA	NA	Floating, foraging
6/30/2022	6:18	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	50	225	40	45	40	NA	NA	NA	Hauled out on rocks
6/30/2022	6:31	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	70	189	70	9	70	NA	NA	NA	Hauled out on rocks
6/30/2022	7:19	Pre/Post-Construction Survey	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	PS	10	258	10	78	10	NA	NA	NA	Swam along barge, crossed over, swam toward sea
6/30/2022	7:20	Pre/Post-Construction Survey	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	B	70	285	66	273	66	NA	NA	NA	Floating, foraging



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6/30/2022	8:58	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	10	204	4	24	Inside	SHUT DOWN	5		Swimming along rocks in front of barge
6/30/2022	9:08	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	10	204	4	24	Inside	SHUT DOWN	1		Entered zone again, milling
6/30/2022	9:25	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	10	200	4	355	Inside	SHUT DOWN	3		Swam up to bucket, then swam out of zone
6/30/2022	9:31	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	5	195	6	285	Inside	SHUT DOWN	5		Sunbathing, logging
6/30/2022	10:02	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	30	220	20	43	Inside	SHUT DOWN	2		Hauled out on rocks
6/30/2022	10:33	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	60	145	59	316	59	NA	NA	NA	Swam parallel with rocks looking for haul out site
6/30/2022	11:27	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	70	180	63	354	63	NA	NA	NA	Hauled out on rocks
6/30/2022	12:59	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PB	30	55	90	215	90	NA	NA	NA	Swam parallel with barge then toward harbor
6/30/2022	13:56	Sediment Excavation/Placement	Jessica Lotts	2	CSL	Juvenile	Unknown	Crane Barge	SS	100	188	92	42	92	NA	NA	NA	Swam parallel with rocks then hauled out
6/30/2022	14:02	Sediment Excavation/Placement	Jessica Lotts	4	CSL	Adult	Unknown	Crane Barge	SS	40	200	31	39	31	NA	NA	NA	Swam toward bucket, turned around and swam away
6/30/2022	15:32	Sediment Excavation/Placement	Jessica Lotts	3	CSL	Adult	Unknown	Crane Barge	SS	100	189	92	42	92	NA	NA	NA	Hauled out on rocks
7/1/2022	6:18	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	100	215	90	44	90	NA	NA	NA	Hauled out on rocks
7/1/2022	7:10	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MP	30	252	14	252	14	NA	NA	NA	Swam from harbor toward crane then veered other direction
7/1/2022	8:20	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	90	175	76	343	76	NA	NA	NA	Swam parallel with barge then toward harbor
7/1/2022	9:34	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	70	180	63	354	63	NA	NA	NA	Swam toward crane, turned and swam away
7/1/2022	11:06	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	MS	60	176	48	338	48	NA	NA	NA	Swam toward barge, then swam toward harbor
7/1/2022	11:19	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	30	220	30	40	30	NA	NA	NA	Logging
7/1/2022	11:33	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	20	223	10.01	44	10	NA	NA	NA	Swam parallel with rocks toward harbor
7/1/2022	12:44	Vessel or Equipment Positioning	Jessica Lotts	3	CSO	Adult	Unknown	Crane Barge	B	180	350	220	241	220	NA	NA	NA	Floating
7/1/2022	13:10	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	25	265	18	60	18	NA	NA	NA	Swam toward barge then turned
7/1/2022	15:53	Sediment Excavation/Placement	Jessica Lotts	3	CSL	Adult	Unknown	Crane Barge	SS	30	225	20	45	20	NA	NA	NA	Swam parallel with rocks toward harbor

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7/1/2022	15:55	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	15	250	15	70	15	NA	NA	NA	Swam parallel with rocks toward harbor
7/2/2022	6:21	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	PS	60	183	60	3	60	NA	NA	NA	Hauled out on rocks
7/2/2022	6:32	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	10	160	23	249	23	NA	NA	NA	Logging
7/2/2022	6:34	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	100	140	101	306	101	NA	NA	NA	Milling
7/2/2022	7:56	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	PS	15	202	15	22	15	NA	NA	NA	Hauled out on rocks
7/2/2022	12:18	No in-water work	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MP	100	315	104	242	104	NA	NA	NA	Swam parallel with barge toward rocks
7/2/2022	12:40	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MP	225	305	222	233	222	NA	NA	NA	Floating / Foraging
7/2/2022	13:30	No in-water work	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MP	250	284	236	231	236	NA	NA	NA	Floating
7/6/2022	6:15	Pre/Post-Construction Survey	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	SS	60	200	51	41	51	NA	NA	NA	Hauled out on rocks
7/6/2022	6:20	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	100	187	92	41	92	NA	NA	NA	Logging
7/6/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	1	BD	Adult	Unknown	Crane Barge	MS	40	165	35	312	35	NA	NA	NA	Swam from harbor toward sea
7/6/2022	6:59	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PS	20	248	20	68	20	NA	NA	NA	Swimming
7/6/2022	7:09	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	70	148	69	308	69	NA	NA	NA	Swam from sea toward harbor
7/6/2022	8:21	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	100	142	100	308	100	NA	NA	NA	Sunbathing / Logging
7/6/2022	8:59	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	70	190	62	40	62	NA	NA	NA	Hauled out on rocks / Fishing gear on hind flippers
7/6/2022	9:48	Sediment Excavation/Placement	Jessica Lotts	8	BD	Adult	Unknown	Crane Barge	SS	150	160	146	337	Inside	SHUT DOWN	2		Swam from sea toward harbor, entered shutdown zone briefly, then exited harbor
7/6/2022	10:19	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	120	200	111	43	111	NA	NA	NA	Sunbathing / Logging
7/6/2022	11:20	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	250	220	240	45	240	NA	NA	NA	Floating
7/6/2022	12:17	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	20	195	12	31	12	NA	NA	NA	Swam around barge
7/6/2022	12:58	Sediment Excavation/Placement	Jessica Lotts	2	CSL	Juvenile	Unknown	Crane Barge	SS	100	200	91	43	91	NA	NA	NA	Swam parallel with rocks
7/6/2022	14:08	No in-water work	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SB	10	75	71	101	71	NA	NA	NA	Logging
7/6/2022	14:28	Sediment Excavation/Placement	Jessica Lotts	3	CSL	Adult	Unknown	Crane Barge	SS	60	215	50	43	50	NA	NA	NA	Milling
7/6/2022	14:30	Sediment Excavation/Placement	Jessica Lotts	4	CSL	Adult	Unknown	Crane Barge	SS	180	210	170	44	170	NA	NA	NA	Milling
7/6/2022	14:48	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	5	145	10	217	Inside	SHUT DOWN	1		Swam between barge and drop

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7/6/2022	14:58	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	3	145	10	228	Inside	SHUT DOWN	1		Approached stopped bucket, swam around bucket, then left
7/6/2022	15:03	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	0	145	10	225	Inside	SHUT DOWN	3		Approached stopped bucket, jumped into bucket
7/6/2022	15:12	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	0	212	10	225	Inside	SHUT DOWN	2		Approached stopped bucket, attempted to jump into bucket, but failed
7/6/2022	16:00	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	15	120	20	260	20	NA	NA	NA	Swam parallel with barge toward rocks
7/6/2022	16:18	Sediment Excavation/Placement	Jessica Lotts	6	CSL	Mixed	Unknown	Crane Barge	SS	60	145	59	316	59	NA	NA	NA	Swam parallel with rocks toward crane, then turned around
7/7/2022	6:25	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	PS	100	270	100	90	100	NA	NA	NA	Hauled out on rocks
7/7/2022	6:26	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	20	190	13	353	13	NA	NA	NA	Floating / Foraging
7/7/2022	6:36	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	20	200	12	33	12	NA	NA	NA	Swam parallel with barge toward rocks
7/7/2022	8:39	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	40	215	30	43	30	NA	NA	NA	Hauled out on rocks
7/7/2022	9:03	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	15	118	20	258	20	NA	NA	NA	Swam parallel with barge then toward sea
7/7/2022	9:15	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	0	169	10	225	Inside	SHUT DOWN	1		Approached stopped bucket and swam around it, then left.
7/7/2022	9:27	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	0	220	10	225	Inside	SHUT DOWN	1		Same CSL as 09:15. Halted work for less than a minute until animal left HZ. CSL approached stopped bucket and swam around it, then left.
7/7/2022	9:52	No in-water work	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	5	135	25	214	25	NA	NA	NA	Swam parallel with crane barge
7/7/2022	10:43	Sediment Excavation/Placement	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	SS	40	172	35	340	35	NA	NA	NA	Swam parallel with rocks
7/7/2022	11:55	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MS	200	340	212	232	212	NA	NA	NA	Floating / Foraging
7/7/2022	13:04	Sediment Excavation/Placement	Jessica Lotts	2	CSL	Juvenile	Unknown	Crane Barge	SS	100	165	95	340	95	NA	NA	NA	Porpoising along rocks
7/7/2022	13:18	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SB	100	140	113	282	113	NA	NA	NA	Swam from sea toward harbor
7/7/2022	13:35	Sediment Excavation/Placement	Jessica Lotts	5	CSL	Adult	Unknown	Crane Barge	SS	65	195	57	41	57	NA	NA	NA	Porpoising along rocks
7/7/2022	14:08	Sediment Excavation/Placement	Jessica Lotts	5	CSL	Adult	Unknown	Crane Barge	SS	200	135	200	312	200	NA	NA	NA	Porpoising along rocks
7/7/2022	14:14	Sediment Excavation/Placement	Jessica Lotts	7	BD	Adult	Unknown	Crane Barge	SB	150	138	159	294	Inside	SHUT DOWN	2		Split into 2 groups; 4 never entered zone, other 3 swam into zone, milled for 1 minute, then left zone
7/7/2022	14:42	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	100	172	87	340	87	NA	NA	NA	Swam toward rocks
7/7/2022	15:16	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	75	220	65	44	65	NA	NA	NA	Swam parallel with rocks toward harbor

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7/7/2022	15:43	Sediment Excavation/Placement	Jessica Lotts	3	CSL	Juvenile	Unknown	Crane Barge	SS	35	200	26	38	26	NA	NA	NA	Swam parallel with rock
7/7/2022	16:16	No in-water work	Jessica Lotts	4	BD	Adult	Unknown	Crane Barge	MS	300	140	299	315	299	NA	NA	NA	Swam toward harbor then turned around
7/8/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	60	150	58	321	58	NA	NA	NA	Swam toward rocks
7/8/2022	6:43	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	40	218	30	43	30	NA	NA	NA	Swam parallel with rocks toward sea
7/8/2022	8:04	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	3	201	7	235	Inside	SHUT DOWN	1		Swam from sea toward crane, then swam around bucket, then toward rocks
7/8/2022	8:08	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	20	160	18	313	18	NA	NA	NA	Swam from sea toward rock
7/8/2022	9:58	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	30	140	31	301	31	NA	NA	NA	Swam from rocks toward sea
7/8/2022	12:10	Vessel or Equipment Positioning	Jessica Lotts	5	BD	Adult	Unknown	Crane Barge	MS	250	170	237	345	237	NA	NA	NA	Swam parallel with barge
7/8/2022	12:10	Vessel or Equipment Positioning	Jessica Lotts	1	BD	Juvenile	Unknown	Crane Barge	MS	250	170	237	345	237	NA	NA	NA	Swam parallel with barge
7/8/2022	12:47	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	S	30	220	20	43	20	NA	NA	NA	Swam toward rocks
7/8/2022	12:59	Sediment Excavation/Placement	Jessica Lotts	3	CSL	Adult	Unknown	Crane Barge	SS	60	155	57	326	57	NA	NA	NA	Swam toward rocks
7/8/2022	13:53	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	30	187	23	355	23	NA	NA	NA	Swam toward rocks
7/8/2022	14:45	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	15	230	5	48	5	NA	NA	NA	Swam from sea toward harbor
7/8/2022	14:48	Sediment Excavation/Placement	Jessica Lotts	7	BD	Adult	Unknown	Crane Barge	SB	100	180	71	334	Inside	SHUT DOWN	2		Branches into 2 groups. 4 stayed back, 3 swam in to shutdown zone.
7/8/2022	14:50	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	40	145	43	287	43	NA	NA	NA	Swam along rocks
7/8/2022	15:06	Sediment Excavation/Placement	Jessica Lotts	3	CSL	Juvenile	Unknown	Crane Barge	SS	25	190	18	357	18	NA	NA	NA	Porpoising along rocks
7/8/2022	15:56	Sediment Excavation/Placement	Jessica Lotts	15	CSL	Mixed	Mixed	Crane Barge	SS	20	170	16	326	16	NA	NA	NA	Swam parallel with rocks
7/8/2022	16:03	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	25	188	18	354	18	NA	NA	NA	Swam along rocks
7/8/2022	16:06	Sediment Excavation/Placement	Jessica Lotts	3	CSL	Adult	Female	Crane Barge	SS	5	189	7	251	Inside	SHUT DOWN	1		Tried to cross crane, scattered as bucket stopped
7/8/2022	17:09	No in-water work	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	MS	30	149	34	275	34	NA	NA	NA	Swam parallel with barge to rocks
7/8/2022	17:16	No in-water work	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	PS	50	360	50	180	50	NA	NA	NA	Swam along rocks
7/9/2022	6:19	Pre/Post-Construction Survey	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	MS	70	155	66	315	66	NA	NA	NA	Swam from harbor toward rocks
7/9/2022	6:29	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	20	202	11	34	11	NA	NA	NA	Milling

DATE	TIME	Type of Activity	PSO	#	ID*	AGE	SEX	PSO LOCATION	PSO SPECIFIC POSITION	DISTANCE OBSERVER TO MAMMAL (meters)	BEARING OBSERVER TO MAMMAL (degrees)	DISTANCE MAMMAL TO ROCK SETTING (meters)	BEARING MAMMAL TO ROCK SETTING (degrees)	DISTANCE TO HARRASSMENT ZONE (meters)	MITIGATION	TIME IN SHUTDOWN ZONE (minutes)	BEHAVIORAL DISTURBANCE LEVEL	NOTES
7/9/2022	7:40	Pre/Post-Construction Survey	Jessica Lotts	4	CSL	Mixed	Mixed	Crane Barge	SS	30	165	26	328	26	NA	NA	NA	Swam along rocks
7/9/2022	13:18	Sediment Excavation/Placement	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	SS	100	145	99	319	99	NA	NA	NA	Swam toward rocks
7/9/2022	14:22	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	20	105	26	259	26	NA	NA	NA	Swam from sea toward harbor
7/9/2022	14:31	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	12	105	19	239	19	NA	NA	NA	Swimming
7/9/2022	15:06	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	225	163	220	341	220	NA	NA	NA	Swam parallel with rock toward sea
7/9/2022	15:44	No in-water work	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	20	163	18	317	18	NA	NA	NA	CSL swam toward CSO, who had a lobster
7/9/2022	16:18	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	3	155	9	242	Inside	SHUT DOWN	1		Swam past bucket then underneath crane barge
7/9/2022	16:28	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	MS	110	165	100	334	100	NA	NA	NA	Swam along rocks toward harbor
7/9/2022	16:59	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	20	160	25	227	25	NA	NA	NA	Swam from harbor toward rocks
7/10/2022	6:19	Pre/Post-Construction Survey	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	S	60	73	69	249	69	NA	NA	NA	Slow travel
7/10/2022	6:54	Pre/Post-Construction Survey	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	SS	45	147	44	314	44	NA	NA	NA	Fast travel SE to W
7/10/2022	8:11	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	B	75	29	134	222	134	NA	NA	NA	Milling
7/10/2022	10:46	Sediment Excavation/Placement	Jennifer Klaib	27	CSL	Mixed	Mixed	Crane Barge	SB	200	180	162	347	162	NA	NA	NA	Hauled out on rocks
7/10/2022	11:20	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	S	50	94	57	265	57	NA	NA	NA	Fast travel SW to E
7/10/2022	14:11	Sediment Excavation/Placement	Jennifer Klaib	1	Dead CSL	Adult	Female	Crane Barge	MS	0	0	0	0	Inside	SHUT DOWN	25		Dead CSL observed on sediment barge
7/10/2022	16:30	Sediment Excavation/Placement	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	SS	30	165	26	328	Inside	SHUT DOWN	6		Foraging, then entered Shutdown Zone
7/11/2022	8:06	Sediment Excavation/Placement	Jennifer Klaib	40	CSL	Mixed	Mixed	Crane Barge	SB	215	180	177	348	177	NA	NA	NA	Resting
7/11/2022	9:25	Sediment Excavation/Placement	Jennifer Klaib	2	CSL	Juvenile	Unknown	Crane Barge	S	65	22	74	205	74	NA	NA	NA	Fast travel away
7/11/2022	9:42	Sediment Excavation/Placement	Jennifer Klaib	1	Dead CSL	Adult	Unknown	Crane Barge	PS	118	256	118	76	118	NA	NA	NA	Observed dead CSL floating along breakwater. Advanced decomposition. Not project related.
7/11/2022	10:03	Vessel or Equipment Positioning	Jennifer Klaib	1	Dead CSL	Adult	Female	Crane Barge	PS	65	278	65	98	65	NA	NA	NA	Observed a lethargic, floating CSL for about 30 minutes as it milled around and approached bow. CSL went into tire, and was told by crew it appeared dead. Confirmed death and disposed of body offshore after agency direction at 12:32.
7/11/2022	14:06	Sediment Excavation/Placement	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	PB	190	323	207	243	207	NA	NA	NA	Rafting / Foraging

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7/11/2022	15:10	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	SS	45	132	47	299	47	NA	NA	NA	Milling
7/11/2022	16:00	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	PS	30	320	30	140	30	NA	NA	NA	Fast travel
7/12/2022	7:50	Sediment Excavation/Placement	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	SS	30	142	30	303	Inside	SHUT DOWN	3		Foraging
7/12/2022	8:40	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	S	100	190	92	42	92	NA	NA	NA	Slow travel W to SE
7/12/2022	9:00	Sediment Excavation/Placement	Jennifer Klaib	40	CSL	Mixed	Mixed	Crane Barge	SB	165	170	139	332	139	NA	NA	NA	Hauled out on rocks
7/12/2022	9:40	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	SB	40	8	97	257	97	NA	NA	NA	Fast travel away NE
7/12/2022	10:25	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	PB	20	105	72	151	72	NA	NA	NA	Slow travel away SE
7/12/2022	13:48	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	SB	60	108	104	221	104	NA	NA	NA	Fast travel away SE
7/12/2022	15:29	Sediment Excavation/Placement	Jennifer Klaib	2	CSL	Adult	Unknown	Crane Barge	SS	35	142	35	306	35	NA	NA	NA	Milling
7/13/2022	6:43	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	MS	60	158	55	315	55	NA	NA	NA	Swam toward rocks
7/13/2022	6:45	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	30	236	30	56	30	NA	NA	NA	Swam along rocks
7/13/2022	9:10	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	S	20	264	14	63	14	NA	NA	NA	Swam parallel with rocks toward harbor
7/13/2022	9:50	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	70	120	73	292	73	NA	NA	NA	Logging
7/13/2022	10:28	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	80	154	77	327	77	NA	NA	NA	Swam along rocks
7/13/2022	14:00	Sediment Excavation/Placement	Jessica Lotts	2	CSL	Adult	Female	Crane Barge	SS	60	165	56	337	56	NA	NA	NA	Hauled out on rocks
7/13/2022	14:00	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	60	165	56	337	56	NA	NA	NA	Hauled out on rocks
7/13/2022	14:31	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	40	205	31	40	31	NA	NA	NA	Swam parallel with rocks toward sea
7/13/2022	15:12	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	20	165	17	319	17	NA	NA	NA	Swam parallel with barge
7/13/2022	15:32	Sediment Excavation/Placement	Jessica Lotts	4	CSL	Mixed	Unknown	Crane Barge	SS	30	168	26	332	26	NA	NA	NA	Swam along rocks
7/13/2022	16:12	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	15	148	16	287	16	NA	NA	NA	Logging
7/13/2022	16:14	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	40	145	40	311	40	NA	NA	NA	Swam along rocks toward harbor

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7/13/2022	16:57	No in-water work	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	S	5	180	7	254	7	NA	NA	NA	Swam along rocks toward barge
7/14/2022	6:36	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	MP	20	158	29	231	29	NA	NA	NA	Swam parallel with barge toward harbor
7/14/2022	6:40	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Male	Crane Barge	MP	60	160	55	313	55	NA	NA	NA	Swam along rocks toward harbor
7/14/2022	8:18	Sediment Excavation/Placement	Jessica Lotts	3	CSL	Adult	Female	Crane Barge	SS	15	158	14	300	14	NA	NA	NA	Swam from sea toward harbor
7/14/2022	10:22	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	20	190	13	353	13	NA	NA	NA	Swam along rocks toward harbor
7/14/2022	10:43	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	25	150	24	307	24	NA	NA	NA	Swam parallel with barge toward sea
7/14/2022	11:24	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	25	148	25	305	25	NA	NA	NA	Milling
7/14/2022	13:52	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	70	135	71	307	71	NA	NA	NA	Swam parallel with rocks
7/15/2022	6:23	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	MS	35	175	27	322	27	NA	NA	NA	Logging
7/15/2022	6:25	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	80	150	77	312	77	NA	NA	NA	Fast travel from sea toward harbor
7/15/2022	6:45	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	30	160	27	322	27	NA	NA	NA	Floating
7/15/2022	7:30	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	40	158	37	325	37	NA	NA	NA	Swam parallel with rocks toward sea
7/15/2022	8:00	Sediment Excavation/Placement	Jessica Lotts	1	HS	Unknown	Unknown	Crane Barge	S	20	222	10.03	44	10	NA	NA	NA	Swam parallel with rocks toward sea
7/15/2022	8:02	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	S	25	225	15	45	15	NA	NA	NA	Swam parallel with rocks toward harbor
7/15/2022	8:07	Sediment Excavation/Placement	Jessica Lotts	4	BD	Unknown	Unknown	Crane Barge	MS	500	102	514	280	514	NA	NA	NA	Swam toward Pismo
7/15/2022	8:28	Sediment Excavation/Placement	Jessica Lotts	2	HBW	Adult	Unknown	Crane Barge	MS	1600	168	1587	347	1587	NA	NA	NA	Tail slapping / Logging
7/15/2022	9:20	No in-water work	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	10	175	20	247	20	NA	NA	NA	Swam toward rocks
7/15/2022	9:43	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	S	22	228	12	46	12	NA	NA	NA	Hauled out on rocks
7/15/2022	10:18	No in-water work	Jessica Lotts	6	BD	Adult	Unknown	Crane Barge	MS	50	168	42	323	42	NA	NA	NA	Swam from sea toward barge, then turned around
7/15/2022	10:38	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	30	150	29	311	29	NA	NA	NA	Swam parallel with rocks toward barge, then hauled out on rocks
7/15/2022	12:43	Sediment Excavation/Placement	Jessica Lotts	2	CSL	Adult	Female	Crane Barge	S	30	212	20	41	20	NA	NA	NA	Hauled out on rocks
7/15/2022	13:12	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	S	250	240	240	46	240	NA	NA	NA	Floating / Foraging
7/15/2022	13:42	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	20	205	11	35	11	NA	NA	NA	Swam parallel with rocks toward sea

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7/15/2022	14:00	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MP	20	260	18	284	18	NA	NA	NA	Foraging
7/15/2022	14:50	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	S	225	288	221	47	221	NA	NA	NA	Floating / Foraging
7/17/2022	7:41	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	60	160	57	331	57	NA	NA	NA	Hauled out on rocks
7/17/2022	7:42	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	PS	70	255	70	75	70	NA	NA	NA	Hauled out on rocks
7/17/2022	10:33	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	50	185	43	358	43	NA	NA	NA	Slow travel towards rock
7/17/2022	12:13	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	S	20	218	10.15	42	10	NA	NA	NA	Swam parallel with rocks / Hauled out
7/17/2022	14:45	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	S	40	192	32	37	32	NA	NA	NA	Hauled out on rocks
7/22/2022	10:28	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	SB	50	65	110	220	110	NA	NA	NA	Finning / Slow travel S to NE
7/22/2022	11:20	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	S	30	112	35	274	35	NA	NA	NA	Slow travel W to SE
7/22/2022	13:34	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	SS	60	112	65	283	65	NA	NA	NA	Finning
7/23/2022	7:27	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MP	20	200	15	341	15	NA	NA	NA	Fast travel toward rocks
7/23/2022	11:28	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	70	205	61	42	61	NA	NA	NA	Logging
7/23/2022	13:24	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	50	210	40	42	40	NA	NA	NA	Slow travel toward rocks
7/23/2022	13:46	No in-water work	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	10	237	2	57	2	NA	NA	NA	Milling
7/23/2022	15:04	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	20	175	16	332	16	NA	NA	NA	Sunbathing
7/23/2022	15:34	Sediment Excavation/Placement	Jessica Lotts	4	CSL	Juvenile	Unknown	Crane Barge	SS	30	163	27	326	27	NA	NA	NA	Fast travel parallel with rocks toward bucket, then changed direction
7/23/2022	15:58	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	S	50	221	40	44	Inside	SHUT DOWN	1		Swam parallel with rocks
7/23/2022	16:02	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	S	50	221	40	44	Inside	SHUT DOWN	3		Same Animal
7/23/2022	17:01	No in-water work	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	PB	180	345	216	242	216	NA	NA	NA	Floating / Foraging
7/24/2022	6:25	Pre/Post-Construction Survey	Jessica Lotts	2	BD	Adult	Unknown	Crane Barge	MS	50	185	35	346	35	NA	NA	NA	Swam from harbor toward sea
7/24/2022	6:42	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	30	215	20	42	20	NA	NA	NA	Hauled out on rocks
7/24/2022	8:35	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	25	205	16	37	16	NA	NA	NA	Swam and hauled out on rocks



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7/24/2022	12:30	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	30	187	23	355	23	NA	NA	NA	Slow travel parallel with rocks
7/24/2022	13:37	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	65	163	61	335	61	NA	NA	NA	Sunbathing / Logging
7/24/2022	14:21	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	60	165	56	337	56	NA	NA	NA	Fast moving toward rocks
7/24/2022	15:44	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	40	188	33	359	33	NA	NA	NA	Milling
7/24/2022	16:40	Vessel or Equipment Positioning	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	MP	250	345	266	231	266	NA	NA	NA	Milling
7/25/2022	7:50	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	15	183	10	337	10	NA	NA	NA	Milling
7/25/2022	10:36	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	30	160	30	291	30	NA	NA	NA	Swam parallel with rocks toward sea
7/25/2022	11:09	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	60	158	55	315	55	NA	NA	NA	Swam to rocks
7/25/2022	12:19	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	10	170	9	295	Inside	SHUT DOWN	3		Logging in bucket swim path. Halted work until 12:21 when animal left HZ.
7/25/2022	13:55	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	MS	100	163	91	330	91	NA	NA	NA	Slow travel from sea toward harbor
7/25/2022	14:07	Vessel or Equipment Positioning	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	B	175	355	218	240	218	NA	NA	NA	Floating
7/25/2022	15:00	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	MS	30	165	28	299	28	NA	NA	NA	Swam parallel with barge toward harbor
7/25/2022	17:05	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	90	158	83	323	83	NA	NA	NA	Slow travel toward rocks
7/26/2022	7:40	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	SS	90	174	84	349	84	NA	NA	NA	Milling
7/26/2022	10:25	Vessel or Equipment Positioning	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	SB	50	138	78	191	78	NA	NA	NA	Hauled out on rock
7/26/2022	12:11	Vessel or Equipment Positioning	Jennifer Klaib	1	CSL	Adult	Female	Crane Barge	S	75	127	77	299	77	NA	NA	NA	Slow travel NE to S
7/26/2022	12:52	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Male	Crane Barge	S	40	144	40	310	40	NA	NA	NA	Travel NE to S
7/27/2022	6:21	Pre/Post-Construction Survey	Jennifer Klaib	1	Dead CSL	Adult	Unknown	Crane Barge	S	60	190	52	40	52	NA	NA	NA	Deceased and floating
7/27/2022	10:49	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	B	20	35	80	246	80	NA	NA	NA	Slow travel SE to W
7/27/2022	11:00	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	SS	40	200	31	39	31	NA	NA	NA	Fast travel NW to SE
7/27/2022	12:07	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	S	60	157	57	328	57	NA	NA	NA	Milling

DATE	TIME	Type of Activity	PSO	#	ID*	AGE	SEX	PSO LOCATION	PSO SPECIFIC POSITION	DISTANCE OBSERVER TO MAMMAL (meters)	BEARING OBSERVER TO MAMMAL (degrees)	DISTANCE MAMMAL TO ROCK SETTING (meters)	BEARING MAMMAL TO ROCK SETTING (degrees)	DISTANCE TO HARRASSMENT ZONE (meters)	MITIGATION	TIME IN SHUTDOWN ZONE (minutes)	BEHAVIORAL DISTURBANCE LEVEL	NOTES
7/27/2022	12:44	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	SS	35	118	39	282	39	NA	NA	NA	Slow travel NW to SE / Milling
7/27/2022	13:24	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Female	Crane Barge	SS	5	122	12	175	Inside	SHUT DOWN	3		Fast travel across stern. Halted work for 3 minutes until animal left HZ.
7/28/2022	7:37	Sediment Excavation/Placement	Jennifer Klaib	1	Unknown	Unknown	Unknown	Crane Barge	S	40	337	45	58	Inside	SHUT DOWN	15		Crane operator notified observer of a pinniped that dove near bucket and possibly under bucket. All stop until able to observe. Did not observe after 10 minutes and cleared crane operator to restart.
7/28/2022	8:25	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Male	Crane Barge	SS	15	108	21	252	21	NA	NA	NA	Resting / Appears to have shark bite wounds on right side
7/28/2022	8:48	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	S	40	130	42	296	42	NA	NA	NA	Fast travel along rocks E to SW
7/28/2022	9:51	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	S	20	154	19	306	19	NA	NA	NA	Fast travel along rocks E to SW
7/28/2022	12:01	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	MP	30	325	46	305	46	NA	NA	NA	Slow travel
7/28/2022	13:26	Sediment Excavation/Placement	Jennifer Klaib	1	CSL	Adult	Female	Crane Barge	S	45	135	46	302	46	NA	NA	NA	Fast travel SW to E
7/29/2022	6:20	Pre/Post-Construction Survey	Jessica Lotts	20	CSL	Mixed	Mixed	Crane Barge	SS	100	210	90	44	90	NA	NA	NA	Hauled out on rocks
7/29/2022	6:51	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	PS	35	280	35	100	35	NA	NA	NA	Milling
7/29/2022	6:55	Pre/Post-Construction Survey	Jessica Lotts	2	BD	Unknown	Unknown	Crane Barge	SS	200	168	195	346	195	NA	NA	NA	Slow travel toward sea
7/29/2022	9:34	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	18	189	12	350	12	NA	NA	NA	Fast travel parallel with rocks
7/29/2022	9:50	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	18	175	14	330	14	NA	NA	NA	Fast travel toward bucket, then turned around
7/29/2022	12:41	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	225	263	217	47	217	NA	NA	NA	Floating / Foraging
7/29/2022	13:02	Sediment Excavation/Placement	Jessica Lotts	4	CSO	Adult	Unknown	Crane Barge	SS	250	265	242	46	242	NA	NA	NA	Floating in kelp
7/29/2022	13:07	Sediment Excavation/Placement	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	B	250	240	193	229	193	NA	NA	NA	Floating / Foraging
8/3/2022	6:38	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	PS	50	180	50	360	50	NA	NA	NA	Swam parallel with rocks toward sea
8/3/2022	6:59	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SB	100	108	140	254	140	NA	NA	NA	Slow travel from harbor toward sea
8/4/2022	6:28	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	65	203	56	42	56	NA	NA	NA	Hauled out on rocks
8/4/2022	6:40	Pre/Post-Construction Survey	Jessica Lotts	9	CSL	Juvenile	Unknown	Crane Barge	SS	70	195	62	41	62	NA	NA	NA	Hauled out on rocks
8/4/2022	6:40	Pre/Post-Construction Survey	Jessica Lotts	3	CSL	Adult	Male	Crane Barge	SS	70	195	62	41	62	NA	NA	NA	Hauled out on rocks
8/4/2022	10:00	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	30	165	26	328	26	NA	NA	NA	Swam parallel with barge toward rocks
8/4/2022	11:12	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	MS	100	100	116	268	116	NA	NA	NA	Slow travel from rocks toward harbor

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8/4/2022	12:39	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	25	133	36	225	36	NA	NA	NA	Swimming
8/4/2022	13:30	Sediment Excavation/Placement	Jessica Lotts	1	Dead CSL	Unknown	Unknown	Crane Barge	SS	45	135	46	302	46	NA	NA	NA	Dead, no obvious injuries, appears to have been dead a while, non-project related – notified KWM at 1337
8/5/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	1	BD	Adult	Unknown	Crane Barge	MS	300	162	290	338	290	NA	NA	NA	Slow travel between rocks and entrance
8/5/2022	7:53	Pre/Post-Construction Survey	Jessica Lotts	14	CSL	Juvenile	Unknown	Crane Barge	SS	15	175	11	324	11	NA	NA	NA	Hauled out on rocks
8/5/2022	7:53	Pre/Post-Construction Survey	Jessica Lotts	3	CSL	Adult	Male	Crane Barge	SS	15	175	11	324	11	NA	NA	NA	Hauled out on rocks
8/5/2022	7:53	Pre/Post-Construction Survey	Jessica Lotts	3	CSL	Adult	Female	Crane Barge	SS	15	175	11	324	11	NA	NA	NA	Hauled out on rocks
8/5/2022	7:53	Pre/Post-Construction Survey	Jessica Lotts	3	CSL	Adult	Unknown	Crane Barge	SS	15	175	11	324	11	NA	NA	NA	Hauled out on rocks
8/5/2022	8:27	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	20	105	26	259	26	NA	NA	NA	Swam from rocks to barge
8/6/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	14	CSL	Juvenile	Unknown	Crane Barge	SS	40	220	30	44	30	NA	NA	NA	Hauled out on rocks
8/6/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	3	CSL	Adult	Female	Crane Barge	SS	40	220	30	44	30	NA	NA	NA	Hauled out on rocks
8/6/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	2	CSL	Adult	Male	Crane Barge	SS	40	220	30	44	30	NA	NA	NA	Hauled out on rocks
8/6/2022	8:00	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	10	159	11	273	11	NA	NA	NA	Swam toward bucket, turned around and swam away
8/6/2022	9:40	Sediment Excavation/Placement	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	MP	240	265	218	230	218	NA	NA	NA	Floating / Foraging
8/6/2022	10:24	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	S	250	275	244	47	244	NA	NA	NA	Floating / Foraging
8/6/2022	11:34	No in-water work	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	MP	300	260	276	228	276	NA	NA	NA	Floating in kelp
8/6/2022	11:50	No in-water work	Jessica Lotts	1	Dead CSL	Adult	Unknown	Crane Barge	SS	70	145	69	317	69	SHUT DOWN	12	NA	Observed floating body. Took skiff to examine. ID'd CSL, heavily decayed, unrelated to project. Body ¼ completely decayed and bird poop on body.
8/7/2022	6:22	Pre/Post-Construction Survey	Jessica Lotts	6	CSL	Juvenile	Unknown	Crane Barge	S	25	230	15	47	15	NA	NA	NA	Hauled out on rocks
8/7/2022	6:22	Pre/Post-Construction Survey	Jessica Lotts	3	CSL	Adult	M	Crane Barge	S	25	230	15	47	15	NA	NA	NA	Hauled out on rocks
8/7/2022	6:22	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	S	25	230	15	47	15	NA	NA	NA	Hauled out on rocks
8/7/2022	6:58	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	100	180	84	350	84	NA	NA	NA	Swam toward sea
8/7/2022	6:58	Sediment Excavation/Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	100	180	84	350	84	NA	NA	NA	Swam toward sea
8/7/2022	10:59	Sediment Excavation/Placement	Jessica Lotts	5	CSL	Juvenile	Unknown	Crane Barge	SS	200	112	204	289	204	NA	NA	NA	Milling
8/7/2022	12:04	Sediment Excavation/Placement	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	MS	225	50	250	229	250	NA	NA	NA	Floating / Foraging
8/7/2022	12:04	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Adult	Female	Crane Barge	MS	225	50	250	229	250	NA	NA	NA	Floating / Foraging
8/7/2022	12:04	Sediment Excavation/Placement	Jessica Lotts	1	CSO	Juvenile	Unknown	Crane Barge	MS	225	50	250	229	250	NA	NA	NA	Floating / Foraging

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8/10/2022	6:27	Pre/Post-Construction Survey	Jessica Lotts	1	HBW	Adult	Unknown	Crane Barge	MS	500	188	480	223	480	NA	NA	NA	Milling around harbor entrance, swam out of harbor, deep dive, then swam back in to harbor
8/10/2022	6:29	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SB	15	95	73	136	73	NA	NA	NA	Foraging
8/10/2022	6:40	Pre/Post-Construction Survey	Jessica Lotts	4	CSL	Adult	Unknown	Crane Barge	MS	100	180	84	350	84	NA	NA	NA	Slow moving from sea to harbor
8/10/2022	6:40	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	MS	100	180	84	350	84	NA	NA	NA	Slow moving from sea to harbor
8/10/2022	6:53	Pre/Post-Construction Survey	Jessica Lotts	3	CSL	Adult	Unknown	Crane Barge	MS	200	145	197	318	197	NA	NA	NA	Foraging
8/10/2022	7:08	Rock Placement	Jessica Lotts	3	CSL	Juvenile	Unknown	Crane Barge	SS	20	180	15	339	15	NA	NA	NA	Hauled out on rocks
8/10/2022	7:08	Rock Placement	Jessica Lotts	2	CSL	Adult	Female	Crane Barge	SS	20	180	15	339	15	NA	NA	NA	Hauled out on rocks
8/10/2022	7:08	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	20	180	15	339	15	NA	NA	NA	Hauled out on rocks
8/10/2022	9:11	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	70	175	57	339	57	NA	NA	NA	Slow travel toward rocks
8/10/2022	9:11	Rock Placement	Jessica Lotts	5	CSL	Adult	Unknown	Crane Barge	SB	150	118	178	275	178	NA	NA	NA	Slow travel toward rocks
8/10/2022	10:40	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SB	100	127	125	269	125	NA	NA	NA	Slow travel from sea into harbor
8/10/2022	11:25	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	20	145	21	296	21	NA	NA	NA	Slow travel toward rocks
8/10/2022	13:04	Pre/Post-Construction Survey	Jessica Lotts	1	HBW	Unknown	Unknown	Crane Barge	SS	3200	165	3195	345	3195	NA	NA	NA	Tail slapping, traveling NE of rocks
8/11/2022	6:38	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PB	100	70	156	235	156	NA	NA	NA	Slow travel away from crane
8/11/2022	6:38	Pre/Post-Construction Survey	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	PB	100	60	159	231	159	NA	NA	None	Slow travel away from crane
8/11/2022	12:45	Rock Placement	Jessica Lotts	3	CSL	Adult	Unknown	Crane Barge	SS	30	140	31	301	31	NA	NA	NA	Fast travel parallel with rocks toward sea
8/11/2022	13:01	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	70	133	71	305	71	NA	NA	NA	Fast travel toward crane, then veered toward harbor
8/11/2022	16:00	Vessel or Equipment Positioning	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	28	215	18	41	18	NA	NA	NA	Crossed parallel with rock toward sea
8/11/2022	17:11	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	MS	100	160	92	327	92	NA	NA	NA	Logging
8/12/2022	7:30	Pre/Post-Construction Survey	Jennifer Klaib	1	CSL	Adult	Female	Crane Barge	MP	10	23	39	6	39	NA	NA	NA	Slow travel NE to SE
8/12/2022	11:11	Rock Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	B	20	274	49	207	49	NA	NA	NA	Fast travel W to NE
8/12/2022	14:10	Rock Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	PB	50	358	101	286	101	NA	NA	NA	Fast travel N to W
8/12/2022	14:12	Rock Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	SB	15	53	77	198	77	NA	NA	NA	Milling
8/13/2022	10:05	Rock Placement	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	SB	185	118	212	279	212	NA	NA	NA	Foraging / Traveling NE to W
8/13/2022	13:25	No in-water work	Jennifer Klaib	1	CSL	Adult	Male	Crane Barge	S	5	249	6	99	6	NA	NA	NA	Hauled out on rocks. Had shark bite on hind quarters.
8/13/2022	13:48	Rock Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	S	40	105	46	272	46	NA	NA	NA	Slow travel NE to S
8/13/2022	15:09	Rock Placement	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	PS	225	261	225	81	225	NA	NA	NA	Foraging
8/14/2022	11:55	Rock Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	B	75	28	134	222	134	NA	NA	NA	Fast travel N to SE
8/14/2022	15:26	Rock Placement	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	SB	160	54	221	231	221	NA	NA	NA	Foraging
8/14/2022	15:47	Rock Placement	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	PS	240	248	240	68	240	NA	NA	NA	Foraging

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8/15/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	MP	100	265	79	236	79	NA	NA	NA	Floating / Grooming
8/15/2022	6:35	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Male	Crane Barge	S	70	80	78	255	78	NA	NA	NA	Fast travel across stern toward sea
8/15/2022	6:35	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Juvenile	Unknown	Crane Barge	S	70	80	78	255	78	NA	NA	NA	Fast travel across stern toward sea
8/15/2022	11:28	Rock Placement	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	SS	80	140	80	313	80	NA	NA	NA	Slow travel along rocks toward sea
8/15/2022	16:25	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	100	135	100	309	100	NA	NA	NA	Slow travel toward harbor / Injured on hind flipper, possible shark bite
8/15/2022	16:56	No in-water work	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	70	130	72	302	72	NA	NA	NA	Foraging
8/16/2022	7:30	Rock Placement	Jessica Lotts	1	Dead CSL	Unknown	Unknown	Crane Barge	S	15	225	5	45	5	NA	NA	NA	Dead CSL. Heavily decayed. Non-project-related.
8/16/2022	10:30	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	70	193	62	41	62	NA	NA	NA	Logging
8/16/2022	11:26	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	MP	100	325	109	242	109	NA	NA	NA	Slow travel parallel with rocks toward sea
8/16/2022	12:26	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	200	128	201	305	201	NA	NA	NA	Fighting
8/16/2022	12:26	Rock Placement	Jessica Lotts	15	CSL	Mixed	Unknown	Crane Barge	SS	250	129	251	307	251	NA	NA	NA	Hauled out
8/16/2022	15:13	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	20	105	39	139	39	NA	NA	NA	Swam under barge then toward sea
8/17/2022	9:13	Rock Placement	Edward Ervin	1	CSL	Unknown	Unknown	Crane Barge	SB	370	120	391	291	391	NA	NA	NA	Hauled out on west end of jetty
8/17/2022	10:37	Rock Placement	Edward Ervin	7	CSL	Adult	Unknown	Crane Barge	SB	320	180	280	352	280	NA	NA	NA	Hauled out on rocks
8/17/2022	10:37	Rock Placement	Edward Ervin	2	CSL	Juvenile	Unknown	Crane Barge	SB	320	180	280	352	280	NA	NA	NA	Hauled out on rocks
8/17/2022	11:22	Rock Placement	Edward Ervin	3	CSL	Adult	Unknown	Crane Barge	SB	320	180	280	352	280	NA	NA	NA	Hauled out on rocks
8/17/2022	11:22	Rock Placement	Edward Ervin	2	CSL	Juvenile	Unknown	Crane Barge	SB	320	180	280	352	280	NA	NA	NA	Hauled out on rocks
8/17/2022	11:31	Rock Placement	Edward Ervin	5	CSL	Adult	Unknown	Crane Barge	SB	320	180	280	352	280	NA	NA	NA	Hauled out on rocks
8/17/2022	11:31	Rock Placement	Edward Ervin	2	CSL	Juvenile	Unknown	Crane Barge	SB	320	180	280	352	280	NA	NA	NA	Hauled out on rocks
8/17/2022	12:23	Rock Placement	Edward Ervin	1	CSL	Adult	Male	Crane Barge	SB	18	139	63	217	63	NA	NA	NA	Swam along south side of jetty toward barge, but turned around
8/17/2022	12:55	Rock Placement	Edward Ervin	2	CSO	Adult	Unknown	Crane Barge	MS	275	302	270	230	270	NA	NA	NA	Foraging / Grooming
8/18/2022	8:46	Rock Placement	Edward Ervin	8	CSL	Adult	Unknown	Crane Barge	SB	320	120	341	289	341	NA	NA	NA	Hauled out on rocks
8/18/2022	8:46	Rock Placement	Edward Ervin	2	CSL	Juvenile	Unknown	Crane Barge	SB	320	120	341	289	341	NA	NA	NA	Hauled out on rocks
8/18/2022	9:27	Rock Placement	Edward Ervin	1	CSO	Adult	Unknown	Crane Barge	B	210	5	259	196	259	NA	NA	NA	Foraging / Grooming
8/18/2022	12:40	Rock Placement	Edward Ervin	9	CSI	Adult	Unknown	Crane Barge	MS	320	120	327	296	327	NA	NA	NA	Hauled out on rocks
8/18/2022	12:40	Rock Placement	Edward Ervin	2	CSI	Juvenile	Unknown	Crane Barge	MS	320	120	327	296	327	NA	NA	NA	Hauled out on rocks
8/19/2022	7:27	Rock Placement	Edward Ervin	1	CSL	Adult	Male	Crane Barge	MS	125	170	113	341	113	NA	NA	NA	Milling
8/19/2022	8:35	Rock Placement	Edward Ervin	6	CSL	Adult	Unknown	Crane Barge	MS	320	120	327	296	327	NA	NA	NA	Hauled out on rocks
8/19/2022	8:35	Rock Placement	Edward Ervin	1	CSL	Juvenile	Unknown	Crane Barge	MS	320	120	327	296	327	NA	NA	NA	Hauled out on rocks
8/19/2022	9:18	Rock Placement	Edward Ervin	1	CSL	Adult	Female	Crane Barge	MS	70	155	66	315	66	NA	NA	NA	Milling

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8/19/2022	9:43	Rock Placement	Edward Ervin	1	CSL	Adult	Female	Crane Barge	MS	70	155	66	315	66	NA	NA	NA	Milling
8/19/2022	9:47	Rock Placement	Edward Ervin	9	CSL	Adult	Unknown	Crane Barge	MS	320	120	327	296	327	NA	NA	NA	Hauled out on rocks
8/19/2022	9:47	Rock Placement	Edward Ervin	3	CSL	Juvenile	Unknown	Crane Barge	MS	320	120	327	296	327	NA	NA	NA	Hauled out on rocks
8/19/2022	10:03	Rock Placement	Edward Ervin	1	CSL	Adult	Female	Crane Barge	SS	20	160	18	313	18	NA	NA	NA	Milling
8/19/2022	12:57	Rock Placement	Edward Ervin	1	CSO	Adult	Unknown	Crane Barge	B	280	350	318	235	318	NA	NA	NA	Floating / Resting / Diving
8/19/2022	13:03	Rock Placement	Edward Ervin	1	CSL	Adult	Female	Crane Barge	SB	500	130	509	303	509	NA	NA	NA	Milling
8/19/2022	15:28	Rock Placement	Edward Ervin	1	Sick CSL	Adult	Female	Crane Barge	MS	75	135	79	296	79	NA	NA	NA	Lethargic; large area of skin and fat missing from dorsoventral area.
8/20/2022	7:09	No in-water work	Edward Ervin	1	CSO	Adult	Unknown	Crane Barge	B	300	40	360	221	360	NA	NA	NA	Swimming on back
8/20/2022	7:34	No in-water work	Edward Ervin	1	CSL	Juvenile	Unknown	Crane Barge	MS	75	160	68	322	68	NA	NA	NA	Foraging along jetty
8/20/2022	9:12	Rock Placement	Edward Ervin	1	CSL	Adult	Male	Crane Barge	MS	60	120	71	276	71	NA	NA	NA	Swimming / Milling
8/20/2022	9:12	Rock Placement	Edward Ervin	1	CSL	Juvenile	Unknown	Crane Barge	MS	60	120	71	276	71	NA	NA	NA	Swimming / Milling
8/20/2022	14:07	Rock Placement	Edward Ervin	1	CSO	Adult	Male	Crane Barge	B	150	75	204	243	204	NA	NA	NA	Swimming
8/20/2022	16:10	Rock Placement	Edward Ervin	1	CSL	Adult	Male	Crane Barge	SS	75	130	77	302	77	NA	NA	NA	Foraging / Swimming
8/20/2022	16:24	Pre/Post-Construction Survey	Edward Ervin	1	CSL	Adult	Male	Crane Barge	SB	10	220	52	192	52	NA	NA	NA	Swimming
8/22/2022	8:47	Rock Placement	Edward Ervin	6	CSL	Adult	Unknown	Crane Barge	SB	325	120	346	289	346	NA	NA	NA	Hauled out on rocks
8/22/2022	8:47	Rock Placement	Edward Ervin	2	CSL	Juvenile	Unknown	Crane Barge	SB	325	120	346	289	346	NA	NA	NA	Hauled out on rocks
8/22/2022	8:56	Rock Placement	Edward Ervin	2	CSL	Adult	Unknown	Crane Barge	MS	325	120	332	296	332	NA	NA	NA	Two males tussling
8/23/2022	8:50	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	S	40	236	30	48	30	NA	NA	NA	Swam parallel with rocks toward sea
8/23/2022	8:50	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	30	125	33	286	33	NA	NA	NA	Traveling toward barge, then parallel toward harbor
8/23/2022	10:34	Rock Placement	Jessica Lotts	2	CSL	Juvenile	Unknown	Crane Barge	SS	80	122	83	295	83	NA	NA	NA	Swam toward barge, turned away toward harbor
8/23/2022	11:09	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	100	121	103	295	103	NA	NA	NA	Hauled out on rocks
8/23/2022	11:20	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	40	135	41	301	41	NA	NA	NA	Milling by rocks then swam towards sea
8/23/2022	11:20	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	40	135	41	301	41	NA	NA	NA	Milling by rocks then swam toward sea
8/23/2022	15:56	Rock Placement	Jessica Lotts	4	CSL	Juvenile	Unknown	Crane Barge	SS	100	110	105	285	105	NA	NA	NA	Fast travel toward harbor
8/24/2022	7:17	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	20	152	20	303	20	NA	NA	NA	Milling, shark bite on hind quarter
8/24/2022	8:59	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	50	158	47	327	47	NA	NA	NA	Swam parallel with rocks toward sea
8/24/2022	9:15	No in-water work	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	S	5	232	5	59	5	NA	NA	NA	Swam from sea into harbor parallel with rocks
8/24/2022	10:00	No in-water work	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	5	232	5	59	5	NA	NA	NA	Slow travel from harbor toward sea
8/24/2022	10:11	Rock Placement	Jessica Lotts	4	CSL	Juvenile	Unknown	Crane Barge	SS	60	105	66	277	66	NA	NA	NA	Fast travel toward barge, then turned and swam other direction
8/24/2022	10:15	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	200	131	201	308	201	NA	NA	NA	Foraging

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8/24/2022	10:30	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	80	128	82	301	82	NA	NA	NA	Fast travel toward barge, then veered off
8/24/2022	11:27	No in-water work	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	5	230	5	55	5	NA	NA	NA	Hauled out on rocks / Shark bite on left flipper
8/24/2022	13:44	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	30	130	32	291	32	NA	NA	NA	Same CSL returned / Milling by barge / Slow travel toward rocks
8/24/2022	15:03	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	30	280	30	100	30	NA	NA	NA	Same CSL / Floating
8/25/2022	10:00	Rock Placement	Jessica Lotts	30	CSL	Mixed	Mixed	Crane Barge	SS	500	138	500	317	500	NA	NA	NA	Hauled out on rocks
8/25/2022	11:42	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	B	120	50	180	228	180	NA	NA	NA	Fast travel toward harbor
8/26/2022	6:29	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	50	240	40	48	40	NA	NA	NA	Fast travel from harbor towards sea
8/26/2022	8:34	Rock Placement	Jessica Lotts	20	CSL	Mixed	Mixed	Crane Barge	SS	500	132	501	311	501	NA	NA	NA	Hauled out on rocks
8/26/2022	12:08	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PS	200	308	200	128	200	NA	NA	NA	Floating in kelp
8/26/2022	12:48	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	PB	100	38	160	222	160	NA	NA	NA	Slow travel from ocean toward harbor
8/26/2022	14:30	Rock Placement	Jessica Lotts	1	Dead CSL	Adult	Unknown	Crane Barge	S	5	225	5	45	5	NA	NA	NA	Dead. Non-work -related, heavily decayed. No head, no tail, dead for weeks.
8/26/2022	16:18	Rock Placement	Jessica Lotts	2	HBW	Adult	Unknown	Crane Barge	SS	1600	180	1593	360	1593	NA	NA	NA	Traveling NE / Fin slapping / Breaching
8/28/2022	7:18	Rock Placement	Jessica Lotts	2	CSL	Juvenile	Unknown	Crane Barge	MS	80	125	88	287	88	NA	NA	NA	Fast travel from harbor toward sea
8/28/2022	7:18	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	80	125	88	287	88	NA	NA	NA	Fast travel from harbor toward sea
8/28/2022	12:20	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PB	150	55	209	231	209	NA	NA	NA	Foraging
8/28/2022	12:50	Rock Placement	Jessica Lotts	1	HBW	Adult	Unknown	Crane Barge	MS	800	147	795	325	795	NA	NA	NA	Two blows, deep dive, swam around harbor
8/28/2022	12:50	Rock Placement	Jessica Lotts	1	HBW	Juvenile	Unknown	Crane Barge	MS	800	147	795	325	795	NA	NA	NA	Swam around harbor
8/28/2022	13:28	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SB	12	235	50	289	50	NA	NA	NA	Swimming
8/28/2022	13:33	No in-water work	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SB	5	230	57	225	57	NA	NA	NA	Swimming
8/28/2022	14:04	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	40	133	42	299	42	NA	NA	NA	Foraging
8/28/2022	14:52	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	150	150	146	321	146	NA	NA	NA	Fast travel from sea toward rocks
8/29/2022	6:40	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PB	120	55	179	230	179	NA	NA	NA	Traveling from harbor to sea carrying pup
8/29/2022	6:40	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	PB	120	55	179	230	179	NA	NA	NA	Traveling from harbor to sea
8/29/2022	11:00	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	PS	30	282	30	102	30	NA	NA	NA	Foraging
8/29/2022	12:59	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	120	154	114	323	114	NA	NA	NA	Fast travel from harbor toward sea
8/29/2022	14:40	Rock Placement	Jessica Lotts	1	HBW	Adult	Unknown	Crane Barge	S	8000	285	7995	45	7995	NA	NA	NA	Fast travel NE
8/29/2022	15:17	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	PS	20	285	20	105	20	NA	NA	NA	Slow travel parallel with rocks toward sea
8/30/2022	6:18	Pre/Post-Construction Survey	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	MS	200	150	195	323	195	NA	NA	NA	Slow travel toward sea
8/30/2022	6:25	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MP	30	208	9	208	9	NA	NA	NA	Slow travel toward harbor
8/30/2022	8:52	Rock Placement	Jessica Lotts	2	CSL	Juvenile	Unknown	Crane Barge	MS	100	148	97	314	97	NA	NA	NA	Fast travel from harbor toward rocks

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8/30/2022	8:53	Rock Placement	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	PS	100	212	100	32	100	NA	NA	NA	Logging
8/30/2022	10:00	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	PS	50	268	50	88	50	NA	NA	NA	Swam parallel with rocks toward harbor
8/30/2022	11:25	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PB	170	50	230	228	230	NA	NA	NA	Foraging / Floating
8/31/2022	6:26	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MP	150	230	120	226	120	NA	NA	NA	Fast travel toward rocks
8/31/2022	8:34	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	60	185	53	359	53	NA	NA	NA	Slow travel from rocks toward sea
8/31/2022	8:57	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	40	200	31	39	31	NA	NA	NA	Milling
8/31/2022	10:18	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	MS	120	165	110	335	110	NA	NA	NA	Sunbathing
8/31/2022	10:23	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	PS	60	200	60	20	60	NA	NA	NA	Milling / Swam toward harbor
8/31/2022	12:10	Rock Placement	Jessica Lotts	2	CSL	Adult	Female	Crane Barge	SS	20	105	26	259	26	NA	NA	NA	Swam parallel with rocks toward sea
8/31/2022	12:38	Rock Placement	Jessica Lotts	3	CSL	Juvenile	Unknown	Crane Barge	SS	40	125	43	291	43	NA	NA	NA	Fast travel toward crane, then turned around
8/31/2022	14:00	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	20	190	13	353	13	NA	NA	NA	Milling / Swam toward sea
9/1/2022	6:24	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	60	192	41	359	41	NA	NA	NA	Slow travel toward rocks
9/1/2022	6:57	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	B	120	30	179	217	179	NA	NA	NA	Swam from harbor toward sea
9/1/2022	6:57	Rock Placement	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	B	120	30	179	217	179	NA	NA	NA	Swam from harbor toward sea
9/1/2022	9:30	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MS	225	165	214	339	214	NA	NA	NA	Slow travel from rocks toward harbor
9/1/2022	9:42	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	40	150	39	316	39	NA	NA	NA	Swam parallel with barge, then toward rocks
9/2/2022	6:20	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Male	Crane Barge	S	220	110	224	288	224	NA	NA	NA	Slow travel from harbor toward sea
9/2/2022	6:20	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Unknown	Unknown	Crane Barge	S	220	110	224	288	224	NA	NA	NA	Slow travel from harbor toward sea
9/2/2022	6:31	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SB	120	110	157	262	157	NA	NA	NA	Slow travel from harbor toward sea
9/2/2022	8:35	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	25	235	15	49	15	NA	NA	NA	Slow travel toward sea
9/2/2022	9:23	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	MS	100	183	83	353	83	NA	NA	NA	Swam from harbor toward rocks
9/7/2022	6:28	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	35	168	30	311	30	NA	NA	NA	Slow travel from rocks toward harbor
9/7/2022	7:06	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MP	200	325	207	233	207	NA	NA	NA	Floating / Foraging
9/7/2022	7:20	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	45	171	36	324	36	NA	NA	NA	Fast travel toward harbor
9/7/2022	7:27	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	225	212	215	44	215	NA	NA	NA	Foraging
9/7/2022	7:53	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	240	202	231	44	231	NA	NA	NA	Foraging
9/7/2022	8:08	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	100	190	92	42	92	NA	NA	NA	Swam parallel with rocks toward sea
9/7/2022	10:10	No in-water work	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	10	241	3	61	3	NA	NA	NA	Swam from sea toward crane, then turned back to sea
9/7/2022	11:44	Rock Placement	Jessica Lotts	3	CSL	Juvenile	Unknown	Crane Barge	PB	120	45	180	225	180	NA	NA	NA	Fast travel from sea toward harbor
9/7/2022	13:48	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	S	20	242	11	53	11	NA	NA	NA	Swam parallel with rocks toward sea



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9/7/2022	14:05	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	30	212	20	41	20	NA	NA	NA	Swam parallel with rocks toward sea
9/8/2022	6:17	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	100	148	97	314	97	NA	NA	NA	Slow travel from rocks toward harbor
9/8/2022	6:34	Pre/Post-Construction Survey	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	SS	40	208	31	41	31	NA	NA	NA	Milling
9/8/2022	6:55	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	30	215	20	42	20	NA	NA	NA	Grooming
9/8/2022	8:08	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	50	145	52	296	52	NA	NA	NA	Swam from harbor toward rocks
9/8/2022	12:28	Rock Placement	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	SS	30	195	22	35	22	NA	NA	NA	Swam from rocks toward crane, then turned around
9/8/2022	12:28	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	30	195	22	35	22	NA	NA	NA	Swam from rocks toward crane, then turned around
9/8/2022	13:11	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MP	200	330	210	233	210	NA	NA	NA	Foraging / Grooming
9/8/2022	13:16	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	PS	20	240	20	60	20	NA	NA	NA	Milling / Slow travel away from crane
9/8/2022	16:18	Rock Placement	Jessica Lotts	2	CSL	Adult	Female	Crane Barge	SS	50	130	52	299	52	NA	NA	NA	Swam from harbor toward rocks
9/9/2022	6:26	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	80	198	71	42	71	NA	NA	NA	Fast travel parallel with rocks toward sea
9/9/2022	7:12	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MS	60	143	62	299	62	NA	NA	NA	Foraging
9/9/2022	7:48	Rock Placement	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	SS	25	138	26	294	26	NA	NA	NA	Milling
9/10/2022	6:37	Pre/Post-Construction Survey	Jessica Lotts	2	CSL	Adult	Male	Crane Barge	SS	100	190	92	42	92	NA	NA	NA	Hauled out on rocks
9/10/2022	6:37	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	100	190	92	42	92	NA	NA	NA	Hauled out on rocks
9/10/2022	6:37	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	100	190	92	42	92	NA	NA	NA	Hauled out on rocks
9/10/2022	6:45	Pre/Post-Construction Survey	Jessica Lotts	20	CSL	Mixed	Unknown	Crane Barge	SS	200	135	200	312	200	NA	NA	NA	Hauled out on rocks
9/11/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	120	155	114	324	114	NA	NA	NA	Slow travel from sea toward harbor
9/11/2022	7:05	Pre/Post-Construction Survey	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	SS	30	175	25	340	25	NA	NA	NA	Logging
9/11/2022	7:20	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	PS	20	275	20	95	20	NA	NA	NA	Milling / Swam toward rocks
9/11/2022	8:20	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MS	180	70	203	247	203	NA	NA	NA	Foraging
9/11/2022	8:56	Rock Placement	Jessica Lotts	4	CSL	Juvenile	Unknown	Crane Barge	SS	60	65	69	242	69	NA	NA	NA	Swam toward barge, then turned around
9/11/2022	9:17	No in-water work	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	S	10	230	1	50	1	NA	NA	NA	Swam from barge toward rocks
9/11/2022	9:17	No in-water work	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	10	230	1	50	1	NA	NA	NA	Swam from barge toward rocks
9/11/2022	9:41	Rock Placement	Jessica Lotts	6	CSL	Unknown	Unknown	Crane Barge	SS	20	163	18	317	18	NA	NA	NA	Fast travel toward crane, then turned around
9/11/2022	10:22	Rock Placement	Jessica Lotts	10	CSL	Unknown	Unknown	Crane Barge	SS	30	165	26	328	26	NA	NA	NA	Fast travel toward crane, then turned around
9/11/2022	14:13	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	S	15	175	11	324	11	NA	NA	NA	Fast travel toward crane, then turned around
9/12/2022	6:27	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	PS	60	275	60	95	60	NA	NA	NA	Fast travel toward rocks
9/12/2022	7:15	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SS	70	215	60	44	60	NA	NA	NA	Foraging
9/12/2022	8:56	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	20	155	19	307	19	NA	NA	NA	Swam from harbor toward rocks

DATE	TIME	Type of Activity	PSO	#	ID*	AGE	SEX	PSO LOCATION	PSO SPECIFIC POSITION	DISTANCE OBSERVER TO MAMMAL (meters)	BEARING OBSERVER TO MAMMAL (degrees)	DISTANCE MAMMAL TO ROCK SETTING (meters)	BEARING MAMMAL TO ROCK SETTING (degrees)	DISTANCE TO HARRASSMENT ZONE (meters)	MITIGATION	TIME IN SHUTDOWN ZONE (minutes)	BEHAVIORAL DISTURBANCE LEVEL	NOTES
9/12/2022	9:30	No in-water work	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	100	135	100	309	100	NA	NA	NA	Milling
9/12/2022	11:07	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	15	150	16	290	16	NA	NA	NA	Swam toward crane, turned and swam away
9/12/2022	11:08	Rock Placement	Jessica Lotts	8	CSL	Unknown	Unknown	Crane Barge	SS	40	149	39	315	39	NA	NA	NA	Fast travel toward crane, then turned around
9/12/2022	13:11	Rock Placement	Jessica Lotts	4	CSL	Juvenile	Unknown	Crane Barge	SS	60	135	61	305	61	NA	NA	NA	Fast travel toward crane, then turned around
9/12/2022	14:22	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	20	143	21	293	21	NA	NA	NA	Swam parallel with rocks toward sea
9/13/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	15	204	7	31	7	NA	NA	NA	Swam toward rocks
9/13/2022	6:40	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MS	60	120	71	276	71	NA	NA	NA	Foraging
9/13/2022	8:22	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	80	169	75	343	75	NA	NA	NA	Swam toward sea
9/13/2022	9:47	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	40	175	34	344	34	NA	NA	NA	Fast travel toward crane, then turned around
9/13/2022	10:25	Rock Placement	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	SS	120	165	115	341	115	NA	NA	NA	Swam from harbor toward rocks
9/13/2022	10:47	Rock Placement	Jessica Lotts	6	CSL	Unknown	Unknown	Crane Barge	SS	60	167	55	339	55	NA	NA	NA	Fast travel toward crane, then turned around
9/13/2022	10:47	Rock Placement	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	SS	60	165	56	337	56	NA	NA	NA	Logging
9/13/2022	10:50	Rock Placement	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	PS	200	280	200	100	200	NA	NA	NA	Logging
9/13/2022	12:27	Rock Placement	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	MS	200	78	221	254	221	NA	NA	NA	Foraging
9/13/2022	12:46	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	60	172	55	344	55	NA	NA	NA	Swam parallel with rocks toward sea
9/13/2022	12:55	Rock Placement	Jessica Lotts	8	CSL	Unknown	Unknown	Crane Barge	SS	70	172	64	345	64	NA	NA	NA	Fast travel parallel with rocks toward sea
9/13/2022	14:47	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	55	174	49	346	49	NA	NA	NA	Travel toward crane, then turned around
9/13/2022	15:32	Rock Placement	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	SS	40	165	36	332	36	NA	NA	NA	Swam toward crane, turned and swam away
9/13/2022	15:32	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	40	165	36	332	36	NA	NA	NA	Swam toward crane, turned and swam away
9/14/2022	6:30	Pre/Post-Construction Survey	Jessica Lotts	2	HBW	Adult	Unknown	Crane Barge	MS	1600	157	1591	336	1591	NA	NA	NA	Slow travel SE / Deep Dive / 2 Breaches
9/14/2022	7:20	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	80	145	80	307	80	NA	NA	NA	Fast travel toward rocks
9/14/2022	8:41	Rock Placement	Jessica Lotts	3	HBW	Adult	Unknown	Crane Barge	SS	1600	110	1604	290	1604	NA	NA	NA	Traveling S
9/14/2022	8:44	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	120	139	120	314	120	NA	NA	NA	Milling
9/14/2022	10:00	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	30	150	29	311	29	NA	NA	NA	Milling
9/14/2022	10:55	Rock Placement	Jessica Lotts	2	HBW	Adult	Unknown	Crane Barge	MS	1600	87	1619	266	1619	NA	NA	NA	Foraging
9/14/2022	12:00	Rock Placement	Jessica Lotts	2	HBW	Adult	Unknown	Crane Barge	MS	800	90	818	269	818	NA	NA	NA	Foraging
9/14/2022	12:30	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	60	84	81	249	81	NA	NA	NA	Foraging
9/14/2022	14:54	Rock Placement	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	SS	40	160	37	327	37	NA	NA	NA	Traveling toward crane
9/14/2022	15:15	No in-water work	Jessica Lotts	2	CSL	Adult	Unknown	Crane Barge	S	18	235	8	51	8	NA	NA	NA	Approached barge, turned around and swam away
9/14/2022	15:15	No in-water work	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	S	18	235	8	51	8	NA	NA	NA	Approached barge, turned around and swam away

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9/14/2022	15:43	No in-water work	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PS	150	220	150	40	150	NA	NA	NA	Foraging
9/14/2022	15:49	No in-water work	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	SS	70	187	62	40	62	NA	NA	NA	Swam from rock toward harbor
9/16/2022	6:43	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	75	189	57	358	57	NA	NA	NA	Fast travel toward rocks
9/16/2022	8:52	No in-water work	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	PB	200	355	243	238	243	NA	NA	NA	Milling
9/16/2022	9:14	No in-water work	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MP	200	243	172	228	172	NA	NA	NA	Foraging
9/16/2022	9:21	No in-water work	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	SB	140	79	195	245	195	NA	NA	NA	Floating in kelp
9/16/2022	10:22	No in-water work	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PS	2	258	2	78	2	NA	NA	NA	Slow travel toward harbor
9/16/2022	12:10	No in-water work	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	8	235	3	58	3	NA	NA	3	Hauled out on rocks, approached and CSL went into water and swam out of work area
9/16/2022	12:20	Rock Placement	Jessica Lotts	2	CSL	Adult	Female	Crane Barge	SS	20	168	17	323	17	NA	NA	NA	Slow travel toward crane, then turned around
9/16/2022	13:57	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	PS	70	185	70	5	70	NA	NA	NA	Fast travel toward harbor
9/17/2022	6:21	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	MS	80	165	71	329	71	NA	NA	NA	Fast travel toward sea
9/17/2022	6:28	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MS	75	168	65	332	65	NA	NA	NA	Foraging
9/17/2022	6:33	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	MS	80	165	71	329	71	NA	NA	NA	Fast travel toward harbor
9/17/2022	7:55	Rock Placement	Jessica Lotts	1	Dead CSL	Adult	Unknown	Crane Barge	PS	230	293	230	113	230	NA	NA	NA	Heavy decay, missing head and fin. Not project related.
9/17/2022	9:48	Rock Placement	Jessica Lotts	8	CSL	Juvenile	Unknown	Crane Barge	SS	20	123	24	274	24	NA	NA	NA	Fast travel toward crane, then turned around
9/17/2022	12:44	Rock Placement	Jessica Lotts	3	CSL	Juvenile	Unknown	Crane Barge	SS	20	124	24	275	24	NA	NA	NA	Fast travel toward crane, then turned around
9/17/2022	13:04	Rock Placement	Jessica Lotts	10	CSL	Unknown	Unknown	Crane Barge	SS	20	124	24	275	24	NA	NA	NA	Fast travel toward crane, then turned around
9/17/2022	14:00	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MP	175	21	203	205	203	NA	NA	NA	Foraging
9/18/2022	6:21	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	MS	90	202	68	219	68	NA	NA	NA	Fast travel toward rocks
9/18/2022	7:35	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	PB	100	310	112	262	112	NA	NA	NA	Foraging
9/18/2022	7:55	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	SS	120	151	118	326	118	NA	NA	NA	Slow travel parallel with rocks toward sea
9/18/2022	12:46	Rock Placement	Jessica Lotts	6	CSL	Juvenile	Unknown	Crane Barge	SS	100	130	101	304	101	NA	NA	NA	Hauled out on rocks
9/18/2022	13:35	Rock Placement	Jessica Lotts	3	CSL	Juvenile	Unknown	Crane Barge	SS	20	148	20	299	20	NA	NA	NA	Slow travel toward crane, then turned around
9/18/2022	15:11	Rock Placement	Jessica Lotts	1	CSL	Adult	Female	Crane Barge	MP	70	242	42	232	42	NA	NA	NA	Slow travel toward harbor
9/19/2022	7:33	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MS	90	151	87	316	87	NA	NA	NA	Foraging
9/19/2022	7:59	Pre/Post-Construction Survey	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	MS	150	143	149	314	149	NA	NA	NA	Fast travel toward sea
9/19/2022	8:15	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	90	147	88	311	88	NA	NA	NA	Slow travel toward harbor
9/19/2022	8:18	Rock Placement	Jessica Lotts	1	CSL	Adult	Male	Crane Barge	MP	60	245	33	235	33	NA	NA	NA	Slow travel toward harbor
9/19/2022	8:21	Rock Placement	Jessica Lotts	1	Dead CSL	Adult	Unknown	Crane Barge	S	25	190	18	357	18	NA	NA	NA	Dead. Heavy decay; large tumor present. Non-project related.
9/19/2022	8:36	Rock Placement	Jessica Lotts	1	HBW	Adult	Unknown	Crane Barge	PS	3200	221	3200	41	3200	NA	NA	NA	Breach / Blows / Submerge

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9/19/2022	9:40	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	S	25	191	18	358	18	NA	NA	NA	Slow travel toward rocks
9/20/2022	6:17	Pre/Post-Construction Survey	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MS	60	185	44	349	44	NA	NA	NA	Foraging
9/20/2022	6:46	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	200	152	194	325	194	NA	NA	NA	Slow travel toward harbor
9/20/2022	6:47	Pre/Post-Construction Survey	Jessica Lotts	1	HS	Adult	Unknown	Crane Barge	PS	30	280	30	100	30	NA	NA	NA	Logging
9/20/2022	14:53	Rock Placement	Jessica Lotts	1	CSO	Adult	Unknown	Crane Barge	MP	250	275	232	230	232	NA	NA	NA	Foraging
9/20/2022	15:00	Rock Placement	Jessica Lotts	8	CSL	Mixed	Mixed	Crane Barge	S	200	180	193	358	193	NA	NA	NA	Hauled out on rocks
9/21/2022	6:25	Pre/Post-Construction Survey	Dante DeLany	10	CSL	Adult	Unknown	Crane Barge	MS	250	180	233	356	233	NA	NA	NA	Hauled out on rocks
9/21/2022	7:15	Pre/Post-Construction Survey	Dante DeLany	1	CSL	Adult	Female	Crane Barge	MS	150	170	137	342	137	NA	NA	NA	Swam toward rocks
9/21/2022	7:50	Rock Placement	Dante DeLany	1	CSL	Adult	Female	Crane Barge	MS	100	185	82	356	82	NA	NA	NA	Swam parallel with rocks to sea
9/21/2022	9:05	Rock Placement	Dante DeLany	4	CSO	Adult	Unknown	Crane Barge	MP	250	250	223	228	223	NA	NA	NA	Rafting
9/21/2022	9:20	Rock Placement	Dante DeLany	3	BD	Adult	Unknown	Crane Barge	S	250	150	248	328	248	NA	NA	NA	Swam away from barge
9/21/2022	10:10	Rock Placement	Dante DeLany	1	CSO	Adult	Unknown	Crane Barge	MP	220	340	234	232	234	NA	NA	NA	Foraging
9/21/2022	10:20	Rock Placement	Dante DeLany	2	CSO	Adult	Unknown	Crane Barge	MP	200	320	205	234	205	NA	NA	NA	Foraging
9/21/2022	10:45	Rock Placement	Dante DeLany	1	CSL	Adult	Unknown	Crane Barge	S	100	65	109	243	109	NA	NA	NA	Foraging
9/27/2022	6:35	Pre/Post-Construction Survey	Dante DeLany	20	CSL	Adult	Unknown	Crane Barge	PB	150	210	93	219	93	NA	NA	NA	Hauled out on rocks
9/27/2022	10:15	Rock Placement	Dante DeLany	1	CSL	Adult	Unknown	Crane Barge	PB	30	200	35	322	35	NA	NA	NA	Foraging
9/27/2022	14:30	Rock Placement	Dante DeLany	1	CSL	Adult	Male	Crane Barge	S	40	80	49	252	49	NA	NA	NA	Swimming
9/27/2022	16:00	Rock Placement	Dante DeLany	1	CSL	Adult	Unknown	Crane Barge	SS	10	50	20	225	20	NA	NA	NA	Foraging
9/28/2022	6:25	Pre/Post-Construction Survey	Dante DeLany	20	CSL	Adult	Unknown	Crane Barge	MP	150	210	121	222	121	NA	NA	NA	Hauled out on rocks
9/28/2022	9:00	Rock Placement	Dante DeLany	1	HS	Adult	Unknown	Crane Barge	MP	30	170	28	295	28	NA	NA	NA	Swimming
9/28/2022	12:05	No in-water work	Dante DeLany	1	CSO	Adult	Unknown	Crane Barge	S	10	90	18	225	18	NA	NA	NA	Foraging
9/30/2022	10:56	No in-water work	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	S	75	110	80	283	80	NA	NA	NA	Foraging
9/30/2022	11:05	Vessel or Equipment Positioning	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	SS	30	142	30	303	30	NA	NA	NA	Fast Travel SE
9/30/2022	12:26	No in-water work	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	B	120	5	170	204	170	NA	NA	NA	Foraging
10/1/2022	10:28	Rock Placement	Jennifer Klaib	1	ES	Juvenile	Unknown	Crane Barge	PB	175	331	200	244	200	NA	NA	NA	Swimming
10/1/2022	12:16	Rock Placement	Jennifer Klaib	1	CSL	Juvenile	Unknown	Crane Barge	B	15	259	48	215	48	NA	NA	NA	Milling
10/2/2022	7:45	Rock Placement	Jennifer Klaib	8	CSL	Juvenile	Unknown	Crane Barge	SS	40	150	39	316	39	NA	NA	NA	Slow travel NE
10/2/2022	10:25	Rock Placement	Jennifer Klaib	1	CSO	Adult	Unknown	Crane Barge	B	210	5	259	196	259	NA	NA	NA	Foraging
10/3/2022	9:07	Rock Placement	Jennifer Klaib	4	HBW	Unknown	Unknown	Crane Barge	SB	800	46	862	226	862	NA	NA	NA	Slow travel
10/3/2022	13:16	Rock Placement	Jennifer Klaib	1	CSL	Adult	Female	Crane Barge	SB	12	67	73	85	73	NA	NA	NA	Swimming N

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10/3/2022	13:52	Rock Placement	Jennifer Klaib	1	CSL	Adult	Unknown	Crane Barge	PB	100	320	121	262	121	NA	NA	NA	Travel toward harbor
10/4/2022	6:30	Pre/Post-Construction Survey	Kyler Sloan	30	CSL	Adult	Unknown	Crane Barge	MS	50	180	37	339	37	NA	NA	NA	Hauled out on rocks
10/4/2022	6:41	Pre/Post-Construction Survey	Kyler Sloan	2	CSL	Adult	Unknown	Crane Barge	MS	50	112	64	265	64	NA	NA	NA	Hauled out on rocks
10/4/2022	7:10	No in-water work	Kyler Sloan	7	BD	Unknown	Unknown	Crane Barge	SB	175	112	207	273	207	NA	NA	NA	Swam away from barge
10/4/2022	7:37	No in-water work	Kyler Sloan	1	CSL	Adult	Unknown	Crane Barge	MS	75	120	85	281	85	NA	NA	NA	Traveling S from jetty
10/4/2022	12:29	No in-water work	Kyler Sloan	2	CSL	Adult	Unknown	Crane Barge	MS	25	124	39	225	39	NA	NA	NA	Traveling S from jetty
10/4/2022	13:15	No in-water work	Kyler Sloan	15	CSL	Adult	Unknown	Crane Barge	MS	100	225	75	225	75	NA	NA	NA	Fast travel to rocks
10/4/2022	13:15	No in-water work	Kyler Sloan	3	CSL	Juvenile	Unknown	Crane Barge	MS	100	225	75	225	75	NA	NA	NA	Fast travel to rocks
10/4/2022	13:20	No in-water work	Kyler Sloan	2	HBW	Adult	Unknown	Crane Barge	S	275	130	276	308	276	NA	NA	NA	Traveling NW
10/4/2022	13:55	Pre/Post-Construction Survey	Kyler Sloan	1	CSL	Adult	Unknown	Crane Barge	MS	75	118	86	279	86	NA	NA	NA	Travel S from rocks
10/4/2022	14:22	Pre/Post-Construction Survey	Kyler Sloan	2	CSL	Adult	Unknown	Crane Barge	B	50	225	10	225	10	NA	NA	NA	Traveling W
10/6/2022	12:00	No in-water work	Kyler Sloan	1	CSL	Adult	Unknown	Crane Barge	B	30	90	84	120	84	NA	NA	NA	Swimming
10/6/2022	12:24	Vessel or Equipment Positioning	Kyler Sloan	1	CSL	Adult	Unknown	Crane Barge	MS	15	135	29	194	29	NA	NA	NA	Traveling S
10/6/2022	12:30	No in-water work	Kyler Sloan	1	CSL	Juvenile	Unknown	Crane Barge	MS	15	202	13	341	13	NA	NA	NA	Hauled out on rocks
10/6/2022	13:07	Vessel or Equipment Positioning	Kyler Sloan	1	CSL	Adult	Unknown	Crane Barge	PS	10	320	10.00	140	10	NA	NA	NA	Swam along rocks toward sea
10/6/2022	14:03	Rock Placement	Kyler Sloan	2	CSL	Adult	Unknown	Crane Barge	SB	200	22	258	209	258	NA	NA	NA	Traveling NE from sea toward rocks
10/6/2022	15:20	Pre/Post-Construction Survey	Kyler Sloan	2	CSL	Adult	Unknown	Crane Barge	SB	200	207	142	220	142	NA	NA	NA	Sunbathing
10/7/2022	6:14	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Unknown	Unknown	Crane Barge	SB	100	68	159	234	159	NA	NA	NA	Fast travel
10/7/2022	6:57	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	PS	15	186	15	6	15	NA	NA	NA	Slow travel along rocks
10/7/2022	7:01	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	MS	200	140	199	313	199	NA	NA	NA	Fast travel along rocks
10/7/2022	10:30	Rock Placement	Jessica Lotts	1	CSL	Juvenile	Unknown	Crane Barge	SS	30	150	29	311	29	NA	NA	NA	Milling
10/7/2022	11:34	Rock Placement	Jessica Lotts	2	CSO	Adult	Unknown	Crane Barge	PB	200	42	260	223	260	NA	NA	NA	Foraging
10/7/2022	13:56	Pre/Post-Construction Survey	Jessica Lotts	1	CSL	Adult	Unknown	Crane Barge	MS	150	155	143	326	143	NA	NA	NA	Slow travel along rocks

**APPENDIX 3. MARINE MAMMAL INCIDENT REPORTS**

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/22 OBSERVER J. Lotts LOCATION PSL START TIME 0717 END TIME 1504

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

pre survey

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0717-	0747	CSL	2	50m 30° Port bow	swam para w/barge => rocks @0733	N		pre survey	
		CSL	2	30m 112° Star stern	swam toward barge bow then => sea @0742	N		pre survey	
		CSL	1	50m 100° mid star	barge => rocks @0750	N		outside EZ	0747 Begin dig plume ~ 20m wide SE
		CSL	1	35m @ mid star	rocks => harbor para w/ barge @0907	N		" "	
		CSL	10	50m 110° mid star	Fast travel away from ship @0908	N		" "	
		CSL	1	100m 90° mid star	Stem => mid ship milled thru => rocks @0937	N		" "	
	1003	CSL	1	10m 112° mid star	popped up 10m from barge thru => sea	Y	4min	inside EZ	animal observed exiting EZ, continue work 1007
1007		CSL	1	20m 330° port stern	@1113	N		outside EZ	
	1128								1128 LUNCH 1212 LUNCH OVER + restart dig
1212									

STARTING WEATHER 80 %cc 1 BS SE Direction 53 °F 200m Visibility 0 Beaufort Sea State

ENDING WEATHER 40 %cc 3 BS SE Direction 44 °F 10mi Visibility 1 Beaufort Sea State

PAGE 1 OF 2

\* P50 observations made from wench



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 4/22 OBSERVER J. Lotts LOCATION PSL START TIME 0717 END TIME 1504

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
									1300 setting buoy / no dig 1330 Resume dig
	1424								1341 End dig + swap barges 1400 WQ
1424	1504	shutdown survey							1420 barges swapped
		CSO	1	200m 20° mid port	foraging; =7 harbor @1436	N		post survey	
		CSO	1	300m 10° stern	foraging @1459	N		" "	

STARTING WEATHER 80 %cc 1 BS SE Direction 53 °F 200m Visibility 0 Beaufort Sea State  
 ENDING WEATHER 40 %cc 3 BS SE Direction 64 °F 10m Visibility 1 Beaufort Sea State PAGE 2 OF 2

\* P50 observations made from wench



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/23 OBSERVER J. Lotts LOCATION PSL START TIME 0651 END TIME 1754

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0651	0721 presurvey	CSO	1	80m 110° mid star	foraging @0706	N		pre survey	0721 anchors up 0758 swap barges
		CSL	1	30m 92° mid star	sea = 7 harbor @0723	N		no work in water	0810 connect bucket 0858 start dig.
		CSO	1	180m star bow 45°	foraging by placement bow @0740	N		" "	
		CSO	1	170m 40° port bow	foraging @0754	N		" "	
		CSL	1	30m 47° bow	milling @0806	N		outside EZ	
		CSO	1	180m port bow 60°	harbor = 7 sea, foraged off bow @0819	N		" "	
		CSL	1	10m mid port 32°	swim para w/ship @0834	N		no work in water	
		CSO	1	10m mid port 34°	swimming away from ship @0835	N		" "	
		CSL	1	30m 108° star bow	swim perp. from ship = 7 harbor @0908	N		outside EZ	
	1131	CSL	2	15m 120° mid star	swimming along rock edge @0922	N		" "	1131 LUNCH

STARTING WEATHER 80 %cc 0 BS SE Direction 58 °F 2 mi Visibility 0 Beaufort Sea State

ENDING WEATHER 15 %cc 3 BS SE Direction 64 °F 9 mi Visibility 0 Beaufort Sea State

PAGE 1 OF 3

\* P50 observations made from wench

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 4/23 OBSERVER J. Lotts LOCATION PSL START TIME 0651 END TIME 1754

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1202		CSL	1	20m 71° star bow	swim past w/ burge => rocks @1306	N			1202 End lunch WG w/ Keith ~1141-1245
1348	1348	CSL	1	10m 10° star stern	bobbing - sickly looking - no obvious injury	Y	8min	possible sick animal	1359 called corp - Natalie Martinez-Talashita for advice 1408 Justin Visicke (Coordinator) called advised no need to contact wildlife rescue as long as animal is in water + swimming
1356									
	1403	CSL	1	10m 45° star stern	past w/ burge => rocks then to sea	Y	4min	inside EZ	
1407	1434	CSO	1	10m 110° star stern	" "	Y	4min	" "	
1438	1450	CSL	1	10m 121° port stern	swam along rocks passed bucket => sea	Y	2min	" "	
1452		CSL	1	70m 45° star stern	milling @1458	N			
		CSL	1	20m 122° mid star	rocks => sea @1510	N			
		CSL	1	100m 135° star stern	swam past to ship along rocks @1522	N			
		CSO	2	180m 82° star mid	swam along burge then => sea @1600	N			

STARTING WEATHER 80 %cc 0 BS SE Direction 58 °F 2mi Visibility 0 Beaufort Sea State

ENDING WEATHER 15 %cc 3 BS SE Direction 64 °F 9mi Visibility 0 Beaufort Sea State

PAGE 2 OF 3

\* P50 obsv. from wench



DATE 10/23OBSERVER V. LattaLOCATION DSC

4-01 MARINE MAMMAL MONITORING DATASHEET

START TIME 0651END TIME 1754

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior &amp; Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1625 Post Survey		CSO	2	00m 130° Star 54.1	drifting along rocks foraging	N	1625	post work	not going to switch barge, calling it a day
<del>1637</del>	1637 Stopped Survey	CSL	1	105m 125° Star 54.1	swim along rocks toward star	N	1637	outside EZ	decided to switch barge
		CSL	1	205m port bow 68°	<del>swim</del> , milling	N	1649	" "	
	<del>1724</del>								1724 barge swapped
1724 Post Survey		CSL	1	126m Star 54.1 132°	swim parallel w/boat towards rocks	N	1726	post work	
	1754 End Survey								

STARTING WEATHER 80 %cc 0 BS SE Direction 58 °F 2mi Visibility 0 Beaufort Sea StateENDING WEATHER 15 %cc 3 BS SE Direction 14 °F 9mi Visibility 0 Beaufort Sea StatePAGE 3 OF 3

\*PSO obsv from wench

PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/24 OBSERVER V. Lotts LOCATION PSC START TIME 0648 END TIME 1606

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0648-0718 Pile-survey									PSO made all mm observations from crane ship wench house unless otherwise stated in notes
	0710	CSL (adult) ♀	2	100m 58° port stern	milling	N	0710	p/r work	
		" "	1	40m star stern	milling	N	0856	outside EZ	0730 moving rails on material barge
									0750 bringing up anchors
									0807 connecting bucket
									0823 start digging
									0900 dumping start
									0940 - Left for WA
									1051 - Back from WA - monitoring resumed
	1126								~1115 finished 1 <sup>st</sup> dump 1126 Break for lunch
1156		CSO (adult) ♀	2	200m 20° port stern	Wrapped in kelp bundle	N	1206	outside EZ	1156 back to digging 1243 stop digging to switch barges
		CSL (adult) ♀	1	240m star stern 200°	hauled out on rocks	N	1256	" "	
		CSL (adult) ♀	1	300m star stern 195°	" "	N	1257	" "	

STARTING WEATHER 90 %cc 0 BS E Direction 50 °F 900m Visibility 0 Beaufort Sea State

ENDING WEATHER 20 %cc 3 BS E Direction 61 °F 9mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/24 OBSERVER J. Lotts LOCATION PSL START TIME 0648 END TIME 1606

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSO (adult) M	2	160m port bow 53°	milling ~ 1min foraging	N	1319	outside SZ	barge towed toward otters, once within 50m otters swam opposite direction level 2 disturbance - take? ← waiting conf. Keith
		CSL (adult) U	1	100m mid star 157°	swim parallel to crane ship toward rocks	N	1405	" "	went back to foraging after barge settled 1428 Begin dump #2
		CSO (adult)	1	200m mid port 45°	back floating, foraging, drifting	N	1437	" "	
		CSO (adult) U	1	250m mid port 295°	" "	N	1438	" "	1530 dump #2 finished
		CSL (adult) U	1	250m star stern 197°	eating	N	1540	" "	
		CSL (JAL) U	1	0m mid star 120°	bobbing, sickly? observed ~ 5min then swam towards rocks	N	1542	no work in water	Keith called for advisement @ 1543 - could potentially be the same one from yesterday, swam away before I could get close to confirm 1547
1606- 1636 Post survey	1606 End work	CSO (adult) A	1	185m port bow 53°	foraging	N	1623	post survey	1605 empty barge to crane ship

STARTING WEATHER 90 %cc 0 BS E Direction 50 °F 900m Visibility 0 Beaufort Sea State

ENDING WEATHER 20 %cc 3 BS E Direction 61 °F 9mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/25 OBSERVER J. Lotte + J. Klaib LOCATION PSL START TIME 0623 END TIME 1840

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

ALL LOCATIONS FROM PSD STATION ON CRANESHIP UNLESS SPECIFIED

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0623-0653		CSL (adult) u	1	10m star stern 215°	swim parallel w/ barge to rock @0632 NO TAKE	N		pre survey	0640 anchor up 0658 connecting bucket
		CSL (adult) u	1	150m star mid 110°	swimming toward rocks @0652 NO TAKE	N		pre survey	0710 start dig 0755, sulfur smell from dig
		CSL (all adults) u	9	500m star stern 182°	hauled out on rocks @0732 NO TAKE	N		outside EZ	0903 moving mowing can 0930 - Left for WQ
		CSL (juv/adult)	1	40m mid star 125°	swim parallel w/ barge toward rock @0840 NO TAKE	N		" "	1021- Back from WQ 1021 - resting bucket to switch barges
		CSO (adult) u	1	220m port bow 332°	floating, foraging @1022 NO TAKE	N		" "	
	1133								1133 Break for lunch 1203 Back from lunch
	1203								1217 barges swapped 1227 connecting bucket
		CSL juv	1	70m mid star 158°	swim par. w/ barge toward rocks @1250 NO TAKE	N		outside EZ	1237 start digging 1254 Begin 1st dump
		CSL (all adults)	~3	500m star stern 190°	hauled out end of rocks @1307 NO TAKE	N		" "	
		CSL (adult) u	1	70m star stern 189°	swim par w/ rocks toward sec @1329 NO TAKE	N		" "	

STARTING WEATHER 100 %cc 0 BS S Direction 53 °F 2mi Visibility 0 Beaufort Sea State

ENDING WEATHER 15 %cc 2 BS SE Direction 100 °F 10mi Visibility 1 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/25 OBSERVER J. Lotts LOCATION PSL START TIME 6623 END TIME 1840

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSL (adult male)	1	50m mid star 138°	Swim para. w/ barge away from rocks @1419 NO TAKE	N		outside EZ	1411 End 1 <sup>st</sup> dump
		CSL (JUV)		50m star stem 207°	milling by rocks @1429 NO TAKE	N		" "	
		CSL (adult) 4		80m mid star 170°	Swim para. w/ barge toward rocks @1515	N		" "	1659 End digging 1705 bucket disconnected 1715 swapping barges 1724 setting anchors 1810 Barge @ crane ship
	1810- 1840 (post sunset)								

STARTING WEATHER 160 <sup>FSU</sup> %cc 0 BS S Direction 53 °F 2mi Visibility 0 Beaufort Sea State

ENDING WEATHER 15 %cc 2 BS SE Direction 60 °F 10mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/26/22 OBSERVER S. Klait LOCATION PSL START TIME 0619 END TIME 1720

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0619	0649	—	—	—	—	—	—	—	Arrived on-site. Starting Pre-Survey Pre-survey completed @ 0649. No Marine mammals observed
0655									Barge 38 - started discharge of dredging material. Discharge stopped due to tow line issues
0715									Both anchors on deck
0730									starting excavation
0915	1005								Conducted water quality monitoring Discharge start @ 0945
1037									Discharge plume light brown ~ 100m long
1052									Discharge completed
1125									Lunch Break
1133									Moved empty Barge 38 to anchor location from discharge location
1205									End Lunch resumed digging

STARTING WEATHER 100 %cc 0- BS S Direction 54 °F 1 mile Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 3 BS NW Direction 66 °F 2+ mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/26/22 OBSERVER J. Klahn LOCATION PSL START TIME 0619 END TIME 1720

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1259	1303	CSL AU	1	60 m Port Stern 110°	slow swim away	N		Outside EZ	Digging.
1305									Placing bucket in cradle, because barge 37 full.
1310									Note: Light tan plume still visible at discharge location. ~100m Radius. May be due to tug. 1320 plume dissipated
1323									Barge disconnected from crane barge and moved to discharge location
1420									Barge 38 attached to crane barge.
1428									start digging & placing material on B37
1515									started discharge of material from Barge 37
1632									End of discharge
1650									cradling bucket and tug is Anchoring Barge 37 at overnight Anchorage.
1720									Anchor placed. End of day.

STARTING WEATHER 100 %cc 0 BS S Direction 54 °F 1mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 3 BS NW Direction 66 °F 2+mi Visibility 3 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 I-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/27/22

OBSERVER J. Klaitz

LOCATION PSL

START TIME 0610

END TIME 1650

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0610	0641								on site starting pre-survey. survey completed and no marine mammals within EZ. Clear to start.
0703									Stabilization Anchors on deck
0707	0712	CSL AU	1	30 m Port Bow 300'	logging/milling	N		outside EZ	No in water activity has started.
0720									Start Excavating
0802	0811	CSL AU	1	3 m Bow 210'	Swimming across Bow Port → STB	Y	9 min	Inside EZ	Excavating Requested on all stop until CSL left EZ. Observed CSL out of EZ, No Distress.
0835									Disconnecting barge 38 because its full.
0842	0843	CSL AU	1	90 m STB bow 94'		N		outside EZ	Swapping barges
0924	0930	CSL AU	1	75 m STB 70'	swimming	N		outside EZ	Swapping barges
0955									Barge 37 attached to crane barge.
1002									Start excavating

STARTING WEATHER 100 %cc 1 BS NW Direction 55 °F 1 mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 2 BS NW Direction 64 °F 2 mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/27/22 OBSERVER J. Klaib LOCATION PSL START TIME 0610 END TIME 1650

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1044									Started discharging Barge 38
11:30	1200								Digging stopped. Lunch 1200 - End lunch & Resume excavating
1158									Discharge completed.
1415									Cradling bucket to swap barges
1501	1503	CSL AU	1	90 m off bow 83°	Swimming	N		Not in EZ	No excavating occurring. Swapping barges
1550									Barges swapped, Barge 38 tied up.
1611									start excavating
1623									started discharge of Barge 37
1656									Stopped Excavating & discharge. End of day
1650	1720								Post survey

STARTING WEATHER 100% %cc 1 BS NW Direction 55 °F 1mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 2 BS NW Direction 64 °F 2+ Visibility 1 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/28/22 OBSERVER J. Klaib LOCATION PSL START TIME 0612 END TIME 1657

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0612	0642								Pre-survey. Clear to work. No marine mammals observed
0704									Stabilization Anchors on deck
0710	0713	CSL AU	1	90m STB Bow 360°	Finning	N		outside EZ	Attaching bucket in water work
0728									Start excavating
0740									Start discharge of Barge 37
0806	0821	CSL JV	1	40m Port Stern 170°	Swim → haul out → foraging → swim	N		outside EZ	Excavating
0827	0930								Water Quality Monitoring
1043									Craddling Bucket. Swapping Barges
1053	1055	CSL AU	1	80m Port Bow 349°	swimming	N		outside EZ	swapping barges
1100		CSL AU	4	PS 50m 180°	resting				

STARTING WEATHER 100 %cc 0 BS N Direction 55 °F 5-1mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 1 BS NW Direction 69 °F 2+mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 4-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/28/22 OBSERVER S. Klair LOCATION PSL START TIME 0612 END TIME 1657

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1120	1150								Lunch
1220									Resuming excavation. Barge 37 alongside.
1250									Starting discharge from Barge 38
1304	1328	CSL AU	1	60m off Port Stern 310	logging/resting	N		outside EZ	Excavating & discharging
1415									Discharge of Barge 38 complete. Placing on mooring.
1436	1539	CSL AU	1	40m off Port Stern 260	logging/resting & foraging	N		outside EZ	Excavation. Appears to be same CSL as 1304. Resight staying along breakwater
1533	1536	CSL AU	1	30m off Port Stern 270	swimming away	N		outside EZ	Excavation.
1555									End of excavation. Moving barge to discharge location. End of excavation work for day. Repairing tag line for rest of day.
1620									Stabilization anchors set & crane boomed down. end of in water work.
1627	1657								End of day survey. CP conducted geo survey of discharge site

STARTING WEATHER 100 %cc 0 BS NW Direction 55 °F 1.5-1mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 1 BS NW Direction 69 °F 2mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/29 OBSERVER J. Lotts LOCATION PSL START TIME 0612 END TIME 1727

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spychopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0612 0642 RESUMED		CSL (adult) u	1	30m star stem 205°	Hauled out on rocks @ 0624	N		pre work	*PSD at wench 0645 cable work 0810 begin crane operations
		CSL (adult) u	2	76m star stem 192°	" "	N		outside EZ	0822 anchors on deck 0825 connecting barge 38
		CSL AU	1	100m port stem 225°	milling/logging @ 0939	N		" "	0840 barge 38 connected 0845 connecting bucket
		HS AU	1	40m port stem 185°	swim para w/ rocks then turned around at 40m swim away @ 0953	N		" "	0900 start digging ~ sulfur smell 1050 bell for WA
		CSL (adult) AU	1	70m star stem 160°	swim para w/ barge then turned to swim w/ rocks ocean bound @ 1035	N		" "	1122 Finish WA ~ 1000 dump
	1120	CSL (adult) u	1	35m port stem 270°	logging at edge of shutdown down but never crossed (30 mins) @ 1037			" "	1120 Lunch 1155 back to dig
	1155	CSL (adult) u	1	60m mid star 165°	swim parallel w/ barge toward harbor @ 1723	N		" "	
		CSO (adult) u	1	225m star stem 195°	grooming by rocks @ 1234	N		" "	
		CSL (adult) u	1	40m port stem 275°	swim parallel w/ rocks out to sea @ 1250	N		" "	1340 stop digging to switch barges
		CSL AU	1	40m port of barge 140°	milling w/ barge then swim toward rocks @ 1417	N		" "	

STARTING WEATHER 15 %cc 0 BS W Direction 55 °F 7mi Visibility 0 Beaufort Sea State

ENDING WEATHER 5 %cc 3 BS SE Direction 63 °F 7mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/29 OBSERVER V. Lotts LOCATION PSC START TIME 0612 END TIME 1727

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSL (adults) u	2	50m bow of barge 2°	floating, maintained at (east) some distance w/ barge @ 1513	N		outside EZ	1500 barge swapped 1503 connecting bucket
		CSL (adult) u	1	40m port stern 276°	milled out on rocks, seems unharmed by work @ 1522	N		" "	~ 1515 2 <sup>nd</sup> dump 1525 start digging
	1537	CSL (adult) u	1	20m stern 282°	swam under bucket path along rocks toward sea, stopped	Y	1min	inside EZ	
	1542	same one			and milled by rock right off bow, observed exiting EZ toward harbor	Y	2min	" "	
1544	1542	CSL (adults) u	2	70m star stern 350°	floating with current away from placement barge @ 1558	N		outside EZ	
1542		CSO adult u	1	280m port bow 282°	floating / foraging	N		" "	~ 1648 end 2 <sup>nd</sup> dump
	1657- 1727 shutdown sunny								end digging 1701 disconnecting bucket 1707 dropping anchors 1716 anchors set 1717 hoisting crane

STARTING WEATHER 15 %cc 0 BS W Direction 55 °F 7mi Visibility 6 Beaufort Sea State

ENDING WEATHER 5 %cc 3 BS SE Direction 63 °F 7mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 6/30 OBSERVER J. Lotts LOCATION PSL START TIME 0613 END TIME 1719

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

ALL SIGHTING FROM WRENCH HOUSE UNLESS SPECIFIED

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613 0613 survey		CSL adult male	1	Star stern 50m 222°	hauled out on rocks @0618	N		pre survey	0701 moving barge to drift site 0723 barge set
		CSL adult u	1	70m port stern 180°	hauled on rocks @0631	N		" "	0736 refueling derrick + survey
		CSL adult u	2	10m port stern 255°	swam along barge, crossed over barge @0719	N		NO work in water	
		CSL adult u	2	70m off bow 285°	floating/foraging @0720	N		outside EZ	
									0822 connecting bucket + moving anchor 0835 bucket connecting
	0858	CSL (1st) AU	1	10m star stern 204°	swimming along rocks in front of bucket.	Y	5min	within EZ	0840 start digging
0905	0908				entered zone again, testing on edge just milling	Y	1min	" "	- walked to star stern to get a closer view, observations taken from here, not wrench
0909	0923	CSL (2nd) AU	1	10m star stern 200°	once bucket was hauled in water, swam up to bucket then left	Y	3min	" "	
0928	0931			5m star stern 195°	1st CSL remaining in area, sunbathing + logging, contacted with,	Y	5min		
0936	1002	CSL (3rd) AU		30m SS 220°	keeping eyes on at all times. hauled on rocks + remained out of zone @1030	Y	2min		

STARTING WEATHER 100 %cc 0 BS SE Direction 54 °F 7mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 12 °F 10mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (2014-01) MARINE MAMMAL MONITORING DATASHEET

DATE 4/30 OBSERVER J. Lotts LOCATION PSL START TIME 0613 END TIME 1719

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1004									
		CSL JU 11	1	60m Star stem 116°	Swim para w/ rocks looking for haul out spot @ 1033	N		outside EZ	~ 1100 const guard inspection
	1145	"	1	70m Star stem 157°	hauled out on rocks @ 1127	N		" "	~ 1140 USAGE Here 1145 stop for lunch
1219		CSL adult 4	1	30m Port bow 55°	off placement barge swim para w/ barge then toward harbor @ 1259	N		" "	1219 detaching bucket to switch barge 1225 switching barges
		CSL JU 10	2	100m Star stem 188°	swim para. w/ rocks then hauled out @ 1356	N		" "	1336 barges swapped + refueling closer 1347 connecting bucket
		CSL AU	4	40m Star stem 200°	swimming toward bucket, turned around only at 40m @ 1402				1350 bucket connected 1358 start digging
		"	3	100m Star stem 189°	hauled on rocks @ 1532	N		" "	~ 1415 1 <sup>st</sup> dump 1425 left for WQ
									1523 back from WQ 1540 end 1 <sup>st</sup> dump
	1649- 1719 shutdown								1649 end dig 1653 disconnecting bucket

STARTING WEATHER 100 %cc 0 BS SE Direction 54 °F 7mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 02 °F 10mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/1 OBSERVER J. Lott LOCATION PSL START TIME 0611 END TIME 1721

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0611 0641 survey		CSL adult U	1	Star Stern 100m 215°	hauled on rocks @0618	N		pre survey	@0655 working on tug / closer organizing barge material
		CSL adult U	1	30m mid port 252°	swam from harbor up to crane then veered other direction @0710	N		outside EZ	0706 moving anchor lines 0750 connecting bucket
		" "	1	90m mid star 175°	swam past w/ barge then toward harbor @0800	N		" "	0810 bucket maintenance 0820 start digging
		" "	1	70m star stern 180°	swam toward crane, turned around at 70m @0804	N		" "	0902 manure like smell from material
		" "		100m mid star 176°	swam toward middle of barge, spy hopped, then swam toward harbor @1106	N		" "	
		" "		30m port stern 221°	logging by rocks @1119	N		" "	
	1135	" "		20m stern 223°	swam past w/ rocks toward harbor, stopped over 20m away @1133	N		" "	1135 Break for lunch 1205 back from lunch
1205		CSO AU	3	180m bow of barge 350°	floating on back @1244	N		" "	1210 disconnecting bucket to swap barge 1258 barge swapped
		CSL adult U	1	25m stern 265°	approached stern, went other direction @1310				1300 connecting bucket 1310 start dig
									1320 left for WQ 1345 back from WQ

STARTING WEATHER 80 %cc 7 BS SE Direction 53 °F 7mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 00 °F 9mi Visibility 4 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/1 OBSERVER J. Lotts LOCATION PSZ START TIME 0611 END TIME 1721

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSL AU	3	30m stem 225°	Swim past w/rocks toward harbor @1553	N		outside EZ	1400 start 1 <sup>st</sup> dump 1425 monitoring resumed
1651	1721	" "	1	15m part stem 250°	Swim past w/rocks harbor → 216 @ 1555	N		" "	1600 end 1 <sup>st</sup> dump 1651 End digging
		Shutdown Survey							1655 disconnecting bucket 1658 moving anchors

STARTING WEATHER 80 %cc 1 BS SE Direction 53 °F 7mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 60 °F 9mi Visibility 4 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/2 OBSERVER J. Lott LOCATION PSL START TIME 0614 END TIME 1400

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614 0644 Survey		CSL S. JV	1	60m port stem 183°	hauled on rocks @0621	N		pre survey	
		" "	1	10m mid star 160°	logging by barge @0652	N		" "	0642 Anchors up 0715 setting mooring for holiday weekend
		CSL AU	2	100 mid star 140°	milling then swimming toward harbor @0654	N		" "	0735 moving crane ship for new dig 0800 connecting bucket
		CSL JV		15m port stem 202°	hauled on rocks while moving anchors, water and watchd. Lul take @0756	N		outside EZ	0812 bucket connected 0814 start digging
									0950 sliding to start new line 1000 left for WQ
									1024 back from WQ - running #1 1040 swapping barges
									1050 back to monitoring 1124 barges swapped
	1145								1141 bringing up staff for maintenance 1145 Lunch
1208									No more digging - day will end after dump 1208 End lunch
		CSL AU	1	100m mid port barge 315°	Swim park w/ crane ship toward water @1256	N		outside EZ	1220 begin dump

STARTING WEATHER 90 %cc 1 BS SE Direction 54 °F 9mi Visibility 0 Beaufort Sea State

ENDING WEATHER 5 %cc 4 BS SE Direction 58 °F 10mi Visibility 4 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/2 OBSERVER J. Lotts LOCATION PSL START TIME 0614 END TIME 1400

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSO AU	1	225m mid port barge 305°	floating and eating @1240	N		outside EZ	
		CSO AU	2	250m mid port barge 284°	floating	N		" "	1330 end dig
	1330- 1400 Shutdown								



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/6 OBSERVER J. Lotts LOCATION PSL START TIME 0611 END TIME 1720

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0611-0641 pre survey		CSL AV	2	60m star stern 200°	hauled out 0615	N		pre survey	
		CSL JU	1	100m star stern 187°	logging 0620	N		" "	
		BD AU	1	40m mid star bow 145°	Harbor => Sea, observed leaving EZ @0630-0636	N		" "	
		CSO AU	1	20m port stern 248°	swam port stern => star stern @0659	N		outside EZ	0659 Raising anchor 0713 connecting bucket
		CSL AV	1	70m mid star bow 145°	Sea => Harbor @0709	N		" "	0717 bucket connected 0719 positioning crane
		CSL AU	1	100m mid star 147°	sunbathing, logging @0821	N		" "	0720 start digging 0740 All sightings from deck
		CSL JU	1	70m star stern 190°	hauled on rocks, fishing glor on hind flippers @0859	N		" "	0903 called Keith about fishing gear on CSL 0908 CSL entered water then swam toward harbor
	0945	BD AU	6-8	150 star stern 160°	Sea => Harbor, closest distance 150m, one swam bow, went back to sea	Y	2min	inside EZ	Observed ~15 min, only entered EZ once no juveniles spotted, observed exiting harbor
	0950	CSL AM	1	120m star stern 200°	sunbathing logging along rocks @0919	N		outside EZ	@1014 same CSL w/tangle returned to rocks 1620 left for WB
	1129	CSO AU	1	250m star stern 272°	floating, watching ship @1120	N		" "	1045 sliding crane - calc. WB data 1106 resume monitoring @ weuch 1129 LUNCH

STARTING WEATHER 90 %cc 2 BS SE Direction 59 °F 9mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 106 °F 9mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/6 OBSERVER J. Lotts LOCATION PSL START TIME 0611 END TIME 1720

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1202		CSL AM	1	20m star stem 195°	watching crane, doing laps around ship @1217-1253	N		outside EZ	1202 back from lunch 1301 end 1st dig
		CSL JU	2	100m star stem 200°	swimming along rock edge @1258	N		" "	1309 barge swap 1316 disconnected bucket
		CSL JU	1	10m star bow 75°	logging @ barge bow @1408	N		NO WORK IN WATER	1323 raising barge 1357 barge swapped
		" "	3	10m star stem 215°	milling around rock edge @1428	N		outside EZ	1412 bucket connected 1415 digging 1420 dump 1
		" CSL AU	4	180m star stem 210	milling @1430	N		" "	
1448		CSL AU	1	5m star stem 145°	swim between barge and dump	Y	1min		Same adult CSL kept approaching bucket and tried to jump on top.
1449	1458	SAME IND	1	3m star stem 145°	approached stopped bucket swam around bucket then left	Y	1min		one successful attempt. Shutdowns cleared one individual seen out of range, all approaches made when stopped.
1459	1503		0m star stem 145°	approached stopped bucket, jumped onto bucket, waited to leave	Y	3min		1520 sharkleer 40m away from bucket by wales - alerted team - hauled at him.	
1506	1512		0m star stem 212°	approached stopped bucket, jump attempt, failed left	Y	2min			
1514									

STARTING WEATHER 90 %cc 2 BS SE Direction SA °F 9mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction WB °F 9mi Visibility 3 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/6 OBSERVER J. Lotts LOCATION PSL START TIME 0611 END TIME 1720

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSL AU	1	15m Star Stern 120°	Swam para w/ barge toward rocks @ 1600	N		outside EZ	
		CSL MIT	6	60m Star Stern 145°	Swim para w/ rocks toward crane, then turned around @ 1615	N		" "	
	1650- 1720								1656 End of day 1655 bucket disconnected
	Shut down								

STARTING WEATHER 90 %cc 2 BS SE Direction 59 °F 9mi Visibility 0 Beaufort Sea State  
 ENDING WEATHER 0 %cc 4 BS SE Direction 66 °F 9mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/7 OBSERVER J. Lott LOCATION PSL START TIME 0618 END TIME 1650

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0618-0648 Survey		CSL JU	1	100m port stern 270	hauled on rocks @0625	N		pre survey	0650 doing maintenance 0718 anchors on block
		CSO AU	1	20m star stern 190	floating + foraging @0626	N		" "	0720 connecting bucket 0724 bucket connected
		CSL AU	1	20m star stern 200	swam para w/ barge toward rocks @0636	N		" "	0734 start dig PSO sightings now from deck ↓
		" "	1	40m star stern 215	hauled on rocks @0859	N		outside EZ	
		CSL JU	1	15m star stern 115d	swam para w/ barge then toward sea @0903	N		" "	
	0915	CSL JU	1	0m star stern 109	entered zone, approached bucket, swam around bucket, left zone	Y	1min	inside zone	Sea Lion approached from sea side, went up to bucket, did a lap, observed swimming under barge.
0916	0927	↓		0m star stern 220		Y	>1min	" "	Same one approached and followed bucket, even when bucket was out of water, then seen heading toward rocks. Shutdown less than 1min
0927		↓		5m mid star 135	once barge left, same CSL approached + swam para w/ crane ship 0952	N		no wave in water	0929 End dig - Sea Lion headed to rocks 0934 disconnect bucket
									0940 swap barges - one barge moved same individual came back - PSO @ wench
		HS AU	1	40m star stern 172	swam para w/ rocks @1043	N		outside EZ	1010 Barges swapped 1020 bucket connected 1030 begin dig 2 - PSO position on deck

STARTING WEATHER 90 %cc 2 BS SE Direction 58 °F 2mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 6 BS SE Direction 66 °F 8mi Visibility 5 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/7 OBSERVER J. Lott LOCATION PSL START TIME 0618 END TIME 1650

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
	1127	CSO AU	1	200m mid starbow 340°	Floating + foraging seen from wench @ 1155	N		outside EZ	1045 begin dump 1127 LUNCH
1157		CSL JU	2	100m starstern 165°	porpoising by rocks seen from deck @ 1304	N		" "	1157 start dig 1208 end 1 <sup>st</sup> dump
		CSC AU	1	100m star bow 140°	Sea => harbor @ 1318	N		" "	1220 move empty barge
		CSE AU	5	65m star stern 195°	Porpoising park w/ rocks one at 65m turned around @ 1335	N		" "	
		"	"	200m star stern 135°	same group same behavior @ 1408	N		" "	
	1414	BD AU	7	150m star bow 138°	7 ~all adult, split into two groups, 4 never entered zone →	Y	2min	inside EZ	other 3 swam 150m of star bow, milled for ~1min then observed leaving zone headed in direction of other group 1408-1420 total obs
1416		CSC AU	1	100m mid star 172°	headed toward rocks @ 1442	N		outside EZ	
		CSL JU	1	75m stern 220°	swam park w/ rocks toward harbor @ 1516	N		" "	
		CSL JU	3	35m star stern 200°	swam park w/ rocks turned around at 35m @ 1543	N		" "	750 positioned at wench 1600 end dig 2
	1620- 1650 Shutdown	BD AU	4	300m midstar 140°	Head toward harbor then turned around at 300m @ 1616	N		" "	1602 disconnect bucket for barge swap

STARTING WEATHER 90 %cc 2 BS SE Direction 58 °F 2mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 6 BS SE Direction 00 °F 8mi Visibility 5 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/8 OBSERVER J. Lotts LOCATION PSL START TIME 0614 END TIME 1722

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614 0644 Survey		CSL AU	1	60m star stern 150°	headed toward rocks @0630	N		off survey	0650 setting anchors 0700 connect bucket
		" AU	1	40m star stern 215°	swam para w/ rocks toward sea @0643	N		" "	0721 start dig- sulfur smell 0735 start dump
	0811	CSL JU	1	3m stern 201°	SEA => CRUISE, swam around bucket then toward rocks	Y	~30 seconds	inside EZ	First spotted @0804, observed until 0815. Believe it's same one from past 2 days.
	0811	CSL AU	1	20m star stern 140°	SEA => ROCKS @0808	N		outside zone	0830 Left for WA ~0920 end dump 0940 back to observing - heavy fog increase
		" "	1	30m star stern 140	Rocks => SEA @0954	N		" "	visibility reduced to ~500m
	1127								1127 LUNCH 1200 back from lunch
	1200	BD SAU 1JU	6	250m mid stern 170°	swimming para w/ barge back & forth @1210-1220	N		" "	1210 end 1 <sup>st</sup> dig - swap barge BD ~1 juvenile - 10min obsv before past break
		CSL AM	1	50m stern 220°	headed toward rocks @1247	N		" "	1255 barges swapped 1330 start 2 <sup>nd</sup> dump
		CSL AU	3	40m star stern 155°	=> rocks @1259	N		" "	1350 visibility back to normal, fog subsiding
		CSL AU	1	30m star stern 181°	=> rocks @1353	N		" "	

STARTING WEATHER 100 %cc 2 BS NW Direction 55 °F 3mi Visibility 1 Beaufort Sea State

ENDING WEATHER 60 %cc 3 BS SE Direction 66 °F 8mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/8 OBSERVER J. Lotts LOCATION DSL START TIME 0614 END TIME 1722

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSL AV	1	15m stern 230°	sla => harbor @ 1445	N		outside EZ	
	1452	BD AV	7	100m star bow 180°	7, branched into 2 groups 4 stayed back, 3 entered zone 1448-1505	Y	2min	inside EZ	-> swam to star bow, turned around, met other 4 200m mid star, then swam 4 times same as 7/7/22. @1505 last seen toward sea
1454		CSL JU	1	40m mid star 125°	=> rocks @1450	N		outside EZ	~ 1500 phase 2 <sup>nd</sup> cleanup, ran out of steering fluid
		CSL JU	3	25m star stern 190°	porpoising by rocks @1506	N		" "	
		CSL mix	10- 15	20m star stern 170°	Swim para w/ rocks turned around once 20m @1556	N		" "	
		CSL AM	1	25m star stern 155°	=> rocks @1603	N		" "	
	1606	CSL AF	3	5m star stern 189°	trying to cross crane, scattered as bucket stopped @1606	Y	~30sec	inside EZ	1651 end dig - no swap 1700 bucket disconnected
	1606	CSL AV	2	30m mid star 149°	Swim para w/ buoy to rocks @ 1709	N		shutdown survey	
	1652- 1722	CSL JU	1	50m port stern 360°	=> rocks @1716	N		" "	
	Shutdown								

STARTING WEATHER 100 %cc 2 BS NW Direction 55 °F 3mi Visibility 1 Beaufort Sea State

ENDING WEATHER 60 %cc 3 BS SE Direction 16 °F 8mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/19 OBSERVER V. Lotts LOCATION PSL START TIME 0611 END TIME 1732

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0611-0641 Survey		CSL AU	2	70m mid star 155°	Harbor => rocks @0619	N		pre-survey	0650 working on starter 0710 moving empty barge
1100		CSL AU	1	20m star stem 202°	milled around stem then wended to rocks @0629	N		" "	1001 Raising anchors 1009 swapping barges
		CSL mit	4	30m star stem 165°	porpoising => rocks @0740	N		outside EZ	1014 barges swapped 1050 bucket connected
	1128	CSL AU	2	100m star stem 145°	=> rocks @1318	N		" "	1100 Begin dig 1128 LUNCH
1158		CSL JU	1	star stem 20m 105°	Sea => harbor @1422	N		" "	1200 dig 1215 left for WQ
		" "	1	12m star stem 115°	↑ could be same one swim under barge @1431	N		" "	1315 back to monitoring
		CSO AU	1	225m star stem 143°	swim past w/ rocks => sea, foraging, caught a lobster @1506	N		" "	1528 end 1 <sup>st</sup> dig 1532 disconnect bucket to swap barges
		CSL JU	1	20m star stem 103°	@1539, CSL came after CSO's lobster, submerged, last observed @1554	N		" "	1609 barges swapped 1415 bucket connected
	1618	CSL JU	1	3m star stem 155°	swam past bucket then underneath crane ship @1618	Y	~30sec	inside EZ	1617 begin second dig
1618		CSL AM	1	110m mid star 105°	Rocks => harbor @1628	N		outside EZ	

STARTING WEATHER 100 %cc 1 BS E Direction SS °F 2m Visibility 0 Beaufort Sea State  
 ENDING WEATHER 10 %cc 4 BS SE Direction 106 °F 9m Visibility 4 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/9 OBSERVER J. Lotts LOCATION PSL START TIME 0611 END TIME 1732

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSL JV	1	20m mid star 140°	harbor => rocks @165h	N		outside EZ	1700 end dig 1710 bucket disconnected
	1702- 1732								
	Sunkey								

STARTING WEATHER 100 %cc 1 BS E Direction 55 °F 2mi Visibility 0 Beaufort Sea State

ENDING WEATHER 10 %cc 4 BS SE Direction 66 °F 9mi Visibility 4 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/10 OBSERVER J. Klaib LOCATION PSL START TIME 0617 END TIME 1127

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0617	0647	CSL AU	1	60 m STB 73°	slow travel stern → Bow	N		pre-survey	pre-survey complete 1 CSL observed @ 0619
0654	0655	CSL AU	1	45m STB stern 147°	Fast travel SE → W across stern	N		outside EZ	No in-water activity
0715									Stabilization anchors on deck
0726									Bucked in water. Star Excavation.
0811									start discharge from Barge 37
0811	0813	CSL AU	1	75 m Bow 29°	Milling / slow travel away	N		outside EZ	Digging & Discharging
0845									End of discharge of Barge 37
1046		CSL AU & SU	27	200m stern-bow 180°	resting	N			27 CSL observed on breakwater rocks closest distance 200m. No disturbance observed
1120	1122	CSL SU	1	50 off starboard 94°	fast travel SW → E	N		outside EZ	Digging
1127	1150								Lunch

STARTING WEATHER 16% %cc 1 BS NW Direction 57 °F 15 mile Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 3 BS NW Direction 69 °F 2<sup>+</sup> Visibility 1 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/10/22 OBSERVER S. Klajb LOCATION PSC START TIME 0617 END TIME 1727

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1200	1239								Swapping out barges. Barge 38 full.
1300									Resume digging
1345									Start discharging barge 38.
1334	1400								WQ sampling
1411		Dead CSC		MS 0m 0°			25		All stop see reverse for Notes
1436									Resume digging
1513									Resume discharge
1630	1654	CSO AU	1	30 m off STB Stern 145°	Feeding	Y	6min 1632- 1638	W/in EZ 7m	1st sighted @ 30 m from barge but entered into EZ. All stop until cleared zone. cleared @ 1638 resume digging
1656									End of day
1657	1727								End survey

STARTING WEATHER 100 %cc 3 BS NW Direction 57 °F 69 °F 1.5mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 3 BS NW Direction 69 °F 2+ Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/11/22 OBSERVER S. Klait LOCATION PSL START TIME 0608 END TIME 1738

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0608	0638								Morning survey
0700									stabilization anchors on deck
0703	0750								Moving barge anchors
0754									stack excavation
0806		CSL	40+	215 m star bow 180°	resting	N		outside EZ	40+ sea lions observed on Breakwater haulout. Closest distance 215 m
0925	0926	CSL JU	2	65 off stern 22°	Fast travel variable away	N		outside EZ	Excavating
0942		Dead CSL	1	118 m off Port stern 256°		N		Dead & outside EZ	Observed a highly decayed ESL floating on surface along breakwater, Not a fake due to decomposition. Not project related
0944									swapping barge 37 for 38
1003	1034	CSL AF	1	65 m Port stern 278°	Logging, lethargic just floating and breathing	N		outside EZ	swapping barges. Observed CSL for 30 mins as it milled around and approached bow of barge. ESL went into tire, and was told by crew it appeared dead. Confirmed death and informed M&A PM. Got direction after agency notifications to remove & dispose of offshore. Disposed @ 1232. Female 3 feet 2 in

STARTING WEATHER 100 %cc 1 BS E Direction 54 °F 2<sup>mi</sup> Visibility 1 Beaufort Sea State

ENDING WEATHER 50 %cc 2 BS WSW Direction 69 °F 2<sup>mi</sup> Visibility 1 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (2011-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/18/22 OBSERVER S. Klaib LOCATION P.S.L. START TIME 0609 END TIME 1738

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1030									Excavating
1055									started discharge
1100	1133								Took water quality samples
1135	1200								Lunch
1205									Excavating
1303	1401								start discharge and end of discharge Barge 37 empty
1406	1407	CSO AU	1	190 m Port Bow 323°	Resting & feeding	N		Not in EZ	Excavated
1500	1512	CSL SU	1	45m STB stern 132°	milling	N		Not in EZ	Excavating
1600	1601	CSL AU	1	30m Port Stern 320°	Fast travel	N		Outside EZ	excavating - 1629 Excavating done for day 1635- Swapping out barges 1650- Survey vessel here
1708	1738	End of Day Survey							1708- Barge swap complete, stabilization anchors set

STARTING WEATHER 100 %cc 1 BS ~~WSW~~ E Direction ~~69~~ 51 °F 2xmi Visibility 1 Beaufort Sea State

ENDING WEATHER 50 %cc 2 BS WSW Direction 69 °F 2xmi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/12/22 OBSERVER J. Klab LOCATION PSL START TIME 0613 END TIME 1727

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613	0643								Survey complete. Cleared to work
0651									All stabilization anchors on deck
0705									starting excavation
0750	0758	CSO AU	1	30m STB Stern → Stern 142°	Feeding	Y	3min 0751- 0753	In EZ	Excavating First observed 130m off STB bow, dove and popped up. Called all stop. CD 5m
0840		CSL JU	1	100 m Stern 190°	Slow travel across Stern W → SE	N		outside EZ	to bucket which was stopped in water. Cleared EZ at 0753. Travel → SE → SW across stern Excavating
0900		CSL	40 +	165m Star bow 170°	hauled out	N		outside EZ	closest ESL is 165m
0940	0941	CSL AU	1	40m STB Bow 8°	fast travel away NE	N		outside EZ	Excavating
1025	1027	CSL AU	1	20m Port Bow 105°	slow travel away SE	N		outside EZ	Excavating
1130	1200								Lunch for excavating crew
1140									start discharge

STARTING WEATHER 100 %cc 1 BS E Direction 55 °F 2<sup>mi</sup> Visibility 0 Beaufort Sea State

ENDING WEATHER 50 %cc 3 BS WNW Direction 62 °F 2<sup>mi</sup> Visibility 2 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/14/22 OBSERVER J. Klamb LOCATION PSL START TIME 0613 END TIME 1727

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1348	1349	CSL AU	1	60 m STB Bow 108°	Fast travel away SE	N		Out side EZ	Excavating & discharging
1415	1505								End of discharging. Swapping Barge 36 empty for Barge 37
1510									Resume excavating
1520									Start discharge
1529	1532	CSL AU	2	35 m STB stern 142°	milling	N		outside EZ	Discharge & Excavating
1657									End of day
1657	1727								End of day survey

STARTING WEATHER 100 %cc 3 BS E W/W Direction 55 62 °F 2 mi Visibility 0 Beaufort Sea State

ENDING WEATHER 50 %cc 3 BS WNW Direction 62 °F 2 mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/13 OBSERVER J. Lotts LOCATION PSL START TIME 0618 END TIME 1720

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0618-0648		CSL AF	1	60m mid star 150°	swimming toward rocks @0643	N		pre survey	0650 connecting bucket 0705 start dig + left for survey
		CSL AU	1	30m port star 236°	=> rocks @0645	N		" "	0850 back on CP monitoring
		CSL AM	1	20m stern 264°	swam past w/ rocks => harbor @0910	N		outside E2	
		CSL AF	1	70m star stern 120°	logging @0950	N		" "	
		CSL AM	1	80m star stern 150°	=> rocks @1020	N		" "	1050 end 1st dig - disconnecting bucket 1100 swapping barges
	1134								1130 barge swapped 1134 LUNCH
	1204								1204 end lunch 1208 crane maintenance
									1217 connecting bucket 1230 begin 2nd dig
									~1235 1st dump 1300 left for WQ
		CSL 2AF 1AM	3	60m star stern 105°	hauled on rocks @1400	N		outside E2	1400 resume monitoring

STARTING WEATHER 100 %cc 1 BS S Direction 57 °F 7mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 4 BS SE Direction 41 °F 9mi Visibility 3 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/13 OBSERVER J. Lotts LOCATION PSC START TIME 0618 END TIME 1720

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSL AF	2	40m star stern 205°	1 swimming => sea 1 para w/rocks => harbor @ 1431	N		Outside EZ	1430 moved 1/2 full barge to work on Pul line
		CSL AV	1	20m star stern 165°	Swim parm w/ barge @ 1512	N		" "	1530 sulfur smell
		CSL mit JJ	4	30m star stern 145°	=> rocks @ 1532	N		" "	
		CSL AF	1	15m star stern 145°	logging @ 1612	N		" "	
		CSL AM	1	40m star stern 145°	rocks => harbor @ 1614	N		" "	
	1650 - 1720 Shutdown	CSL AF	1	5m aft barge stern 180°	rocks => barge @ 1657	N		shutdown	1650 end of day 1655 disconnecting bucket

STARTING WEATHER 100 %cc 1 BS S Direction 57 °F 7mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 4 BS SE Direction 61 °F 9mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 07/14 OBSERVER J. Lott LOCATION PSL START TIME 0615 END TIME 1657

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0617 0647 suney		CSL AF	1	20m mid barge 158°	para w/ barge => harbor @0636	N		pre-survey	0648 working on engine 0655 removing anchors
		CSL JM	1	40m mid barge 160°	rocks => harbor @0640	N		" "	0708 swapping barge 0736 barge swapped
		CSL AF	3	15m star stern 158°	SEA => harbor, came within 15m of bucket then turned around @0818	N		outside E2	0740 begin 1 <sup>st</sup> dump 0745 connecting bucket
		CSL JU	1	20m star stern 191°	rocks => harbor @1022	N		" "	0750 bucket connected 0800 start dig + PSO at crane
		CSL JU	1	25m star stern 150°	swam para w/ barge then => SEA @1043	N		" "	0920 left for HQ 1020 resume monitoring
	1153	CSL AF	1	25m star stern 141°	milled for a few min then => harbor @1124	N		" "	1143 end 1 <sup>st</sup> dig 1153 disconnected bucket + lunch
1230		CSL AF	1	70m star stern 135°	swim para w/ rocks @1352	N		" "	1233 swap barge 1310 barge swapped connecting bucket
	1500						16min		1321 start 2 <sup>nd</sup> dig ~1330 begin 2 <sup>nd</sup> dump
1516	1527						10min		1500 crane main engine died, down for maintenance 1516 start back up
1537	1627- 1657 shutdown								1527 engine died again 1537 resume digging 1627 end dig - work on main engine

STARTING WEATHER 100 %cc 2 BS N Direction 57 °F 7mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 4 BS SE Direction 67 °F 8mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/15 OBSERVER J. Lotts LOCATION PSL START TIME 0617 END TIME 1727

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0617-0647 survey		CSL AF	1	35m mid star 175°	logging @ 0623	N		pre-survey	PSO positioned at wench 1649 lift anchors
		CSL UV	1	80m mid star 150°	fast moving sea → harbor @ 0625	N		" "	0703 connecting bracket 0715 begin dig - PSO under crane
		CSL AV	1	30m star stern 160°	floating @ 0645	N		" "	0818 end 1 <sup>st</sup> dig 0822 disconnect bucket to sweep pinger
		CSL AM	1	40m star stern 150°	para w/rocks = 7 sec @ 0730	N		outside E2	
		HIS UV	1	20m stern 222°	swam para w/rocks → sea @ 0800	N		" "	
		CSL AM	1	25m stern 225°	swam para w/rocks → harbor @ 0802	N		" "	
		BD UV	~4	500m+ mid star 162°	swimming toward Pismo @ 0807	N		" "	
		Humpback whale AV	2	1 mile+ mid star 148°	one tail slapping contin. ~5min, other logging ~100m away @ 0828-0840	N		" "	PSO 90% confident mm were Humpbacks. observed total 12min, observed heading SE toward Pismo
		CSL UV	1	10m mid star 175°	= rocks @ 0920	N		no work in water	0905 adjusting rock anchor placement
		CSL AF	1	22m stern 228°	hauled on rock @ 0943	N		outside E2	-advised crane operator on location so he could place anchor away from CSL

STARTING WEATHER 30 %cc 1 BS NW Direction 55 °F 5mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 65 °F 8mi Visibility 4 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/15 OBSERVER J. Lotts LOCATION PSL START TIME 0617 END TIME 1727

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		BD AV	6	50m mid star 180d	SEA = 7 barges, one at 50m turned around => SLA @1018	N		no work in water	0950 Anchor placement finished Dolphins observed 1018-1025 (7min)
		CSL AM	1	30m star stem 150°	swam para w/ rocks => crane, hauled out at 30m @1038	N		outside E2	1035 empty barge brought to crane 1045 connect bucket
	1052	_____					38 min	_____	1052 LUNCH 1132 begin 2nd dig
1130		CSL AF	2	30m stem 212°	hauled on water @1243	N		" "	1206 left for WQ 1240 resume monitoring - under crane
		CSO AU	1	250m stem 240°	floating feeding, caught 2 crabs @1312-1350	N		" "	1300 start 1st dump CSO observed leaving area @1350
		CSL AM	1	20m star stem 205°	swam para w/ rocks => SLA @1342	N		" "	1456 End dig 1459 disconnect bucket
		CSL UU	1	20m mid port 260°	foraging @1400	N		" "	1506 moving full barge to dump site 1532 start 2nd dump - PSL at WENCH
	1657-1727	CSO AV	1	225m star barge 288°	" @1450	N		" "	1657 end dump / end of day
	Shutdown								

STARTING WEATHER 30 %cc 1 BS NW Direction 55 °F 5mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 65 °F 8mi Visibility 4 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/17 OBSERVER J. Lott LOCATION PSL START TIME 0618 END TIME 1728

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0618-0648 survey		CSL AF	1	60m star stern 110°	hauled on rocks @0741	N		outside EZ	0656 anchors on deck + bring empty barge 0713 barge secured
		CSL AM	1	70m port stern 75°	hauled on rocks @0742	N		" "	0720 bucket connected 0725 reposition crane ship
		CSL AU	1	50m star stern 185°	slow moving => rocks @1037	N		" "	0738 start 1 <sup>st</sup> dig PSO positioned under crane
	1132	CSL UU	1	20m stern 218°	swam para w/ rocks then hauled at @1215	N		" "	1040 Reposition crane ship 1132 LUNCH
1206		CSL AM	1	40m stern 192°	hauled on rocks @1445	N		" "	1206 LUNCH over resume dig 1254 end 1 <sup>st</sup> dig + swap barges
	1658-1728								1403 Barge swapped 1415 Bucket connected
	shutdown								1420 Begin 2 <sup>nd</sup> dig 1430 Begin 1 <sup>st</sup> dump
									1450 left for WQ 1550 Resume monitoring - under crane
									1627 end 1 <sup>st</sup> dump 1658 end dig - end of day

STARTING WEATHER 100 %cc 1 BS NW Direction 53 °F 1mi Visibility 1 Beaufort Sea State

ENDING WEATHER 50 %cc 4 BS SE Direction 64 °F 8mi Visibility 3 Beaufort Sea State

PAGE 1 OF 1



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/20/22 OBSERVER J. Klaib LOCATION PSL START TIME 0611 END TIME 1715

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0611	0641								Beginning Survey
0716									stabilization anchors up
0830									Barge 37 attached
0916									Start digging
1110	1150								WQ sampling
1130	1200								Lunch
1130	1420								moving barge 37 to discharge site.
1350									Stabilization anchors in. No more digging today. Working on repairs
1528	1700								Discharging from barge : End of day

STARTING WEATHER 100 %cc 1 BS SE Direction 55 °F 2 miles Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS W Direction 69 °F 2+ mi Visibility 4 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/22/22 OBSERVER S. Klaib LOCATION PSL START TIME 0615 END TIME 1710

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0615	0645								On barge. Start Survey.
0700									Removing stabilization anchors. Moving Barge anchors
0920									Barge along side. Bucket getting connected
0940									Start digging
1028	1030	CSL AV	1	50m STB Bow 65°	Finning → Slow travel S to NE	N		outside EZ	Digging.
1120	1122	CSL SU	1	30m Stern 112°	Slow travel across stern W→SE	N		outside EZ	
1125	1245								Lunch & crew meeting. Resume digging @ 1245
1334	1338	CSL SU	1	60m STB Stern 112°	Finning	N		outside EZ	Digging
1638									End of digging. Moving barge 37 to discharge site. End of day
1640	1710								End of day survey

STARTING WEATHER 100 %cc 1 BS NW Direction 54 °F 1m Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 4 BS NW Direction 71 °F  Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/23 OBSERVER J. Lotts LOCATION PSL START TIME 0616 END TIME 1721

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0616	0646	CSL JU	1	20m midship 200°	fast moving = 7 rocks * Boat wrench @0727	N		outside EZ	0655 maintenance 0716 anchors up + bringing empty barge
		CSL JU	1	70m star stem 205°	logging by rocks @1128	N		" "	0745 empty barge connected + connecting bucket 0754 bucket connected sliding into position
									0800 start 1 <sup>st</sup> dig ~0830 start 1 <sup>st</sup> dump
	1140	CSL JU	1	50m star stem 210°	slow travel = 7 rocks @1724	N		no work in water	0900 left for WA 0955 resume monitoring - P50 under crane
1213		CSL JU	1	10m stern 237°	milling in front of stern @1346	N		" "	~1050 end 1 <sup>st</sup> dump 1140 LUNCH
		CSL AF	1	20m star stem 175°	Sunbathing at rock edge @1504	N		outside EZ	1213 restart dig 1218 end 1 <sup>st</sup> dig + swap barge
		CSL JU	4	30m star stem 163°	fast moving swim parallel w rocks toward bucket changed direction at 20m 158°	N		" "	1347 barge swapped start 2 <sup>nd</sup> dig 1455 start 2 <sup>nd</sup> dump
	1559	CSO AV	1	50m stern 221°	Swim parallel w rocks foraging @1558	Y	1min	inside EZ	CSO last seen @ 1606 1638 end 2 <sup>nd</sup> dump
1600	1602	↓			Same one	Y	3min	" "	1609 End dig End of day
1605	1651-1721	CSO AV	2	180m port bow 3415°	floating + foraging at dump site P50 at wrench @1701	N		post survey	

STARTING WEATHER 80 %cc 1 BS SE Direction 54 °F 6mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 5 BS SE Direction 42 °F 9mi Visibility 5 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/24 OBSERVER J. Lotts LOCATION PSL START TIME 0618 END TIME 1718

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0618	0648 Survey	BD AU	2	50m midship 185°	harbor => sea PSO at wench @0625	N		pre-survey	BD observed leaving harbor @0629 *PSO positioned at wench all of pre survey
		CSL JU	1	30m star stern 215°	hauled on rocks @0642	N		" "	0655 anchors up 0702 bucket connected
		same one		25m stern 205°	swam + hauled on rocks closer to crane @0935	N		" "	0707 Bucket maintenance 0729 Begin 1 <sup>st</sup> dig + PSO under crane
		CSL AU	1	30m star stern 187°	slow swim from w/rocks @1230	N		" "	0916 End 1 <sup>st</sup> dig 0925 disconnected bucket swap barges
	1136	CSL JU	1	65m star stern 163°	sunbathing + logging @1337	N		" "	1025 barges swapped + reconnected bucket 1034 Begin 2nd dig
1200		CSL AF	1	60m star stern 145°	fast moving => rocks @1421	N		" "	1130 LUNCH 1200 LUNCH OVER
		CSL AF	1	40m star stern 185°	milling by rocks @1544	N		" "	1216 Begin 1 <sup>st</sup> dump 1235 left for WA
		CSO AU	2	250m mid barge 345°	milling @1640	N		" "	1335 Resume monitoring under crane 1420 end 1 <sup>st</sup> dump
	1648 1718								1605 End 2 <sup>nd</sup> dig + swap barges 1648 barge swapped EOD

Fog

STARTING WEATHER 100 %cc 1 BS S Direction 54 °F 6mi Visibility 0 Beaufort Sea State

ENDING WEATHER 5 %cc 4 BS SE Direction 59 °F 9mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/25 OBSERVER J. Lott LOCATION PSL START TIME 0620 END TIME 1738

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0620	0650	CSL AU	1	15m star star 183°	milling by rollers @0750	N		outside EZ	0704 anchors up 0710 STAFF MAINTENANCE
		CSL UV	1	50m mid star 110°	popped up by rocks, swam past w/ rollers @ 75m @1036	N		" "	0720 Bucket connected 0736 Begin 1 <sup>st</sup> dig + PSO under crane
	1136	CSL AU	1	40m mid star 158°	swam to water @1109	N		" "	~0815 Begin 1 <sup>st</sup> dump + Surveyor marking Control points
1206	1219	CSL AF		10m star star 176°	logging in bucket swing path @1219	Y	3min	inside EZ	1136 LUNCH 1206 Restart dig
1221		CSL AM	1	100m mid star 163°	slow swim sea => harbor @1355	N		outside EZ	1306 left for WB 1346 Resume monitoring
		CSO AU	2	175m bow of barge 355°	floating at placement site, kept distance as barge approached @1407	N		" "	1350 swap barges - PSO at watch 1453 barge swapped + start dig 2
	1546	CSL AF	1	30m mid star 168°	swam past w/ barge => harbor @1500	N		" "	↳ PSO under crane 1543 Begin 2 <sup>nd</sup> dump
1548						Y	2min	possible dead sea lion	noticed a strong decomposed smell after dump, stopped to investigate, didnt find anything
		CSL AU	1	90m mid star 158°	slow moving => rollers @1705	N		outside EZ	1557 barge slide into new position, further investigated smell, found nothing.
	1707 1738								1658 end 2 <sup>nd</sup> dump 1707 End dig EOD

STARTING WEATHER 100 %cc 1 BS NW Direction 54 °F 7mi Visibility 0 Beaufort Sea State  
 ENDING WEATHER 10 %cc 3 BS SE Direction 60 °F 9mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/26/22 OBSERVER J. Klaib LOCATION BSL START TIME 0630 END TIME 1723

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0630	0700								Morning Survey
0702	0715								Stabilization anchors up & connecting bucket
0720									Start digging
0740	0742	CSL JU	1	90m STB Stern 174°	milling	N		outside of EZ	Excavating
1021	1220								swapping barges. Barge 38 full. Moving anchors
1025		CSL JU	1	50m STB Bow 138°	Resting on Rock	N		outside EZ	Setting anchors. CSL appears lethargic
1240	1210								Lunch
1211	1212	CSL AF	1	75m STB 127°	slow travel NE → S	N		outside EZ	swapping barges
1245	1255								start excavating
1252	1253	CSL AM	1	40m STB 144°	Travel NE → S	N		outside EZ	Excavating

STARTING WEATHER 100 %cc 1 BS NNW Direction 56 °F 2+mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS WNW Direction 62 °F 2+mi Visibility 3 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/22 OBSERVER J. Klaib LOCATION PSL START TIME 0630 END TIME 1723

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1300	1635								Discharging Barge 58
1310	1346								WQ Sampling
1653	1723								End of Excavating. Starting end of day survey

STARTING WEATHER 100 %cc 1 BS NNW Direction 50 °F 2<sup>+</sup> Visibility 1 Beaufort Sea State  
 ENDING WEATHER 0 %cc 4 BS WNW Direction 62 °F 2<sup>+</sup> Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/27/22 OBSERVER J. Klais LOCATION PSL START TIME 0615 END TIME 1742

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0615	0645								Pre-survey
0621		CSL AU	1	60m stern 190°	Deceased & floating	N			
0648	0755								picking up anchors & swapping Barges. Barge 37 full
0816									Start excavating
0855	0956								Start discharge
1049	1050	CSL JU	1	20m Bow 35°	slow travel SE → W	N		outside EZ	Excavating
1100	1101	CSL JU	1	40m STB stern 200°	Fast Travel NW to SE	N		outside EZ	Excavating
1130	1230								Lunch
1207	1209	CSL JU	1	60m stern 157°	Milling along break water	N		outside EZ	Excavating
1244	1245	CSL JU	1	35m STB stern 118°	slow travel/milling NW to SE	N		outside EZ	Excavating

STARTING WEATHER 100 %cc 1 BS NW Direction 56 °F 2 mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 5 BS WNW Direction 66 °F 2 mi Visibility 5 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/27/22 OBSERVER J. Klaib LOCATION PFL START TIME 0615 END TIME 1742

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1324	1326	CSL AF	1	5m STB stern 122°	Fast travel	Y	3m	Inside EZ	Excavation, first observed @ 200m. Fast travel across stern. No distress or disturbance
1358	1506								sway out barge via Barge 38 full
1517									Setting anchors and not excavating any more due to weather
1618	1710								Discharging but called at 1710 due to weather
1712	1742								End of day survey

STARTING WEATHER 100 %cc 1 BS NW Direction 56 °F 2<sup>+</sup> mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 5 BS WNW Direction 66 °F 2<sup>+</sup> mi Visibility 5 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/28/22 OBSERVER J. Klaib LOCATION PSL START TIME 0613 END TIME 1744

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613	0643								Pre-survey
0645	0725								Pulling stabilization anchors, hooking up bucket, and starting excavation
0737	0748	unidentified	1	40m off stern 337°	Diving	Y	11min	In EZ	While observer was getting water, Crane operator notified observer of a pinniped that dove near bucket & maybe under bucket. All stop unit was able to observe. Did not observe after 15 mins as PSD cleared crane operator for work.
0825	0854	CSL AM	1	15m off STB stern 108°	resting	N			Excavating + CSL floating on surface. Appears to have wounds at side. Shark bite wounds
0848	0850	CSL SU	1	40m stern 130°	Fast travel along break water NE → SW	N		outside EZ	Excavating
0900	0947								WQ 0845-1005 Discharging
0951	0952	CSL SU	1	20m stern 154°	Fast travel along Breakwater E → SW	N		outside EZ	Excavating
1130	1200								Lunch
1201	1203	CSL SU	1	30m Port 325°	slow travel Variable	N		outside EZ	Excavating
1326	1327	CSL AF	1	45m Stern 135°	Fast travel SW → E	N		outside EZ	Excavating

STARTING WEATHER 100 %cc 1 BS NNW Direction 57 °F 2<sup>+</sup> mi Visibility 1 Beaufort Sea State

ENDING WEATHER 25 %cc 3 BS NW Direction 46 °F 2<sup>+</sup> mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/28/22 OBSERVER J. Klaib LOCATION PSL START TIME 0613 END TIME 1744

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1506	1613								Swapping barges. Barge 37 full
1618	1711								Resume excavating
1650	1710								Discharging Barge 37
1714	1744								End of day. starting Post survey

STARTING WEATHER 100 %cc 1 BS NNW Direction 57 °F 2<sup>+</sup> mi Visibility 1 Beaufort Sea State  
 ENDING WEATHER 25 %cc 3 BS NW Direction 66 °F 2<sup>+</sup> mi Visibility 3 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 7/29 OBSERVER J. Lott LOCATION PSL START TIME 0618 END TIME 1400

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0618	0648 survey	CSL mixed	~20	100m star stem 210°	hauled on rocks @0620	N		pre-survey not in EZ	0618 P50 at wench 0702 Anchors up
		CSL JU	1	35m port stem 280°	milling park w/crane @0651	N		outside EZ	0710 Bucket Connected + slide in 0722 start 1 <sup>st</sup> dig + P50 under crane
		BD W	2	200m star stem 148°	slow traveling =7 sea @0655	N		" "	0750 start 1 <sup>st</sup> dump 0830 get far WQ
		CSL AE	1	18m star stem 189°	Fast moving park w/ bucket, turned around at 15m @0934	N		" "	0920 Resume monitoring, P50 under crane 0923 End 1 <sup>st</sup> dump
	1130	CSL AU	1	18m star stem 175°	Fast moving toward bucket turned around at 12m @0950	N		" "	1051 End dig day + swap barge 1125 anchors set
1200		CSO AU	1	225m star stem of barge 263°	Floating foraging @1241	N		" "	1130 LUNCH 1200 End lunch
		CSO AU	4	250m star stem barge 265°	Floating in kelp bed @1302	N		" "	1208 start 2 <sup>nd</sup> dump + P50 at wench 1305-1400
	1330	CSO AU	2	250° barge bow 270°	Floating + foraging @1307	N		" "	
1400									1330 End 2 <sup>nd</sup> dump EOD 1340

STARTING WEATHER FOG MIST 100 %cc 1 BS NW Direction 56 °F 2mi Visibility 1 Beaufort Sea State

ENDING WEATHER 90 %cc 2 BS NE Direction 64 °F 10mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 08/13 OBSERVER J. Lotts LOCATION PSL START TIME 0618 END TIME 0837

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0618-0648	start up survey	CSL AM	1	50m Port Stern 180°	Swim para w/ rocks => sea @0638	N		pre survey	0618 P50 at bench for start up 0640 oiling crane
		CSL AD	1	100m Star bow 108°	slow swim harbor => sea @0659	N		outside EZ	0719 Anchor up + bringing empty barge 0749 barge connected + connecting bucket
									0805 checking winch 0850 sliding position P50 under crane
	0837								0837 Tobey called EOD due to high swell, no work in water started, no shutdown 0845 disconnect bucket

STARTING WEATHER 100 %cc 1 BS SE Direction 58 °F 9mi Visibility 0 Beaufort Sea State

ENDING WEATHER 100 %cc 1 BS SE Direction 67 °F 8mi Visibility 1 Beaufort Sea State

PAGE 1 OF 1



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/4 OBSERVER J. Lotts LOCATION PSL START TIME 0614 END TIME 1555

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614-0644 Start up		CSL JU	1	65m star stem 203°	hauled on rocks @0628	N		pre-survey	*PSO at wrench for survey 0651 Anchors up + connected bucket 0705 bucket connected + sliding into position
		CSL ~1 AM ~9JU ~2 AM	~12	70m star stem 195°	hauled on rocks @0640	N		" "	0719 Begin 1st dig + PSO under crane
	1128	CSL AU	1	38m star stem 165°	Swam para w/ barge => rocks @1000	N		outside EZ	1128 LUNCH 1158 End LUNCH
	1158	CSL AF	1	100m mid star 100°	Swim moving rocks => harbor @1112	N		" "	1309 End 1st 1317 bucket disconnected + swapping barges
		CSL JU	1	25m mid star 133°	swim under barge @1239	N		" "	1330 barge taken to placement 1340 moving lines
		CSL UU	1	45m star stem	dead sea lion, appears to have been dead a while, no obvious injuries @1345	N		" " + dead	1st noticed at 1330, no obvious injuries, appears to have been dead a while, non project related, notified Keith @1337
									1420 tug maintenance 1555 Shut down EOD + Anchors up
									* no work in water since 1420, PSO continued monitoring entire time, no shutdown *

STARTING WEATHER 100 %cc 0 BS SW Direction 58 °F 7mi Visibility 1 Beaufort Sea State  
 ENDING WEATHER 60 %cc 4 BS SE Direction 61 °F 9mi Visibility 3 Beaufort Sea State PAGE 1 OF 1

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/5 OBSERVER J. Lotts LOCATION PSL START TIME 0613 END TIME 1606

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613-0643 Survey		BD AU	1	300m mid star 142°	Slow travel, back & forth breakwater entrance @0630	N		pre survey	0613 P50 at wench 0645 Moving liner
		CSL 3AM 3AD 3AF 14JU	25	~15m star stem 175°	Hauled on rocks, watched as we moved to buoy @0730	N		outside EZ	0700 P50 under crane 0730 CSL mostly undisturbed as new anchor placed remained in same location entire day
		CSL JU	1	20m star stem 105°	rocks to barge @0827	N		" "	0735 bring in empty barge 0810 empty barge connected + connectors buckled
	1130								0839 Begin 1 <sup>st</sup> dig 0940 start 1 <sup>st</sup> dump
1204									0955 GA for WQ 1053 Resume monitoring under crane
									1120 End 1 <sup>st</sup> dump 1130 LUNCH
									1204 Resume digging 1532 End dig + disconnect bucket
	1536-1606 Shutdown								1536 call EOD P50 at wench for shutdown

STARTING WEATHER 100 %cc 1 BS SE Direction 58 °F 5mi Visibility 1 Beaufort Sea State

ENDING WEATHER 40 %cc 5 BS SE Direction 65 °F 9mi Visibility 4 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/6 OBSERVER J. Lotts LOCATION PSZ START TIME 0615 END TIME 1202

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0615-0645 startup		CSL ~15JA ~2AM ~3AF	~20	40m star stern 225°	Hauled on rocks @0630	N		pre-survey	0615 PSO survey from wench 0650 Anchors up + connecting bucket
		CSL AU	1	10m star stern 159°	heading toward bucket, turned around as PSO was about to shut down	N		left EZ as PSO was about to call	0712 start dig 0812 End of digging
		CSO AU	2	240m mid of p. barge 215°	floating foraging @0940	N		outside EZ	0818 disconnect bucket + take fill barge 0905 Begin dump
	1127	CSO AU	1	250m stern p. barge 275°	floating foraging @1024	N		" "	0915 left for WQ 1013 Resume monitoring at wench
1202		CSO AU	2	300m mid p. barge 210°	floating in kelp bed @1134	N		post survey	1127 End dump + EOD 1150 PSO observed floating body 70m star stern of crane
		CSL AU	1	70m star stern 145°	see notes shutdown delayed for examination	Y	12	" dead	1153 took skiff to examine further, 1155 ID CSL, heavily decayed, death unrelated to project. Body 1/4 completely decayed, head mostly missing, bird poop on body 1202 Return from skiff, shutdown complete

STARTING WEATHER 100 %cc 2 BS SE Direction 60 °F 7mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 3 BS SE Direction 64 °F 9mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 I-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/7 OBSERVER J. Lotts LOCATION PSL START TIME 0617 END TIME 1355

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0617-0647 wavy		CSL 3AM IAF 6JU	~10	35m Stern 230°	hauled on rocks @0622	N		pre-survey	PSO at wrench for survey 0640 wrench maintenance
		CSL 1AM 1JU	2	100m mid star 180°	Swim => sea @0658	N		outside EZ	1050 Running survey of excavation + placement. PSO monitored excavation from
		CSL JU	5	200m star stern crane 112°	milling along rocks @1059	N		" "	wrench and placement aboard survey vessel
		CSO 1AF 1JU 2AM	4	225m mid star P. barge 50°	floating + foraging @1204-1400	N		" "	PSO monitored area 30 min after work 1355 EOD - No in water work, no shutdown

STARTING WEATHER 10 %cc 1 BS SE Direction 57 °F 7mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 69 °F 9mi Visibility 4 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 08/10 OBSERVER J. Lotts LOCATION PSL START TIME 0622 END TIME 1330

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0622-0652 startup		Humpback whale Au	1	500m mid star 188°	milling around harbor entrance, came into harbor briefly, no feeding @0627	N		pre-survey	PSO at wench for survey Humpback swimming out of harbor, deep dive at 0629. Re appeared soon bow @0636 headed into harbor. ~30-35 <sup>ft</sup> long
		CSL Au	1	15m star bow 95°	feeding off bait ball @0629	N		pre-survey	Bait ball off mid star (0625-0730) Humpback last observed leaving harbor 0640 ↓ spotted ~1mi outside harbor @0650 heading ⇒ sea, last observation.
		CSL 1AM ~4AU	5	100m mid star 180°	slow moving sea ⇒ harbor @0640	N		pre-survey	
		CSL Au	~3	200m mid star 145°	feeding off bait @0653	N		outside EZ	0701 slide into position 0726 moving wench lines - PSO under crane
		CSL 1AM 3JU 2AF	6	20m star stern 180°	hauled on rocks @0708	N		" "	0930 bring in empty barge (57) 1009 barge secured
		CSL Au	1	70m mid star 175°	slow travel ⇒ rocks @0911	N		" "	1015 cleaning deck 1040 attaching tongs for witness rocks
		CSL Au	5	150m star bow 118°	slow travel ⇒ rocks @0911	N		" "	1049 Tongs attached 1100 start loading witness stones + PSO at crane
	1132	CSL AM	1	100m star bow 127°	slow travel sea ⇒ harbor @1040	N		" "	1132 LUNCH 1202 END LUNCH + back to witness stones
1202	1300-1330 shutdown	CSL AM	1	20m star stern 145°	slow travel ⇒ rock @1125	N		" "	1300 end witness stone work 1306 Tongs disconnected
		Humpback Au	1	2 miles star stern 165°	tail slapping, travelling NE of rocks @1304-1323	N		" "	1325 Caleb notified PSO of non work related injury CSL on beach by pier, was spotted by army corp. PSO called MMC to report @1527

STARTING WEATHER 100 %cc 1 BS SE Direction 58 °F 1mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 3 BS SE Direction 69 °F 5mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/11 OBSERVER J. Lotts LOCATION PSL START TIME 0616 END TIME 1729

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0616-0646	Survey	CSL AU	1	100m port bow 78°	Slow travel away from crane @0638	N		pre-survey	0617 weath repair 0709 weigh witness rock
		HS AU	1	100m port bow 60°	" "	N		" "	0715 scale not working - maintenance 0850 weighing witness stones
	1128	CSL AU	3	30m star stern 140°	fast travel para w/ rocker => sea @1245	N		outside EZ	1038 moving rock - P50 under crane 1128 LUNCH
1200		CSL AF	1	70m star stern 133°	Fast travel toward crane then veered toward harbor @1301	N		" "	1200 Lunch over - moving rock 1207 swap tongs for orange peel
		CSL AU	1	8m stern 215°	Crossed pinnacles => sea while not were sliding positions @1600	N		no work in water	1227 Resume rock - P50 under crane 1659 End rock EOD - P50 at weath
1659	1729 Shutdown	CSL AM	1	100m mid star 110°	Logging @1711	N		post survey	1707 orange peels(OP) disconnected

STARTING WEATHER 160 %cc 1 BS SE Direction 57 °F 1mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 2 BS SE Direction 68 °F 10mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/12/22

OBSERVER J. Klaib

LOCATION PSL

START TIME 0615

END TIME 1625

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0615	0645								Pre-Survey
0710									Start of rock moving/placement
0730	0737	CSL AF	1	10m off M Port 23°	Slow travel S NE → SE	N	-	In water work not occurring	<del>setting</del> conducting survey of breakwater
1111	1112	CSL AU	1	20m off bow 274°	Fast travel W → NE	N	-	outside EZ	setting rock
1130	1210								Lunch
1410	1411	CSL JU	1	50 m off port bow 358°	Fast travel N → W	N	-	outside EZ	setting rock
1412	143	CSL AU	1	15 m stb bow 53	milling	N	-	outside EZ	Setting rock
1555	1625								Setting rock done for the day. Weigh rocks on barge. Completing post-survey

STARTING WEATHER 100 %cc 1 BS N Direction 58 °F 1mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 4 BS NW Direction 71 °F 2+mi Visibility 2 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/13/22 OBSERVER J. Klaib LOCATION PSL START TIME 0620 END TIME 1725

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0620	0650								Pre-survey
0730									start setting rock
0745	0830								Went out on rocks to look for abalone at low tide. No abalone seen. Hard & dangerous
1005	1007	CSO AU	1	185 m off STB bow 118°	Feeding / travel NE → W	N	-	outside EZ	setting rock
1200	1240								Lunch
1300									start setting rock
1325	1329	CSL AM	1	5 m off stern 249°	Fast travel across stern NW → SE	N	-	No in water work Barge.	Hauled out ~ 75 m on break water, SE of Has shark bite on hind quarters.
1348		CSL JU	1	40 m off STB 105°	Slow travel NE → S	N	-	outside EZ	setting rock
1509	1509	CSO AU	1	225 m off port stern 261	foraging	N	-	outside EZ	setting rock
1655	1725								End of day survey

STARTING WEATHER 0 %cc 1 BS NNE Direction 57 °F 2<sup>x</sup> mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS NW Direction 73 °F 2<sup>x</sup> mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (2011-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/14 OBSERVER J. Klaib LOCATION PSL START TIME 0615 END TIME 1725

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0615	0645								Pre-survey
0715	0745								Resetting anchors. Starting to set rock @ 0745
1155	1156	CSL AU	1	75m off bow 28°	Fast travel N → SE	N	-	outside EZ	
1200	1230								Lunch
1240									Resume setting rock. Reports of 3 great whites patrolling area
1526	1527	CSO AU	1	160m off STB Bow 54	<del>resting</del> feeding	N	-	outside EZ	setting rock
1548	1548	CSO AU	1	240m off Port stern 248	feeding	N	-	outside EZ	setting rock
1655	1725								End of day, Post-survey

STARTING WEATHER 100 %cc 1 BS N Direction 57 °F 2<sup>r</sup> Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS NW Direction 65 °F 2<sup>r</sup> Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/15 OBSERVER J. Lotts LOCATION PSL START TIME 0616 END TIME 1728

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0016-0646 survey		CSO AU	2	100m mid port 265°	floating + grooming @0630	N		pre-survey	0616 P50 at wrench, 0620 tongs weld
		CSO 1 AF 1 JH	2	70m stern 80°	fast travel across stern => sea @0635	N		" "	0720 set anchor + slide in 0757 tongs connected + moving rocks
	1128	HS AU	1	80m star stern 140°	slow travel along rocks => sea	N		outside EZ	P50 under wrench for rock placement 1128 LUNCH
1202		CSL AU	1	100m star stern 135°	slow travel => heabr, injured on hind flippers, possible sharkbite @1625	N		" "	1202 Lunch over, slide in + move rocks 1420 very low MM activity
		CSO AU	1	70m star stern 130°	feeding - crossed stern @1656	N		" "	1453 switching to orange peels 1645 P50 inspected rocks on barge, no abalone.
	1658-1728 post survey								

STARTING WEATHER 100 %cc 1 BS NW Direction 54 °F 5mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 3 BS SE Direction 61 °F 7ms Visibility 2 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (2014-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/16 OBSERVER J. Lotts LOCATION PSL START TIME 0613 END TIME 1643

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613-0643	Survey	CSL HU	1	~15m stern 227°	Dead on rocks, heavily decayed - non project related	N		dead	0613 Heavy fog + P50 under crane 0730 dead CSL spotted on other side of rock by guys on the breakwater. Too decayed to identify age + gender.
		CSL AU	1	70m star stern 193°	logging by rocks @1030	N		outside EZ	
	1127	CSL AF	1	160 mid port 325°	slow travel para w/ rocks => sea @1126	N		" "	1127 LUNCH 1158 End lunch resume work setting
1158		CSL AM	3	200m star stern 128°	fighting in water by rocks @1226	N		" "	
		CSL mix	~15	250m star stern 129°	on rocks, too far to diff size/gender @1226	N		" "	
	1613-1643	CSL AU	1	20m mid stern 105°	swam under barge then => sea @1513	N		" "	1643 swell too high, EOD

STARTING WEATHER 100 %cc 1 BS NW Direction 52 °F 1mi Visibility 1 Beaufort Sea State

ENDING WEATHER 50 %cc 2 BS SE Direction 62 °F  Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/17 OBSERVER E.L. Ervin LOCATION PSL START TIME 0621 END TIME 1638

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0621						N			Arrived on barge. Pre-construction monitoring begins
0659						N			Operator begins moving boulders. @ 7:15 Chuck-ACoE arrived.
0913		CSL	1	120° SB 370m	hauled out at the south end of jetty	N			Crew placing and fitting boulders in place on jetty
0950									Tug brings flat barge along side of barge, several boulders placed on barge tied to crane barge.
1037		CSL AU-7 JU-2	9	180° SB 320m	group hauled out ~1050 feet from crane barge				Crew placing rock
1122		CSL AU-3 JU-2	5	"	"				"
1131		CSL AU-5 JU-2	7	"	"				"
1135									Lunch break for crew
1205									Monitoring continued
1223		CSL AM	1	SB 139° 18m	One adult swam along south side of jetty towards barge but turned around at approximately 18m	N		Did not enter shutdown zone	Crew placing rock. I radioed the operator to inform him of CSL presence.
1255		CSO AU	2	275m 302° MS	Foraging/grooming at ~900' from crane	N		"	Crew placing rock. Operator informed.

STARTING WEATHER 100 %cc 1 BS - Direction 54 °F poor Visibility calm Beaufort Sea State

ENDING WEATHER 100 %cc 3 BS SE Direction 56 °F poor Visibility calm Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/18 OBSERVER F.L. Ervin LOCATION PSL START TIME 0621 END TIME 1705

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0624									Crew boards barge & begins duties. Flat barge with boulders swapped with empty barge.
0658									
0751									Operator begins grabbing boulders Dence marine layer lifts / visibility improves
0846		CSL 8 AU	10	120° SB 320 m	Group hauled out	N			
0927		CSO AU	1	5°, 210 m B	foraging, grooming	N			Placing boulders.
1134	1201								Lunch. Monitoring continues.
1240		CSL 9 AU 2 JU	11	120° SB 320 m	Group hauled out	N			Placing boulders.
1332	1448								Crew pulling some anchors/bouys for barge move
1449									Resume boulder placement
1705									Operator places 'orange peel' attachment on deck. Crane barge is moved back away from jetty. Crew preparing for tomorrow's tasks.
					* Very slow day in regard to marine mammals.				



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/19 OBSERVER E. L. Ervin LOCATION PSL START TIME 0622 END TIME 1620

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0622-									- We board barge & crew begins tasks & I begin monitoring
0638-									- I complete pre-construction survey.
0655-									- Tug asst. with barge move, anchors reset.
0727-		< CSL-AM	1	125°/170m	milling about	N			- Operator moving rocks
0832-		Marine layer			began to lift increasing visibility.				- "
0835-		< CSL 6 AU 1 JU	7	120°/320m	hauled out	N			- "
0918-0929	0943-0949	CSL/AF	1	155°/70m	milling about	N			- Operator moving rock
				MS (closest it came to barge)					
0947		< CSL 9 AU 3 JU	11	120°/320m	hauled out	N			- Crane stationary. Crew break
1003-1012		CSL/AF	1	160°/20m	milling about	Y	1003	CSL milling between crane barge & jetty	During shutdown operator lowered 'orange peel' attachment on deck so crew could switch to tongs attach.
1134	1219								Lunch break. Monitoring cont,
1257	1348 (still there)	CSO/AU	1	350°/B	float-resting & diving	N			Operator moving rock.
1303-1317		CSL/AF		130°/500m	milling about	N			"

STARTING WEATHER 100 %cc 1 BS E Direction 51 °F poor Visibility 1 Beaufort Sea State

ENDING WEATHER see pg. 2 %cc  BS  Direction  °F  Visibility  Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/19 OBSERVER E.L. Ervin LOCATION PSL START TIME 0622 END TIME 1620

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
1528	1630	CSL/AF	1	see text →	Lethargic, large area of skin & fat (25" x 12") missing from dorsoventral area. No muscle or organs visible when it occasionally rolls over. @ 1530 I informed Keith Merkel.				Work permitted to continue because it remains approx. 250' away from construction.
				75m 135° MS	Keith Merkel contacted Natalie (USACE) to inform her of situation. My instructions are to continue to monitor its location while work can continue.				
					Location of injured sea lion is approx mid jetty, while construction is approximately 250' to the west (towards shore).				
1620									Tug pulls both crane & flat barges away from jetty. Crane has set tongs back on deck. End of work, end of mon. for the day.

STARTING WEATHER see pg 1 %CC \_\_\_\_\_ BS \_\_\_\_\_ Direction \_\_\_\_\_ °F \_\_\_\_\_ Visibility \_\_\_\_\_ Beaufort Sea State \_\_\_\_\_

ENDING WEATHER 0 %CC 2 BS N Direction 64 °F good Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22 1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/20 OBSERVER E.L. Ervin LOCATION PSL START TIME 0623 END TIME 1620

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0623									We board derrick & crew begins task to ready the equipment.
0709		CSO/AU	1	40°/300 <sub>B</sub>	Swimming on back	N			Tug bringing flat barge w/ boulders back to derrick. Separated due to PM swell last
0734		CSL/JU	1	160°/75m ms	Foraging along jetty edge	N			securing flat barge to derrick. night.
0912		CSL/AF JU	2	120°/60m ms	Swimming & milling	N			Moving boulders w/ crane.
									Lunch break, monitoring continued
1407		CSO/AM	1	75°/150 B	Swimming	N			Moving boulders w/ crane
1610		CSL/AM		130°/75m SS	Foraging, swimming	N			
1620									Operator places tongs on deck. Rock work done for the day.
1624		CSL/AM		220°/10m SB	Swimming	N/A			Work had already ceased for the day.

STARTING WEATHER 100 %cc 1 BS E Direction 57 °F good Visibility 1 Beaufort Sea State

ENDING WEATHER 100 %cc 1 BS E Direction 63 °F good Visibility 1 Beaufort Sea State

PAGE 1 OF 1



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22 1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/22 OBSERVER E.L. Ervin LOCATION PSL START TIME 0621 END TIME 1620

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0621	0655								Crew begins startup routines. All clear of marine mammals.
0719									Derrick begins pulling the two anchors securing the flat barge w/rock.
0847		CSL AU JU	6 2	120° SB / 325m	Hauled out, resting	N			Moving boulders with tongs.
0856		CSL AU	2	120° MS / 325m	Two males tussling	N			Moving boulders w/tongs
1134	1202	~~~~~							Lunch break, Monitoring cont.
1620		~~~~~							Operator set tongs on deck of derrick barge. Done for the day.
		~~~~~							
				*Very slow day for marine mammal observations					



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 08/23 OBSERVER J. Lotts LOCATION PSL START TIME 0614 END TIME 1713

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614-0644	Survey	CSL AU	1	30m star stem 125°	travelling toward barge then para-7 harbor @0850	N		outside EZ	PSO at wench for survey 0644 Boring in barge 415
		CSL AF	1	40m Stern 236°	para w/ rocks => SEA swam across stern	N		NO work in water	0714 B415 connected + attach tongs 0716 Slide into position + PSO under crane
		CSL JU	2	35m star stem 122°	swam toward barge @1034	N		outside EZ	0836 Wench check 0845 Resume rock move
		CSL AF	1	100m star stem 121°	sunbathing by rocks @1109	N		" "	0914 tong broke, stop to fix - PSO at wench 1056 Resume rock move - PSO under crane
	1131	CSL IAM IAU	2	46m star stem 135°	milling by rocks, then => SEA @1120	N		" "	1131 LUNCH 1218 End lunch - resume rock - PSO under crane
	1218	CSL JU	4	100m star stem 110°	Fast travel => harbor @1556	N		" "	1230 tongs up for modification 1315 resume rock - PSO under crane
	1643-1713								1643 End in water work for tong maintenance 1706 EOD
	Shutdown								

STARTING WEATHER 100 %cc 1 BS SE Direction 56 °F 300m Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 2 BS SE Direction 65 °F 8mi Visibility 3 Beaufort Sea State

PAGE 1 OF 1



PORT SAN LUIS BREAKWATER REPAIR PROJECT (2014-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/24 OBSERVER J. Lotts LOCATION PSL START TIME 0614 END TIME 1725

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614-0644 Survey		CSL AF	1	20m star stem 152°	milling around barge 45 shark bite on hind flipper @0717	N		outside EZ	0614 P50 at wrench for survey 0644 Tongs connected & slide in
		CSL JU	1	30m star stem 159°	swim parm w/rocks => sea @0759	N		" "	0700 Begin rock move + p50 under crane
		CSL AF	1	5m stern 232°	swim sea => harbor. para w/rocks, crossed stem, shark bite @0915	N		NO work in water	0916 P50 alerted crew to presence - no work in water work so no shutdown, CSL observed safely crossing, CSL sun bathing 100m away @0922
		CSL JU	1	5m stern 232°	slow travel harbor => sea @1000	N		" "	1000 CSL safely crossed stern, crane was picking rock from barge 45
		CSL JU	4	60m star stem 105°	Fast travel toward barge, direction, swim other @1011	N		outside EZ	
		CSO AU	1	200m star stem 131°	foraging + feeding by rocks @1015	N		" "	
	1127	CSL AU	1	80m star stem 128°	Fast travel => barge then veered off 80m west + around @1050	N		" "	
1159		CSL AU	1	5m Stern 230°	hauled onto rock site, shark bite left flipper @1127	N		LUNCH	1128 called Keith for mitigation advise ment 1159 CSL still on rocks, advised crew to approach
					milled around stern until 1240 left area				from behind with skiff, decided to climb on rock from behind, animal entered water @1216, swam 30m starboard milling by rocks.
									1221 Pause rock, divers in water, retrieving rock 1310 swapping tongs

STARTING WEATHER 100 %cc 7 BS NW Direction 55 °F 7mi Visibility 2 Beaufort Sea State

ENDING WEATHER 40 %cc 4 BS SE Direction 65 °F 8mi Visibility 3 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (2013-01) MARINE MAMMAL MONITORING DATASHEET

DATE 08/24 OBSERVER J. Lotts LOCATION PSL START TIME 0614 END TIME 1725

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
	1655-1725 Shutdown	CSL same zone from lunch ↓	1	30m star stem 130°	milling by barge, drifted across stem, slow moving to rocks = 7 sea	N		outside EZ	1335 Tongs attached resume work plac. + P50 under crane 1344 same CSL milling by barge; last observed 1950
				30m port stem 280°	same behavior, just floating around @ 1503	N		" "	1508 same CSL reappeared - CSL came in & out & exhibited same behavior for rest of work day 1655 End work EOD



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 08/25

OBSERVER J. Lotts

LOCATION PSL

START TIME 0614

END TIME 1724

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614-0644	0644	CSL MIT	~30	500 <sup>+</sup> m star stem 138°	hauled on water @1000	N		Outside EZ	0614 P50 at wench 0647 Connect tongs + slide in
		CSL AF	1	120m Bow 50°	Fast travel => harbor @ 1142	N		LUNCH	0659 Begin rock plac. + P50 under crane 1004 very low MM activity
									1134 LUNCH
	1654-1724								1205 Resume rock plac. - P50 under crane 1527 switching to OP
									1654 End rock EOD - Abnormally low MM activity - P50 at wench for shutdown

STARTING WEATHER 100 <sup>F0h</sup> %cc 1 BS NW Direction 53 °F 1mi Visibility 2 <sup>SWELL</sup> Beaufort Sea State

ENDING WEATHER 90 <sup>F0h</sup> %cc 2 BS SE Direction 64 °F 1mi Visibility 3 Beaufort Sea State

PAGE 1 OF 1



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 08/26 OBSERVER J. Lotts LOCATION PSL START TIME 0613 END TIME 1700

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613-0643		CSL AU	1	50m Stem 240°	Fast travel harbor → sea @0629	N		pre-survey	0613 P50 at wench 0647 attach tongs + slide in
	1132	CSL mix	~20	506m Star stem 142°	Waded on rocks @0854	N		outside EZ	0715 Begin rock + P50 under crane 1132 LUNCH
1210		CSO AU	1	206m Port stem 508°	Floating in kelp @1208	N		" "	1210 End lunch, resume rock
		CSL AM	1	100m Port bow 38°	Slow travel ocean → harbor @1248	N		" "	
		CSL AU	1	5m Stem 225°	drifted across stem in current → sea @1430	N		DEAD	1430 Non-work related, heavily decayed, no mind, no tail, no skin, dead for weeks
		Humpback AU	2	2mile Star stem 180°	traveling NE, fin slapping + breaching @1618	N		outside EZ	1618-1645 27min HBW observation - P50 at wench 1630 End rock - move line - No more in
1630-1700									Water work - P50 at wench

STARTING WEATHER <sup>F061</sup> 100 %cc 1 BS SE Direction 54 °F 1mi Visibility 2 Beaufort Sea State  
 ENDING WEATHER 40 %cc 3 BS SE Direction 66 °F 4mi Visibility 3 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 08/28 OBSERVER J. Lotts LOCATION PSL START TIME 0611 END TIME 1455

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0611-0641		CSL 1Au 2Ju	3	80m mid star 125°	Fast travel harbor => sea @0718	N		outside EZ	0611 P50 at wench 0649 Anchors up
		CSO Au	1	150m port bow 55°	Feeding, floating @1220	N		" "	0700 Attach tongs + 5400 in 0715 Start rock plac. + P50 under crane
	1129	Humpback 1Au 1Ju	2	1/2 mile mid star 147°	two blows, deep dive => NE, swim around harbor then E @1250	N		" "	1129 LUNCH 1210 End lunch, break wench
1210		CSL Ju	1	12m star bow 285°	swim across stern under ship => sea @1328	N		" "	1225 Resume rock - P50 at wench 1315 last H&W obsv.
		CSL AM	1	5m star bow 280°	crossed stern harbor => sea @1533	N		NO work in water	
		CSL Au	1	40m star stern 133°	Feeding @1404	N		outside EZ	1455 End rock - P50 wench - stay for ship maintenance
	1425-1455	CSL Au	1	150m mid star 150°	Fast travel, sea => rocks @1452	N		" "	

STARTING WEATHER 155 %cc 1 BS SE Direction 56 °F 6mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 2 BS SE Direction 63 °F 10mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 08/29 OBSERVER J. Lotts LOCATION PSL START TIME 0613 END TIME 1721

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613-0643		CSO 1AU 1NU	2	120m port bow 55°	travelling harbor → sea courting pup @0649	N		outside E2	0613 P50 at winch 0645 Bring in barge 45
		CSL 1AU	1	30m port stern 282°	feeding @1100	N		" "	0825 Begin rock + P50 under crane 0900 line broke, stop for maintenance
	1140	CSL AU	1	120m mid stay 154°	Fast travel harbor → sea @1259	N		" "	0910 resetting barge + work on line 0945 line fixed - attaching longer
1213		HBW AU	1	~5mi stern 223°	Fast travel NE, only shw spout @1440	N		" "	1015 Resume rock - P50 at winch. 1140 LUNCH
		CSL AF	1	20m port stern 285°	Slow travel past w/ rocks → sea swim under crane @1517	N		" "	1215 End lunch - resume rock 1651 End rock - EOD
	1651-1721								P50 at winch for shutdown
	shutdown								

STARTING WEATHER 25 %cc 1 BS W Direction 53 °F 8mi Visibility 2 Beaufort Sea State

ENDING WEATHER 0 %cc 3 BS SE Direction 65 °F 9mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 08/30 OBSERVER J. Lott LOCATION PSL START TIME 0614 END TIME 1730

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614-0644 survey		HS AU	1	200m mid star 150°	slow travel => sea @0618	N		pre-survey	0614 P50 at wench 0700 attach tongs + slide in
		CSL AU	1	30m mid port 208°	slow travel => harbor @0625	N		" "	0713 start rock p. 1100 move lines East
		CSL JU	2	100m mid star 148°	Fast travel harbor => rocks @0852	N		outside EZ	
		HS AU	1	100m port stern 212°	logging by rocks @0853	N		" "	
	1122	CSL AM	1	50m port stern 268°	swim past w/rocks => harbor @1000	N		" "	1122 LUNCH 1208 End lunch - resume rock
1208		CSO AU	1	170m port bow 50°	foraging + floating @1125	N		LUNCH	1500 slide in new position 1525 resume rock- P50 at wench
	1700-1730 shutdown								1700 End rock 1707 Move bridge onto deck - EOD

STARTING WEATHER 25 %cc 1 BS SW Direction 53 °F 8mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 71 °F 9mi Visibility 4 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 8/31 OBSERVER J. Lott LOCATION PSL START TIME 0611 END TIME 1656

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0611-0641		CSL JU	1	150m mid port 230°	Fast travel = 7 rocks @0626	N		pre survey	0611 P50 at wench 0647 Tongs connected + sliding in
		CSL JU	1	80m star stern 185°	slow travel rocks => sea @0834	N		outside E2	0830 Army Corp here (check) 0940 P50 at crane deck
		CSL AU	1	40m star stern 200°	milling by rocks @0857	N		" "	
	1126	CSL AM	1	120m mid star 145°	Sunbathing @1618	N		" "	1126 LUNCH 1158 End lunch resume rock - P50 rotating between
1158		CSL JU	1	60m port stern 200°	milling activity, turned around swim => harbor @1023	N		" "	crane deck + wench
		CSL AF	2	20m star stern 105°	swim pass w/ rocks => sea @1210	N		" "	
		CSL JU	3	40m star stern 125°	Fast travel toward crane, turned around at 40m @1238	N		" "	
	1626-1656	CSL AF	1	20m star stern 190°	milled around rocks then => sea @1400	N		" "	1626 End rock - team oiling crane + doing maintenance

STARTING WEATHER 10 %cc 1 BS SE Direction 55 °F 10m. Visibility 1 Beaufort Sea State  
 ENDING WEATHER 0 %cc 3 BS SE Direction 70 °F 8m. Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/01 OBSERVER J. Lotter LOCATION PSL START TIME 0610 END TIME 1514

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSL AU	1	60m mid star 192°	slow travel => rocks @0624	N		pre survey	0610 P50 at wench 0649 Brake adj on wench
		CSL 1 AF 1 NU	2	120m bow 30°	harbor => sea @0657	N		outside EZ	0653 attach tugs + slide in 0728 Begin rock
		CSO AU	1	225m mid star 145°	slow travel rocks => harbor @0930	N		" "	0935 P50 on crane deck + Army Corps here (chuck)
	1130	CSL JU	1	40m starstem 150°	swam out w/ large then => rocks @0942	N		" "	1130 LUNCH 1210 end lunch - resume rock
1210									1430 Heavy veed tide ~ harbor - 2 mile out 1444 End rock - EOD
	1444- 1514								
	Shutdown								

STARTING WEATHER 10 %cc 1 BS SE Direction 57 °F 8mi Visibility 1 Beaufort Sea State  
 ENDING WEATHER 5 %cc 2 BS SE Direction 68 °F 9mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/02

OBSERVER J. Lotts

LOCATION PSL

START TIME 0615

END TIME 1005

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0611-0641		CSO IAF INU	2	220m star bow 110'	slow travel harbor => SEA @0620	N		pr survey	0611 P50 at bench 0645 Attach tongs + slide in
		CSL AU	1	120m star bow 110'	" @0631	N		" "	0650 Begin node p 0919 End node - slide out
		CSL AU	1	25m stem 235'	slow travel, crossed stem => SEA @0635	N		outricks EZ	0925 Take away barge 45 0950 set anchors
	0935-1005	CSL AM	1	100m mid star 183'	travel harbor => rock @0925	N		No work in water	1005 EOD
	Shutdown								

STARTING WEATHER 100 %cc <sup>FOG</sup> 1 BS NW Direction 56 °F 5mi Visibility 2 Beaufort Sea State

ENDING WEATHER 100 %cc 1 BS NW Direction 58 °F 8mi Visibility 2 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/07 OBSERVER J. Lotts LOCATION PSL START TIME 0615 END TIME 1418

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613-0645		CSL JU	1	35m mid star 168°	Slow travel rocks => Harbor @0628	N		pre-survey	0613 P50 at wench 0659 Anchors up + replace life raft Larkons
		CSO AU		325m mid port 240°	floating + foraging @0706	N		outside E2	0806 Attach barge 45 0833 Attach tongs + slide in
		CSL AU	1	45m mid star 171°	Fast travel => Harbor @0720	N		" "	0853 Begin rock
		CSO AU	1	225m star stern 212°	floating, beaching => harbor @0727	N		" "	
		CSO AU	1	240m star stern 202°	foraging + feeding by rocks @0753	N		" "	
		CSL AF	1	100m starstern 190°	Swim para w/ rocks => sea @0808	N		" "	
		CSL JU	1	10m stem 241°	sea => crawl then turned back to sea @1010	N		no work in water	
	1132	CSL JU	3	120m port bow 45°	Fast travel sea => harbor @1144	N	43min	" "	1132 LUNCH 1215 End lunch resume work
1215	1300	CSL AM	1	20m stem 242°	para w/ rocks => sea crossed stem @1348	N		" "	1300 - Swell too big, para to see if it gets better - P50 remain monitoring from wench during phase
		CSL AM	1	30m star stem 212°	" " @1405	N		" "	1350 slide away from rocks 1418 EOD called - P50 remained monitoring th rough no work period. no shutdown survey needed

STARTING WEATHER <sup>FOG</sup> 100 %cc 1 BS NW Direction 61 °F 300m Visibility 1 Beaufort Sea State  
 ENDING WEATHER 0 %cc 2 BS E Direction 79 °F 8mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/08

OBSERVER J. Lotts

LOCATION PSL

START TIME 0613

END TIME 1700

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613-0643		CSL Au	1	160m mid star 145°	slow travel rocks → harbor @0617	N		survey	0613 P50 at wench 0645 Anchors up
		HS Au	1	40m star stern 208°	milling @0634	N		" "	0655 Attach barge + slide in 0800 Begin rock
	1101	CSO Au	1	30m star stern 215°	grooming floating @0655	N	39 min	outside EZ	1101 LUNCH 1140 End lunch resume work - P50 on crane deck
1140		CSL Au	1	50m mid star 145°	harbor → rocks @0808	N		" "	1330 Break for swell - P50 remain monitoring from wench 1422 Resume work - P50 on crane deck
		CSL 2AV 1JU	3	30m star stern 195°	rocks → crane, turned around at 30m @1228	N		" "	1624 End work + lose barge 1630 EOD
		CSO Au	1	200m mid port 330°	foraging + grooming @1311	N		" "	
		CSL AF	1	20m port stern 240°	milling, slow travel along crane @1316	N		" "	
	1630-1700 shutdown	CSL AF	2	50m star stern 130°	harbor → rocks @1618	N		" "	

STARTING WEATHER 00 F<sub>04</sub> %cc 1 BS NW Direction 58 °F 400m Visibility 1 Beaufort Sea State

ENDING WEATHER 20 %cc 2 BS NE Direction 69 °F 9m Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/09 OBSERVER J. Lotts LOCATION PSL START TIME 0611 END TIME 1700

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0611-0641		CSL AU	1	80m port side in 108°	Fast travel path w/ rocks = 75km @0626	N		PM SURVEY	0611 P50 at wench 0700 Bring in barge
		CSO AU	1	60m mid star 143°	foraging, left on barge approached @0712	N		no work in water	0730 Attach tongs + slide in 0731 Begin rock - P50 on crane deck
	1130	HS AU	1	25m star stem 138°	milling by rock @0744	N	46min	Outside EZ	1130 LUNCH 1216 End lunch - resume work - P50 at crane
1216									1300 Low MM activity 1333 storm clouds - possible rain
	1630								1630 End rock - lose barge 1636 Heavy red tide

STARTING WEATHER 50 %cc 1 BS SE Direction 64 °F 6mi Visibility 1 Beaufort Sea State  
 ENDING WEATHER 90 %cc 1 BS NE Direction 74 °F 8mi Visibility 2 Beaufort Sea State PAGE 1 OF 1

PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 I-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/10 OBSERVER J. Lotts LOCATION PSL START TIME 0614 END TIME 1625

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614-0644		CSL 2AM IAF 1AU	4	100m star stern 190°	hauled on rocks @0637	N		pre-survey	0614 P50 at wrench for survey 0649 Anchors on deck
		CSL MIX	~20	200m star stern 135°					0700 move line anchors 0837 Begin rock - P50 on crane deck
	1222						40min		1000 heavy red tide 1222 LUNCH
1302									1302 End lunch - resume dig - P50 at crane 1400 very low MM activity
	1555-1625								1555 End rock - EOD - Big swell

STARTING WEATHER 90 %cc 2 BS E Direction 66 °F 8mi Visibility 2 Beaufort Sea State  
 ENDING WEATHER 90 %cc 2 BS SE Direction 76 °F 8mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27 4-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/11 OBSERVER J. Lotts LOCATION PSL START TIME 0612 END TIME 1715

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0612-0642 Sunny		CSL AU	1	120m mid star 155°	slow travel sea => harbor @0630	N		pre Survey	0612 P50 at wrench - light rain 0650 connect tongs slide in
		HS AU	1	30m star stem 175°	logging by rocks @0705	N		outside EZ	0724 Begin rock - pso under crane 0900 rain
		CSL AF	1	20m Port-stern 275°	swam from port to star, milled then => rocks @0720	N		" "	
		CSO AU	1	180m mid star 70°	feeding + foraging @0820	N		" "	
		CSL JU	4	60m star stem 65°	approached, spy hop, turned around at 60m @0856	N		" "	
		CSL IAF 1JU	2	10m stem 230°	crossed port to star stem => rock @0917	N		no in water waste	
		CSL mix UU	6	20m star stem 165°	fast travel toward crane, turned around at 20m @0941	N		outside EZ	
	1130	CSL mix UU	10	30m star stem 165°	" "	N		" "	1130 LUNCH 1210 end lunch - resume rock - pso under crane
1210		CSL AU	1	15m stem 175°	swam under crane port => star stem @1418	N		" "	1626 End dig - reset line anchor & 1645 EOD
	1645-1715 Shutdown								

STARTING WEATHER 100 %cc 1 BS W Direction 69 °F 8mi Visibility 1 Beaufort Sea State  
 ENDING WEATHER 50 %cc 2 BS SE Direction 76 °F 8mi Visibility 2 Beaufort Sea State  
 Rain  
 PAGE 1 OF 1



PORT SAN LUIS BREAKWATER REPAIR PROJECT (27-1-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/12 OBSERVER J. Lotts LOCATION PSL START TIME 0613 END TIME 1730

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613-0643		CSL uu	1	40m port stern 275°	Fast travel → rocks @0627	N		pre survey	0613 P50 at wench 0651 Anchors on deck
		CSO AU	1	76m star stern 215°	Feeding, foraging left once barge approached @0715	N		outside EZ	0700 Attach barge 0741 Slide in + attach tongs
		CSL AU	1	20m star stern 155°	harbor → rock @0856	N		" "	0800 Begin rock - P50 under crane
		CSL AU	1	100m star stern 135°	milling by rocks @0930	N		no work in water	
	1206	CSL AF	1	15m star stern 150°	approaching crane turned around at 15m @1107	N		outside EZ	1206 LUNCH 1246 End lunch - rock - P50 under crane
1245		CSL mix uu	4-8	40m star stern 149°	Fast travel toward crane turned around at 40m @1108	N		" "	1638 End dig 1645 Slide out barge
		CSL JU	4	60m star stern 135°	" " @1311	N		" "	1700 EOD
1700-1730 shaded		CSL AF	1	20m star stern 143°	Swam park w/ rocks → sea @1422	N		" "	

STARTING WEATHER 20 %cc 1 BS NW Direction 60 °F 7mi Visibility 1 Beaufort Sea State

ENDING WEATHER 40 %cc 2 BS SE Direction 64 °F 8mi Visibility 2 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/13

OBSERVER J. Lott

LOCATION PSL

START TIME 0612

END TIME 1700

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0612-0642 Survey		CSL JU	1	15m stern 204°	swam under stern then => rocks @0630	N		pre-survey	0612 P50 at wench 0650 Anchors up
		CSO AU	1	60m mid star 132°	Feeding, foraging @0640	N		" "	0700 Attach fungs - slide in 0713 Begin rock- P50 under crane
		CSL AG	1	80m star stern 149°	Swimming @0822	N		outside EZ	_____
		CSL JU	1	40m star stern 175°	Fast travel => crane turned around at 40m @0947	N		" "	_____
		CSL AU	2	120m star stern 165°	harbor => rocks @1025	N		" "	_____
		HS AU	1	60m star stern 165°	logging by rocks @1047	N		" "	_____
	1140	CSL mit AU	6	60m star stern 167°	Fast travel => crane turned around at 60m @1047	N		" "	1140 LUNCH 1220 End lunch - resume dig - P50 under crane
1220		HS AU	1	200m port stern 280°	logging by rocks @1050	N		" "	
		CSO AU	2	200m mid star 78°	Feeding + foraging @1127	N		" "	
		CSL AF	1	60m star stern 172°	swim para w/ rocks => sea @1246	N		" "	

STARTING WEATHER 100 %cc 1 BS SE Direction 60 °F 8mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 68 °F 9mi Visibility 4 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/13

OBSERVER J. Lotts

LOCATION PSL

START TIME 0612

END TIME 1700

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSC mix uu	1-8	70m star stern 172°	popped up at 70m, first travel path w/rocks → sea @ 1255	N		outside SZ	
		CSL AF	1	55m star stern 174°	travel toward crane turn around at 55m @ 1447	N		" "	
		CSL IAF 2AU	3	40m star stern 165°	" "	N		" "	1630 End dig- tong maintenance - pro at wrench for shutdown
	1650- 1700								

STARTING WEATHER 100 %cc 1 BS SE Direction 60 °F 8mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 4 BS SE Direction 68 °F 9mi Visibility 4 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/14

OBSERVER J. Lott

LOCATION PSL

START TIME 0614

END TIME 1707

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST **HBW** = Humpback whale

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614-0644		HBW AU	2	~1mi mid star 157°	Slow travel SE, deep diving, 2 branches @0630	N		OTL-survey	0614 PFD at Welch 0650 survey lines for rock
		CSL AU	1	80m mid star 145°	Fast travel → rocks @0720	N		outside EZ	0715 last HBW sighting 0735 Anchors on deck
		HBW AU	3	~1mi star stern 110°	travelling S @0841	N		" "	0740 Attach tongs - shale in 0815 Begin rock-PFD under crane
		CSL AF	1	120m star stern 134°	milling by rocks @0844	N		" "	
		CSL AM	1	30m star stern 150°	milling by rocks 1000	N		" "	1055 HBW followed by Army corp boat
	1130	HBW AU	2	~1mi mid star 87°	feeding- travel NE @1055	N		" "	1130 LUNCH 1200 HBW followed by Army corp boat
1215		HBW AU	2	1/2 mile mid star 90°	feeding- travel NE @1200	N		" "	1215 Lunch over- resume rock - PFD under crane
		CSL AU	1	40m mid star 84°	feeding - foraging @1230	N		" "	1536 Line 6 snapped - all stop to fix
		CSL AU	1	40m star stern 160°	travel toward crane turn around at 40m @1454	N		" "	
		CSL IAF 2AU	3	18m stern 235°	2AU approached turned around at 30m, AF crossed stern @1515	N		no work in water	

STARTING WEATHER 0 %cc 2 BS SE Direction 58 °F 9mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 5 BS SE Direction 67 °F 9mi Visibility 4 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/14

OBSERVER J. Lotts

LOCATION PSL

START TIME 0614

END TIME 1707

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
		CSG AG	1	150m port stern 220°	feeding - foraging @1543	N		outside EZ	1637 Riset line 6 - End water work
	1637- 1707 shutdown	CSL AF	1	70m star stern 187°	rocks => harbor @1549	N		no work in water	1657 set storm anchors - EOD

STARTING WEATHER 0 %cc 2 BS SE Direction 58 °F 9mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 5 BS SE Direction 67 °F 9mi Visibility 4 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-014-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/16 OBSERVER J. Lotter LOCATION PSL START TIME 0612 END TIME 1515

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0612-0642 Survey		CSL UU	1	75m mid star 189°	Fast travel = 7 rocks @0643	N		no work in water	0612 P50 at wench 0646 anchors on deck
		HIS AU	1	200m port bow 355°	milling by tug @0852	N		" "	0760 connect barge 0708 line 6 + 5 snap-standby to fix-P50 remain work
		CSO AU	1	200m mid port 243°	Reeding @0914	N		" "	0855 Moving 2+5 lines 1111 Attach tongs + slide in
	1125	CSO AU	1	140m star bow 79°	floating in kelp bed @0921	N		" "	1125 LUNCH 1202 End lunch
1202		CSO AU	1	2m port stern 259°	slow travel = 7 harbor @1022	N		" "	
		CSL JU	1	8m stern 235°	hauled onto rocks at work site @1210	N		" "	CSL was on rocks preventing start up-P50 advised crew on safety approaching, mm went into water = 7 sex undrilled.
		CSL AF	2	20m star stern 168°	slow travel = 7 crane turned around at 20m @1220	N		outside EZ	1215 Begin rock 1239 Down for wench service-P50 remains
		CSL AM	1	70m port stern 185°	Fast travel = 7 harbor @1357	N		" "	monitoring 1307 Resume rock 1330 High winds / swell - lose barge - EOD
	1445-1515 shutdown								1430 Set storm anchors 1445 P50 shutdown

STARTING WEATHER 30 %cc 2 BS SE Direction 56 °F 7mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 5 BS SE Direction 67 °F 8mi Visibility 4 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/17 OBSERVER J. Lotts LOCATION PSL START TIME 0615 END TIME 1637

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0613-0643		CSL UU	1	80m mid star 165°	Fast travel = 75m @0621	N		pre survey	0613 PSL at wench 0700 Anchors on deck
		CSO AU	1	75m mid star 168°	Feeding + Foraging @0628	N		" "	0715 Wench man informs PSL shade fin spotted off port bow 0715 Attach barge
		CSL AF	1	80m mid star 165°	Fast travel => harbor @0633	N		" "	0734 Attach tongs + slide in 0756 Begin rock - PSL under crane
		CSL AU	1	230m port star 295°	NOT-project related heavy decay, missing Mast + fin @0755	N		DEAD	0755 CSL seen floating, heavy decay, non project related
	1125	CSL JU	8	20m star stem 123°	Fast travel => crane turned around at 2am @0948	N		outside E2	1125 lunch 1225 End lunch - resume rock - PSL under crane
	1225	CSL JU	3	20m star stem 124°	" " @1214	N		" "	
		CSL MIX UU	10	" "	" " @1364	N		" "	
	1657-1657 shut down	CSO AU	1	175m mid port 21°	Feeding @1400	N		" "	1407 End rock - work on tug - no more water work

STARTING WEATHER 100 %cc 1 BS SE Direction 55 °F 6mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 4 BS SE Direction 63 °F 9mi Visibility 3 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-014-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/18

OBSERVER J. Lotts

LOCATION PSL

START TIME 0611

END TIME 1615

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0611-0641 Sunny		CSL AF	1	90m mid star 202°	Fast travel → rocks @0621	N		pre survey	0611 P50 at wrench 0650 Attach barge
		CSO AU	1	100m port bow 310°	Feeding / Foraging @0735	N		outside EZ	0719 Attach tongs + slide in 0742 Begin rock - P50 under crane
	1120	CSL AM	1	120m star stem 151°	Slow travel port w/ rocks → 5K @0755	N		" "	1125 LUNCH 1125 P50 examines rocks on barge - no activity
1230		CSL JU	6	100m star stem 130°	Movements onto rocks @1246	N		" "	1250 Resume rock
		CSL JU	3	20m star stem 148°	slow travel → crane turned around 70m @1335	N		" "	
		CSL AF	1	70m mid port 242°	Slow travel → harbor @1511	N		" "	1533 End rock - slide out - P50 at wrench 1535 lose barge - set stam anchors 1545 EOD
	1545-1615 shut down								

STARTING WEATHER 20 %cc 1 BS NW Direction 55 °F 9mi Visibility 1 Beaufort Sea State

ENDING WEATHER 85 %cc 4 BS N Direction 63 °F 9mi Visibility 5 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/19

OBSERVER J. LaHs

LOCATION P5L

START TIME 0729

END TIME 1345

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0729-0754		CSO AU	1	90m mid star 151°	Feeding @0753	N		8/11-SUNNY	0729 P50 at wench - late start, sk, ftr were w/coastguard-don't start until 7am
		CSO AU	2	150m mid star 143°	fast travel = 7 Sea @0759	N		" "	0800 Attach tongs + slide in 0815 Begin rock P50 under crane
		CSL JU	1	90m mid star 147°	slow travel => harbor @0815	N		outside EZ	0900 Rain
		CSL AM	1	60m mid part 245°	slow travel para w/crane @0818	N		" "	
		CSL AU	1	25m stern 190d	Heavy decay, large tumor present non-project related @0821	N		DEAD	
		HBW AU	1	~4mi port stern 221°	one breach, few blows, then out of sight @0836	N		outside EZ	
	1130	CSL JU	1	25m stern 191°	slow travel => rocks @0940	N		" "	1130 LUNCH 1230 Remove rock - P50 under wench
	1230								1315 End rock- EOD- severe weather
	1315-1345								Shutdown

STARTING WEATHER 100 %cc 1 BS SW Direction 61 °F 9mi Visibility 2 Beaufort Sea State

ENDING WEATHER 100 %cc 2 BS SW Direction US °F 6mi Visibility 4 Beaufort Sea State

RAIN

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 09/20

OBSERVER J. Lotts

LOCATION PSL

START TIME 0614

END TIME \_\_\_\_\_

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0614-0644		CSO AU	1	60m mid star 185°	foraging, feeding @0617	N		pre survey	0614 P50 at wench 0650 Anchors on deck
		CSL AU	1	200m mid star 152°	slow travel = 7m above @0646	N		outside EZ	0700 Attach barge 0715 Attach tongs + slide in
		HS AU	1	36m port stern 280°	logging @0647	N		" "	0810 Begin work - P50 under crane 0900 Heavy red tide
	1130								1050 Army corp visit 1130 LUNCH
1200									1200 End lunch - Army corp leave - team meeting
1230									DD takes over as P50 @ wench severe red tide, minimal mammal activity
<del>1457</del>		CSO AU	1	250m in port 275°	foraging, feeding	N		outside EZ	attaching chain to tongs
1500		CSL A MIF		200m star 180°	hauled out, 8 individuals	N		" "	
	1650								End work

STARTING WEATHER 40 %cc 1 BS NW Direction 58 °F 8mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 1 BS NW Direction 65 °F 10mi Visibility 1 Beaufort Sea State

PAGE 1 OF 1



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 9/21/22 OBSERVER Dante Delany LOCATION PSL START TIME 0620 END TIME 1620

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0620 -0650		CSL AU	10	180° star 250 m	Hauled out on breakwater (BW)	N	0625	outside EE no work in H <sub>2</sub> O	0620 P50 @ wench setup barge + lift anchor
		CSL AF	1	140° star 150 m	swimming to BW	N	0715	outside EE no work in H <sub>2</sub> O	tying to barge, attaching fongs
		CSL AF	1	185° star 100 m	swimming parallel to BW toward ocean	N	0750	outside EE	placing rocks from barge on BW
		CSO AU	4	250° port 1250 m	Rafting	N	0855	outside EE	" "
		BD AU	3	150° star 250 m	swimming away from barge	N	0920	outside EE	" "
		CSO AU	1	220 m 340° port	foraging/feeding	N	1010	outside EE	" "
		CSO AU	2	200 m 320° port	swimming foraging/feeding	N	1020	" "	" "
		CSL AU	1	100 m 65° stern	foraging/feeding	N	1045	" "	" "
	1145								gone to lunch, stopwork
	1230								work resumes

STARTING WEATHER 50 %cc 1 BS E Direction 60 °F 10mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 2 BS NW Direction 65 °F 10mi Visibility 1 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-04-01) MARINE MAMMAL MONITORING DATASHEET

DATE 9/21/22 OBSERVER \_\_\_\_\_ LOCATION \_\_\_\_\_ START TIME \_\_\_\_\_ END TIME \_\_\_\_\_

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
	1515								stopped work while switching barges moving rocks from one barge to another
									moved bulldozer onto barge @ 1545
									work ended early from wind 1620

STARTING WEATHER \_\_\_\_\_%cc \_\_\_\_\_BS \_\_\_\_\_Direction \_\_\_\_\_°F \_\_\_\_\_Visibility \_\_\_\_\_Beaufort Sea State

ENDING WEATHER \_\_\_\_\_%cc \_\_\_\_\_BS \_\_\_\_\_Direction \_\_\_\_\_°F \_\_\_\_\_Visibility \_\_\_\_\_Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 9/22/22 OBSERVER Dante Delany LOCATION PSL START TIME 0630 END TIME 1500

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0630									PSO @ wench 0630 Anchored on deck 0705
		CSL AU	16 20	210° port bow 150 meters	Hauled out on jetty	N	0635	No work in H <sub>2</sub> O out of EZ	Pulling anchor Tug arrives w/rock barge 0745
		CSL AU	1	200° port bow 30m	Foraging/ feeding	N	1015	Out of EZ	Work on jetty, placing rocks from barge
		CSL AM	1	80° stern 40 meter	Swimming	N	1430	" "	" "
		CSL AU	1	50° stern star 100 meters	Foraging/feeding	N	1600	" "	" "
	1500								Tug take away rock barge 1505 Drop anchor 1715 1705

STARTING WEATHER 100 %cc 1 BS W Direction 60 °F 2mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 1 BS NW Direction 65 °F 8mi Visibility 1 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 9/28/22 OBSERVER Dank DeLany LOCATION PSL START TIME 0615 END TIME \_\_\_\_\_

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0615									PSO @ wench 0620 # heavy fog in Anchor on deck @ 0650 morning
		CSL AU	~20	210° port 150 meters	Hauled out on jetty	N	0625	Out of EZ	lifting anchor, tying up rock barge
		HS AU	1	140° port 30 meters	Swimming	N	0900	" "	placing rock on jetty
	1145								Lunch
		CSO AU	1	90° star 10 meters	Foraging/Feeding	N	1205	No work in H <sub>2</sub> O	Lunch
1215									Resume work
	1630								Tug takes rock barge @ 1620 Anchor Drapped 1645

STARTING WEATHER 100 <sup>(fog)</sup> %cc 1 BS NW Direction 55 °F 300 yards Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 1 BS NW Direction 65 °F 8mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 9/30/22

OBSERVER S. Maib

LOCATION PSL

START TIME 0615

END TIME 1600

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0615	1000								weighing rock.
1000	1030								Pre-survey.
1030	1130								swapping barges
1056	1106	A CSO	1	75 m off STB 110°	Feeding	N	N/A	No in water work	Swapping barges
1105	1107	JUV CSL	1	30 m off STB Stern 142°	Fast travel SE	N	N/A	" "	" "
1226	1240	A CSO	1	120 m off Bow 5°	Feeding	N	N/A	" "	standing by. Crew waiting on direction from corps.
1245									Start rock placement
1515									End of rock placement for day.
1530	1600								End-survey
								Humpback	Whales observed through out day closest distance 1/4 mile

STARTING WEATHER 100 %cc 1 BS SSE Direction 56 °F 2<sup>+</sup>mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 1 BS NW Direction 67 °F 2<sup>+</sup>mi Visibility 1 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 10/1/22

OBSERVER S. Klumb

LOCATION PSL

START TIME 0615

END TIME ~~1700~~ 1720

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0630	0700								Pre-survey.
0640	0710								stability anchor up and rock barge along side.
0745									Start rock placement
1028	1029	Juv ES	1	175m off Port bow 331°	swimming	N	N/A	Outside EZ	Placing rock. Rock placement off stem of barge therefore ES outside EZ
1216	1218	Juv CSL	1	15 m off bow 259°	milling	N	N/A	outside EZ	Placing rock
1650	1720								End of day. End Survey

STARTING WEATHER 100 %cc 1 BS SSE Direction 57 °F 2<sup>+</sup>mi Visibility 1 Beaufort Sea State

ENDING WEATHER 100 %cc 1 BS NW Direction 65 °F 2<sup>+</sup>mi Visibility 1 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 10/2/22 OBSERVER J. Klaib LOCATION PSL START TIME 0615 END TIME 1720

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0630	0700								Pre-survey
0715									Rock barge along side
0745	0746	Juv CSL	8	40m off STB Stern 150°	slow travel NE	N	N/A	outside EZ	Placing rock
1025	1028	Adult CSO	1	210m off bow 5°	Feeding	N	N/A	outside EZ	Placing rock
1650	1720								End of day survey

STARTING WEATHER 100 %cc 1 BS SE Direction 58 °F 2<sup>+</sup>mi Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 3 BS NW Direction 65 °F 2<sup>+</sup>mi Visibility 3 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-004-01) MARINE MAMMAL MONITORING DATASHEET

DATE 10/3 OBSERVER J. Klaib LOCATION PSL START TIME 0615 END TIME 17:15

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0630	0760								Pre-survey
0720									Rock barge along side
0907		Humpback whales	4	1/2 mile of STB Bow 46°	slow travel	N	N/A	Outside EZ	Placing rock
1150									Natalie with ACOE requested that we note how many rocks we inspect on barge for abalone
1245									Inspected 4 rocks w/growth. no Abalone
1316	1317	ADULT F CSL	1	100m off STB bow 67°	swimming N	N	N/A	outside EZ	Placing rock
13:52	13:54	ADULT CSL	1	100m port bow 320°	Swimming towards shore in direction of pier	N	N/A	outside EZ	Placing rock
14:45	15:15								post-survey

STARTING WEATHER 0 %cc 0 BS S Direction 52 °F 2mi Visibility 0 Beaufort Sea State

ENDING WEATHER 0 %cc 3 BS N Direction 77 °F 2mi Visibility 3 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-04-01) MARINE MAMMAL MONITORING DATASHEET

DATE 10/4/2022 OBSERVER K. Sloan LOCATION PSL START TIME 6:15 END TIME 15:00

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
6:30	7:00	6:41 Adult CSL	2	50 m off starboard 112°	Swimming south	N	N/A	N/A outside E2	Pre-survey
6:30	15:00	Adult CSL	~30	Port side of jetty 180° 50m from bow	Sitting on jetty	N	N/A	N/A	These CSL stayed on the jetty the entirety of construction activities
7:10	7:15	BD	7	175 m 112° starboard bow	Swimming south away from barge	N	N/A	N/A	Anchoring barge
7:37	7:37	Adult CSL	1	75 m starboard 120°	Travelling from jetty south	N	N/A	N/A	Anchoring barge
12:29	12:30	Adult CSL	2	25 m starboard 124°	Travelling south from jetty	N	N/A	N/A	Lunch break
13:15	13:25	Adult CSL Juv ESL	15 3	100 m 225° off shore starboard	travelling to jetty very quickly	N	N/A	N/A	No construction
13:20	13:30	Adult Humpback	2	surfaced edge of jetty 275m starboard 130°	Travelling NW	N	N/A	N/A	No construction
13:55	14:25	4:11 Adult CSL	1	75 m 118° starboard	travelling S from jetty	N	N/A	N/A	Post-survey
14:22	14:22	Adult CSL	2	50 m bow 225°	Travelling W	N	N/A	N/A	Unanchoring barge

STARTING WEATHER 0 %cc 0 BS N Direction 47 °F 2mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 1 BS N Direction 75 °F 2mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 10/10/2022 OBSERVER K. Sloan LOCATION PSL START TIME 8:30 END TIME 18:00

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
8:30	9:00								Pre-survey
9:00	12:00								weighing rocks
12:00	12:03	Adult CSL	1	30m 90' bow	Travelling in shore	N	N/A	<del>outside</del> No in water work	Changing hook
12:24	12:25	Adult CSL	1	15m 135' Starboard	Travelling South	N	N/A	No in water work	Moving barge towards jetty
12:30	12:38	JUV CSL	1	15m 202' Stern	Sitting on rock in construction area	N	N/A	No in water work	No active construction, discussion occurring among crew. CSL got in water and travelled east inshore along jetty.
13:07	13:09	Adult CSL	1	10m 320' port Stern	Travelling along port edge of barge the inshore along jetty.	N	N/A	No in water work	Moving rocks on barge only.
14:03	14:08	Adult CSL	2	200m 22' Starboard bow	Travelling NE from offshore to jetty	N	N/A	Outside E2	Rock placement
17:15	17:45								post-survey
15:20	15:45	Adult CSL	2	200m 207' Starboard bow	Sunbathing on green traffic buoy	N	N/A	Outside E2	Removing barge

STARTING WEATHER 100 %cc 0 BS N Direction 53 °F 1mi Visibility 1 Beaufort Sea State

ENDING WEATHER 10 %cc 1 BS N Direction 78 °F 2mi Visibility 2 Beaufort Sea State



PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 10/07

OBSERVER J. Lott

LOCATION PSL

START TIME 0612

END TIME 1405

**MM**=Marine Mammal, **CSL**= CA Sea Lion, **SSL**=Stellar Sea Lion, **HS**= Harbor Seal, **ES**=Elephant Seal, **CGW**=California Gray Whale, **BD**=Bottlenose Dolphin, **CSO**=CA Sea Otter, **GST**=Green Sea Turtle / #: number of MM, GST

**Behavior & Location:** behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0612-0642 survey		CSL uu	1	100m star bow 68°	Fast travel @0614	N		pre-survey	0612 P50 at wench 0650 Anchors on deck
		CSL JU	1	15m port Stern 186°	slow travel => rocks @0657	N		outside EE	0653 Attach barge
		CSL JU	1	200m mid star 148°	Fast travel => rocks @0701	N		" "	0721 slide in + attach target
	1133	CSL JU	1	30m star Stern 150°	milling by rocks @1030	N		" "	1133 LUNCH 1203 Resume work - P50 under crane
1213		CSO AU	2	200m port bow 42°	Feeding @1134	N		" "	1304 lost barge + disconnect target 1335 Release storm tie, set anchors EOD
1335-1405 shutdown		CSL AU	1	150m mid star 155°	slow travel => rocks @1354	N		shutdown	P50 at wench for shutdown

STARTING WEATHER <sup>FOG</sup> 100 %cc 1 BS SE Direction 65 °F 200m Visibility 1 Beaufort Sea State

ENDING WEATHER 0 %cc 2 BS SE Direction 59 °F 8mi Visibility 2 Beaufort Sea State

PORT SAN LUIS BREAKWATER REPAIR PROJECT (22-024-01) MARINE MAMMAL MONITORING DATASHEET

DATE 10/12

OBSERVER J. Lotts

LOCATION Mono Rock

START TIME 0730

END TIME 0930

MM=Marine Mammal, CSL= CA Sea Lion, SSL=Stellar Sea Lion, HS= Harbor Seal, ES=Elephant Seal, CGW=California Gray Whale, BD=Bottlenose Dolphin, CSO=CA Sea Otter, GST=Green Sea Turtle / #: number of MM, GST

Behavior & Location: behavior (hauled out, foraging, swimming, spyhopping, resting, milling, etc) and location (in relation to work). Note if CLT, GST, or MM are reacting or modifying their behavior due to construction activities.

TIME		SPECIES OBSERVED				WORK HALTED?			CONSTRUCTION ACTIVITY
START	STOP	TYPE	#	LOCATION	BEHAVIOR	Y/N	TIME	REASON	
0730- 0800 Survey									0730 PSO on skiff, pre-survey 0800 Begin work
	0840- 0910 post survey								0840 End work - no marine mammals observed

STARTING WEATHER 100 %cc 2 BS SE Direction 56 °F 3mi Visibility 2 Beaufort Sea State

ENDING WEATHER 100 %cc 2 BS SE Direction 57 °F 3mi Visibility 2 Beaufort Sea State



**APPENDIX 4. RAW DATA SHEETS**

## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	SICK	<b>ANIMAL CONDITION:</b>	SICK
<b>INCIDENT DATE:</b>	6-23-22	<b>INCIDENT TIME:</b>	13:48
<b>INCIDENT LOCATION:</b> Latitude:Longitude	35.159176°; -120.752242°	<b>OBSERVER:</b>	Jessica Lotts
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	1.0 m
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>No obvious injury but unable to keep head up, floating flat head down except to breath</li> <li>Bobbing and sickly</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
<p>A California Sea Lion that appears to be sick swam/drifted through the project area. The monitor directed the contractor to shut down operations while the animal was within the safety zone, the shutdown was brief. The contractor went back to work as the animal logged alongside the barge well outside of the 10-m minimum shutdown boundary. The PSO assessed that the animal did not appear to be injured from the contractor's activities and showed no indication of physical injurie. The animal remained outside of the designated safety zone. The monitor contacted the regional NMFS marine mammal stranding coordinator (Justin Z.) to report the incident via phone.</p> <p>As this was the first MM incident of the project a high level of coordination occurred to establish protocols.</p> <p>PSO notifications were made to Natalie Martinez-Takeshita, Corps biologist and Justin Viezbicke, NMFS WCR Stranding Coordinator by telephone. The Corps further notified Justin Greenman, and Ben Laws and Justin via email.</p> <p>Ben Laws noted no additional action on the HIA required and would defer to West Coast Region for any other needs. Justin Viezbicke advised there was no need to call wildlife rescue as long as animal was in water and swimming</p>			
<b>Reported to:</b>			
Merkel & Associates Date/Time:	Keith Merkel On boat at time of sighting	Phone: Email:	619-884-6715 kmerkel@merkelinc.com
USACE Date/Time:	Natalie Martinez-Takeshita 6-23-22 13:59	Phone: Email:	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
NOAA Date/Time:	Justin Viezbicke 6-23-22 14:08	Phone: Email:	562-980-3230 Justin.viezbicke@noaa.gov



## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	SICK/INJURED	<b>ANIMAL CONDITION:</b>	SICK/INJURED
<b>INCIDENT DATE:</b>	06-24-22	<b>INCIDENT TIME:</b>	15:43
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.159047°; -120.752612°	<b>OBSERVER:</b>	Jennifer Klaib
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>Bobbing</li> <li>Sickly, pale skin sea lion drifted into the work area and eventually swam away</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
<p>This could be the same animal as was observed on June 23, 2022, based on size, coloration, and behavior. No change in behavioral response of animal was observed as it approached or left the area.</p>			
<b>Reported to:</b>	No formal report made		
<b>Merkel &amp; Associates Date/Time:</b>	Keith Merkel 6-24-22, 15:45 – Monitor and report any change in behavior	<b>Phone: Email:</b>	619-884-6715 kmerkel@merkelinc.com
<b>USACE Date/Time:</b>	Natalie Martinez-Takeshita Not notified	<b>Phone: Email:</b>	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
<b>NOAA Date/Time:</b>	Justin Viezbicke Not notified	<b>Phone: Email:</b>	562-980-3230 Justin.viezbicke@noaa.gov

## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	DEAD	<b>ANIMAL CONDITION:</b>	DEAD
<b>INCIDENT DATE:</b>	07-10-22	<b>INCIDENT TIME:</b>	14:11
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.158336°; -120.752412°	<b>OBSERVER:</b>	Jennifer Klaib
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	2.06 meters
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>• Picked up by bucket and transferred to discharge barge</li> <li>• Strong decomposition odor</li> <li>• Signs of decay</li> <li>• Cold to touch</li> <li>• Animal was in a state of early decomposition with odor, and skin lesions. The condition of the carcass suggested the animal died a few days prior.</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
<p>On July 10, 2022, at 14:11 hours the M&amp;A PSO monitor was notified that a sea lion had been placed on the sediment barge and that it was dead. She stopped work and investigated the animal.</p> <p>At 14:18 Keith Merkel received a call from the monitor noting that she was confirming that there was a female sea lion that was caked in sand on the barge. Keith asked her to check it out further including washing it off and looking at the condition of the skin and eyes and checking the temperature by feel while I notified the Corps and NMFS.</p> <p>At 14:21 Keith called Natalie Martinez-Takeshita, project biologist with ACOE LAD and Justin Viezbicke, NOAA West Coast Region, Stranding Coordinator was patched into the call at 14:22 to report what was known at the time.</p> <p>At 14:24 Keith heard back from the monitor that the animal was cool to the touch underneath the body out of the sun, it had considerable necrotic tissue and strong cadaver odor. At the time initial direction was provided for checking the animal for indications of time since death it was not known that the animal was in a state of early decomposition.</p>			



## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

Upon viewing photos, it appears that this animal is likely the same animal observed on June 23 hanging around the work site and appearing sickly that was reported previously. That (June 23, 24) animal was face down floating head and anterior flippers deep in the water except for breathing when it would lift its head and then drop into the water again. It was very approachable and lethargic at the time but appeared to not have any notable injuries. However, she had several small round skin lesions on her back, more tumor-like than physical injury in character.

The dead sea lion was a mature female measuring 2.06 meters overall length and she had no obvious significant bodily injuries. However, she did have the aforementioned tumor like scars on her back, necrotic skin, and a urogenital-like bulge (potentially tumor) that was found when she was flipped to examine her ventral side. By the nature of the injuries and the level of decomposition of tissue and cadaverine odor it was determined that the animal was picked up dead and not killed by the clam shell.

Keith asked the monitor to restart excavation activities after it was determined that the animal had been dead for some time. Digging commenced again at 14:36. The placement material barge where the animal was located remained shut down pending additional contact with the stranding coordinator.

Follow up contact efforts to Justin via phone were made at 14:29, 14:38, and 14:41. Ultimately direction was requested and received by text. The general information was reported to Justin Viezbicke via text at 14:52. Actions were confirmed by Justin at 14:53 with a notice that work was good to proceed. The sea lion was placed back into the water at 1502 wherein she sank immediately. Work then commenced on the material barge at 15:12.

During the post-incident review, the monitor confirmed that the waters at the excavation site were closely observed and had an animal come into the area on the surface it would have been observed. It is believed the animal was picked up from the bottom and deposited with the sand onto the material barge where it was then discovered.

The mortality is not believed to be project related.

# Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

PHOTO AS FIRST OBSERVED ON MATERIAL BARGE



DORSAL SIDE OF RINSED ANIMAL





## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

VENTRAL SIDE OF RINSED ANIMAL



Reported to:			
Merkel & Associates Date/Time:	Keith Merkel 7-10-22, 14:18	Phone: Email:	619-884-6715 kmerkel@merkelinc.com
USACE Date/Time:	Natalie Martinez-Takeshita 7-10-22, 14:21	Phone: Email:	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
NOAA Date/Time:	Justin Viezbicke 7-10-22, 14:22	Phone: Email:	562-980-3230 Justin.viezbicke@noaa.gov
Email Incident Report	July 11, 2022, 09:55 email notice sent out		Ben Laws, PR.ITP.Monitoring Reports, Justin Viezbicke, Justin Greenman

## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	SICK/DEAD	<b>ANIMAL CONDITION:</b>	SICK/DEAD
<b>INCIDENT DATE:</b>	07-11-22	<b>INCIDENT TIME:</b>	10:03
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.158969°; -120.752242°	<b>OBSERVER:</b>	Jennifer Klaib
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	1.0 meter
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>Observed a lethargic, floating CSL for about 30 minutes as it milled around and approached bow</li> <li>CSL went into a large tire bumper, and Construction crew in skiff checked on it for PSO it appeared dead</li> <li>PSO confirmed death at 10:34 and disposed of body offshore at 12:32</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
<p>A 0.96 m total length female California sea lion swim into the work area and die without any distress from construction activities. This is a no-take report.</p> <p>Activities underway at the time were limited to excavation of the access way to move construction barges close enough to the breakwater to affect repairs. A clamshell bucket is excavating sand and placing it onto a deck barge where the material is being relocated to push off to a reuse location in San Luis Bay where eelgrass will be restored. In water noise was minimal at this time and vessel traffic is also minimal. The animal was first spotted approximately 200 meters from the work area yesterday morning during the morning survey. It was notable in that it was floating high in the back with its head and anterior body down with very slow and non-agile movement. Occasionally it would lift its head and breath before lowering its head again into the water.</p> <p>At 10:03 the sea lion came to within 65 meters of the work area at the port stern of the crane barge. It continued to move sluggishly and was monitored for 30 minutes. The sea lion appeared very lethargic and was expected that it would ultimately move into the excavation area where it would result in a work stoppage.</p> <p>At 10:17 the PSO notified Keith Merkel that the sea lion was hanging around the stern of the barge and photographs were sent from the field. No shut down occurred as the animal was not near the excavation activities.</p> <p>At 10:30 the animal swam into a half-submerged large tire bumper on the side of the crane barge and Keith was notified that animal rescue should be called. The PSO was requested to determine if it would leave if approached, as the rescue team would generally not pull an animal out of the water if it would swim away to avoid capture. She asked the contractor crew to check on the sea lion and it was reported that she looked dead. Based on this report, the PSO was asked to confirm the status and that it wasn't just resting. She got into the skiff from the barge and approached where the sea lion could be inspected. The animal was determined to be dead at 10:34. The animal was inside the tire for approximately 2 minutes before being first identified as likely dead. It was not constrained by the tire due to the semi submergence of the tire and the size of the tire (see picture).</p>			



Port San Luis Breakwater Repair Project - Marine Mammal Incident Form



## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

At 10:53 Keith Merkel contacted Natalie Martinez-Takeshita, ACOE LAD ERB Project Biologist and attempted to join Justin Viezbicke, NOAA Stranding Coordinator to the call. Justin was not reached so subsequent conversation via text message occurred to advise of the situation. The animal was floated out of the tire and inspected. It was very buoyant in the mid body with both the head and anterior body hanging down in the water. The animal was rotated to inspect for injuries and no injuries were noted. The sea lion was measured at 0.96 meter in length.

At 12:32 the sea lion was towed to sea away from the project area and release far enough away that it should not drift back into the work area.

Reported to:			
Merkel & Associates Date/Time:	Keith Merkel	Phone: Email:	619-884-6715 kmerkel@merkelinc.com
USACE Date/Time:	Natalie Martinez-Takeshita	Phone: Email:	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
NOAA Date/Time:	Justin Viezbicke	Phone: Email:	562-980-3230 Justin.viezbicke@noaa.gov



## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	DEAD	<b>ANIMAL CONDITION:</b>	DEAD
<b>INCIDENT DATE:</b>	07-11-22	<b>INCIDENT TIME:</b>	09:42
<b>INCIDENT LOCATION:</b> Latitude:Longitude	35.159083°; -120.752848°	<b>OBSERVER:</b>	Jennifer Klaib
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>Highly decayed</li> <li>Floating on surface along breakwater</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
<p>Observed dead CSL floating along breakwater. Advanced decomposition. Not project related. Animal was not relocated a few minutes later.</p>			
<b>Reported to:</b>			
<b>Merkel &amp; Associates Date/Time:</b>	Keith Merkel	<b>Phone:</b> <b>Email:</b>	619-884-6715 kmerkel@merkelinc.com
<b>USACE Date/Time:</b>	Natalie Martinez-Takeshita	<b>Phone:</b> <b>Email:</b>	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
<b>NOAA Date/Time:</b>	Justin Viezbicke	<b>Phone:</b> <b>Email:</b>	562-980-3230 Justin.viezbicke@noaa.gov

## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	DEAD	<b>ANIMAL CONDITION:</b>	DEAD
<b>INCIDENT DATE:</b>	07-27-22	<b>INCIDENT TIME:</b>	06:21
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.158555°; -120.752144°	<b>OBSERVER:</b>	Jennifer Klaib
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>Deceased and floating</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
<p>Dead animal floating in from the south along breakwater toward the project area. No work was underway at the time as the observation was made during the pre-construction survey. Animal drifted on through the project monitoring area to the northeast.</p> <p>No action taken.</p>			
<b>Reported to:</b>	None		
<b>Merkel &amp; Associates Date/Time:</b>	Keith Merkel Notified at 6:25 am	<b>Phone: Email:</b>	619-884-6715 kmerkel@merkelinc.com
<b>USACE Date/Time:</b>	Natalie Martinez-Takeshita	<b>Phone: Email:</b>	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
<b>NOAA Date/Time:</b>	Justin Viezbicke	<b>Phone: Email:</b>	562-980-3230 Justin.viezbicke@noaa.gov



## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	DEAD	<b>ANIMAL CONDITION:</b>	DEAD
<b>INCIDENT DATE:</b>	08-04-22	<b>INCIDENT TIME:</b>	13:30
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.159035°; -120.752154°	<b>OBSERVER:</b>	Jessica Lotts
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>No obvious injury</li> <li>Appears to have been dead a while, based on skin loss and smell</li> <li>Notified KWM at 1337</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
Not project related. Construction activity was excavation.			
<b>Reported to:</b>			
<b>Merkel &amp; Associates</b> Date/Time:	Keith Merkel 8/4/22 13:37 – Document on monitoring form, no other action needed	<b>Phone:</b> <b>Email:</b>	619-884-6715 kmerkel@merkelinc.com
<b>USACE</b> Date/Time:	Natalie Martinez-Takeshita Not Notified	<b>Phone:</b> <b>Email:</b>	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
<b>NOAA</b> Date/Time:	Justin Viezbicke Not Notified	<b>Phone:</b> <b>Email:</b>	562-980-3230 Justin.viezbicke@noaa.gov

## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	DEAD	<b>ANIMAL CONDITION:</b>	DEAD
<b>INCIDENT DATE:</b>	08-06-22	<b>INCIDENT TIME:</b>	11:50
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.157377°; -120.751224°	<b>OBSERVER:</b>	Jessica Lotts
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>Observed floating body</li> <li>Heavily decayed</li> <li>Body ¼ completely decayed and bird crap on body</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
Not project related.			
<b>Reported to:</b>	No notices made		
<b>Merkel &amp; Associates Date/Time:</b>	Keith Merkel	<b>Phone:</b> <b>Email:</b>	619-884-6715 kmerkel@merkelinc.com
<b>USACE Date/Time:</b>	Natalie Martinez-Takeshita	<b>Phone:</b> <b>Email:</b>	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
<b>NOAA Date/Time:</b>	Justin Viezbicke	<b>Phone:</b> <b>Email:</b>	562-980-3230 Justin.viezbicke@noaa.gov

## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	DEAD	<b>ANIMAL CONDITION:</b>	DEAD
<b>INCIDENT DATE:</b>	08-16-22	<b>INCIDENT TIME:</b>	07:30
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.158365°; -120.753030°	<b>OBSERVER:</b>	Jessica Lotts
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>CSL heavily decayed corpse on rocks on the outside of the breakwater.</li> <li>Too decayed to ID age and gender</li> <li>Dead for weeks</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
Not project related.			
<b>Reported to:</b>	No notifications made		
<b>Merkel &amp; Associates Date/Time:</b>	Keith Merkel	<b>Phone:</b> <b>Email:</b>	619-884-6715 kmerkel@merkelinc.com
<b>USACE Date/Time:</b>	Natalie Martinez-Takeshita	<b>Phone:</b> <b>Email:</b>	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
<b>NOAA Date/Time:</b>	Justin Viezbicke	<b>Phone:</b> <b>Email:</b>	562-980-3230 Justin.viezbicke@noaa.gov



## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	INJURED	<b>ANIMAL CONDITION:</b>	INJURED
<b>INCIDENT DATE:</b>	08-19-22	<b>INCIDENT TIME:</b>	15:28
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.157971°; -120.752074°	<b>OBSERVER:</b>	Edward Ervin
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>Adult female with large shark bite 0.3 meter tall, 0.6 meter wide wound with skin missing and fat exposed. No muscle or organs were visible.</li> <li>Injury to dorsoventral area</li> <li>Animal acting very lethargic</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
<p>Work permitted to continue as animal remained approximately 75 meters from construction                      Injury appeared to be shark bite and not project related.</p>			
<b>Reported to:</b>			
Merkel & Associates Date/Time:	Keith Merkel 08/19/22 15:30 – Just observe as long as it is swimming	Phone: Email:	619-884-6715 kmerkel@merkelinc.com
USACE Date/Time:	Natalie Martinez-Takeshita Notified by text as FYI	Phone: Email:	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
NOAA Date/Time:	Justin Viezbicke Not notified	Phone: Email:	562-980-3230 Justin.viezbicke@noaa.gov

## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	DEAD	<b>ANIMAL CONDITION:</b>	DEAD
<b>INCIDENT DATE:</b>	08-26-22	<b>INCIDENT TIME:</b>	14:30
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.158368°; -120.752560°	<b>OBSERVER:</b>	Jessica Lotts
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>Heavy decay</li> <li>Missing head and hind quarters</li> <li>No skin</li> <li>Appeared to have been dead for weeks</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
Not project related.			
<b>Reported to:</b>	No notifications made.		
<b>Merkel &amp; Associates Date/Time:</b>	Keith Merkel	<b>Phone:</b> <b>Email:</b>	619-884-6715 kmerkel@merkelinc.com
<b>USACE Date/Time:</b>	Natalie Martinez-Takeshita	<b>Phone:</b> <b>Email:</b>	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
<b>NOAA Date/Time:</b>	Justin Viezbicke	<b>Phone:</b> <b>Email:</b>	562-980-3230 Justin.viezbicke@noaa.gov

## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	DEAD	<b>ANIMAL CONDITION:</b>	DEAD
<b>INCIDENT DATE:</b>	09-17-22	<b>INCIDENT TIME:</b>	07:55
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.159273°; -120.754055°	<b>OBSERVER:</b>	Jessica Lotts
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	

**DESCRIPTION:** *(shape, color, markings, behavior)*

- Seen floating
- Heavy decay
- Missing head and fins
- Corpse eddied out on the lee of the breakwater near Whaler's Island

**COMMENTS:** *(timeline, actions, people involved, etc)*

Not project related.

<b>Reported to:</b>	Notifications not made		
<b>Merkel &amp; Associates</b> Date/Time:	Keith Merkel	Phone:	619-884-6715
		Email:	kmerkel@merkelinc.com
<b>USACE</b> Date/Time:	Natalie Martinez-Takeshita	Phone:	213-452-3306
		Email:	Natalie.M.Martinez-Takeshita@usace.army.mil
<b>NOAA</b> Date/Time:	Justin Viezbicke	Phone:	562-980-3230
		Email:	Justin.viezbicke@noaa.gov



## Port San Luis Breakwater Repair Project - Marine Mammal Incident Form

<b>INCIDENT TYPE:</b>	DEAD	<b>ANIMAL CONDITION:</b>	DEAD
<b>INCIDENT DATE:</b>	09-19-22	<b>INCIDENT TIME:</b>	08:21
<b>INCIDENT LOCATION:</b> Latitude: Longitude	35.157863°; -120.752058°	<b>OBSERVER:</b>	Jessica Lotts
<b>SPECIES:</b>	California Sea Lion	<b>ID CONFIDENCE:</b>	Certain
<b># OF ANIMALS:</b>	1	<b>BODY LENGTH:</b>	
<b>DESCRIPTION:</b> <i>(shape, color, markings, behavior)</i>			
<ul style="list-style-type: none"> <li>Heavy decay</li> <li>Large tumor present</li> </ul>			
<b>COMMENTS:</b> <i>(timeline, actions, people involved, etc)</i>			
Not project related			
<b>Reported to:</b>	Notifications not made		
<b>Merkel &amp; Associates Date/Time:</b>	Keith Merkel	<b>Phone:</b> <b>Email:</b>	619-884-6715 kmerkel@merkelinc.com
<b>USACE Date/Time:</b>	Natalie Martinez-Takeshita	<b>Phone:</b> <b>Email:</b>	213-452-3306 Natalie.M.Martinez-Takeshita@usace.army.mil
<b>NOAA Date/Time:</b>	Justin Viezbicke	<b>Phone:</b> <b>Email:</b>	562-980-3230 Justin.viezbicke@noaa.gov