



GRAY WHALE *Eschrichtius robustus* NORTHBOUND MIGRATION - 2019



Total whales: 854 calves: 35 Number of sightings: 478

This report presents all sightings and tracking of all northbound gray whales, on-effort. Any voided or off-effort sightings have been removed.

Our 2019 survey was conducted from February 14 through May 22, scheduled from 9 to 5 every day except our off-day, Tuesdays. The survey team — Counters — consisted of the Project Coordinator and an array of volunteer Observers, who worked scheduled 2-hour shifts, supervised by the Project Coordinator.

Observers use Fujinon and Baker Marine 7x50 binoculars with a built-in reticle scale and compass. All of the five pairs are within 1° of standard. For species identification of distant animals, we use a Zeiss spotting scope. When appropriate we have been taking digital images with a Canon 7D Mark 2. Data are entered in pencil on paper datasheets, designed by Gray Whales Count. Datasheets and entry guides are available for download, the last report in this group.

Report Key: Quality is overall observation quality; The number with Beaufort corresponds to the Beaufort scale; Position of the sighting is represented by true bearing, with distance in meters from our observation platform, which faces south. Our eye-height is 13.56 meters (about 44.5 feet).

part of 2019 Gray Whales Count, Survey Report © Gray Whales Count, 2019, Santa Barbara, California, USA
prepared by Michael H Smith, Project Coordinator

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Feb 16		Day 4 of 99		Daily Totals		whales	3	calves	0
Sighting Number	01	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting						
		10:00 -PST	18:00-GMT	Position: 115° / 3088 m	Direction: West;	Behavior: Speed slow •	Traveling		
		10:17 -PST	18:17-GMT	Position: 119° / 2749 m	Direction: West;	Behavior: Speed slow •	Traveling		
		10:25 -PST	18:25-GMT	Position: 126° / 2260 m	Direction: West;	Behavior: Speed slow •	Traveling • Fluke		
		10:31 -PST	18:31-GMT	Position: 136° / 1483 m	Direction: West;	Behavior: Speed slow •	Traveling		
		10:39 -PST	18:39-GMT	Position: 176° / 1208 m	Direction: West;	Behavior: Speed slow •	Traveling • Fluke		
		10:45 -PST	18:45-GMT	Position: 209° / 827 m	Direction: West;	Behavior: Speed slow •	Traveling		
Sighting Number	02	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting						
		10:37 -PST	18:37-GMT	Position: 121° / 1922 m	Direction: West;	Behavior: Speed slow •	Traveling		
		10:44 -PST	18:44-GMT	Position: 177° / 1208 m	Direction: West;	Behavior: Speed slow •	Traveling		
Feb 18		Day 6 of 99		Daily Totals		whales	5	calves	0
Sighting Number	01	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting						
		10:17 -PST	18:17-GMT	Position: 172° / 678 m	Direction: West;	Behavior: Speed slow •	Traveling		
Sighting Number	03	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting						
		12:22 -PST	20:22-GMT	Position: 154° / 2260 m	Direction: West;	Behavior: Speed slow •	Traveling		
		12:29 -PST	20:29-GMT	Position: 163° / 1922 m	Direction: West;	Behavior: Speed slow •	Traveling		
		12:33 -PST	20:33-GMT	Position: 168° / 1922 m	Direction: West;	Behavior: Speed slow •	Traveling • Fluke		
		12:50 -PST	20:50-GMT	Position: 203° / 1483 m	Direction: West;	Behavior: Speed slow •	Traveling		
Sighting Number	05	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting						
		14:58 -PST	22:58-GMT	Position: 193° / 946 m	Direction: West;	Behavior: Speed slow •	Traveling		
		15:09 -PST	23:09-GMT	Position: 192° / 946 m	Direction: West	playing around - not coming up enough to see what they are doing, but staying in same place			
		15:16 -PST	23:16-GMT	Position: 192° / 946 m	Direction: West				
		15:41 -PST	23:41-GMT	Position: 203° / 827 m	Direction: West;	Behavior: Speed slow •	Traveling • Rolling rolling		
Feb 20		Day 8 of 99		Daily Totals		whales	2	calves	0
Sighting Number	01	Quality: Fair Beaufort: 4	Total whales 2 — 0 calves at sighting						
		09:25 -PST	17:25-GMT	Position: 157° / 778 m	Direction: West;	Behavior: Speed slow •	Traveling 1st sighting just off kelp		
		09:31 -PST	17:31-GMT	Position: 187° / 600 m	Direction: West;	Behavior: Speed slow •	Traveling • Rolling		
		09:37 -PST	17:37-GMT	Position: 251° / 827 m	Direction: West;	Behavior: Speed slow •	Traveling • Breach 2 breaches		
Feb 21		Day 9 of 99		Daily Totals		whales	2	calves	0
Sighting Number	04	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting						
		10:08 -PST	18:08-GMT	Position: 105° / 3088 m	Direction: West;	Behavior: Speed slow •	Traveling		
		10:21 -PST	18:21-GMT	Position: 114° / 1922 m	Direction: West;	Behavior: Speed slow •	Traveling		

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

	10:26 -PST	18:26-GMT	Position: 124° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	10:33 -PST	18:33-GMT	Position: 160° / 946 m Direction: West; Behavior: Speed slow • Traveling
Feb 22	Day 10 of 99		Daily Totals whales 16 calves 0
Sighting Number	03	Quality: Good Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:35 -PST	18:35-GMT	Position: 125° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	10:42 -PST	18:42-GMT	Position: 152° / 883 m Direction: West; Behavior: Speed slow • Traveling
	10:48 -PST	18:48-GMT	Position: 174° / 883 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Good Beaufort: 1	Total whales 2 — 0 calves at sighting
	10:43 -PST	18:43-GMT	Position: 138° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	10:52 -PST	18:52-GMT	Position: 144° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	10:59 -PST	18:59-GMT	Position: 150° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	11:06 -PST	19:06-GMT	Position: 159° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Good Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:55 -PST	18:55-GMT	Position: 138° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	10:51 -PST	18:51-GMT	Position: 158° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:01 -PST	19:01-GMT	Position: 192° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	06	Quality: Good Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:05 -PST	19:05-GMT	Position: 184° / 600 m Direction: West; Behavior: Speed slow • Traveling
	11:09 -PST	19:09-GMT	Position: 207° / 550 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Good Beaufort: 2 Images: 6577-95	Total whales 2 — 0 calves at sighting
	11:42 -PST	19:42-GMT	Position: 118° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:50 -PST	19:50-GMT	Position: 144° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	08	Quality: Good Beaufort: 2	Total whales 1 — 0 calves at sighting
	11:43 -PST	19:43-GMT	Position: 135° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	11:52 -PST	19:52-GMT	Position: 166° / 696 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Good Beaufort: 3	Total whales 2 — 0 calves at sighting
	12:08 -PST	20:08-GMT	Position: 122° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:13 -PST	20:13-GMT	Position: 148° / 696 m Direction: West; Behavior: Speed slow • Traveling
	12:15 -PST	20:15-GMT	Position: 169° / 661 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Good Beaufort: 3	Total whales 1 — 0 calves at sighting
	12:19 -PST	20:19-GMT	Position: 129° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	12:26 -PST	20:26-GMT	Position: 157° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	11	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting
	13:34 -PST	21:34-GMT	Position: 168° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	13:41 -PST	21:41-GMT	Position: 185° / 2749 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number	12	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting
		13:35 -PST 21:35-GMT	Position: 170° / 1208 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	13	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting
		14:03 -PST 22:03-GMT	Position: 151° / 883 m Direction: West; Behavior: Speed slow • Traveling
		14:05 -PST 22:05-GMT	Position: 175° / 600 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	15	Quality: Fair Beaufort: 4	Total whales 2 — 0 calves at sighting
		15:04 -PST 23:04-GMT	Position: 137° / 1674 m Direction: West; Behavior: Speed slow • Traveling
		15:09 -PST 23:09-GMT	Position: 145° / 1331 m Direction: West; Behavior: Speed slow • Traveling
		15:11 -PST 23:11-GMT	Position: 156° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		15:17 -PST 23:17-GMT	Position: 182° / 913 m Direction: West; Behavior: Speed slow • Traveling
Feb 23	Day 11 of 99	Daily Totals whales 17 calves 0	
Sighting Number	01	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		09:09 -PST 17:09-GMT	Position: 206° / 1403 m Direction: West; Behavior: Speed slow • Traveling
		09:13 -PST 17:13-GMT	Position: 218° / 1331 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	03	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
		09:23 -PST 17:23-GMT	Position: 137° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		09:26 -PST 17:26-GMT	Position: 153° / 946 m Direction: West; Behavior: Speed slow • Traveling
		09:32 -PST 17:32-GMT	Position: 196° / 883 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
		09:34 -PST 17:34-GMT	Position: 161° / 913 m Direction: West; Behavior: Speed slow • Traveling
		09:41 -PST 17:41-GMT	Position: 212° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
		09:36 -PST 17:36-GMT	Position: 210° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
		10:19 -PST 18:19-GMT	Position: 120° / 1331 m Direction: West; Behavior: Speed slow • Traveling breach further back
		10:28 -PST 18:28-GMT	Position: 176° / 883 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting
		11:38 -PST 19:38-GMT	Position: 220° / 661 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting
		11:45 -PST 19:45-GMT	Position: 154° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		11:49 -PST 19:49-GMT	Position: 174° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	12	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting
		12:11 -PST 20:11-GMT	Position: 121° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		12:19 -PST 20:19-GMT	Position: 155° / 778 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

	12:23 -PST	20:23-GMT	Position: 199° / 600 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	13	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	12:37 -PST	20:37-GMT	Position: 125° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	12:47 -PST	20:47-GMT	Position: 196° / 678 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	15	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	14:59 -PST	22:59-GMT	Position: 199° / 600 m Direction: West; Behavior: Speed slow • Traveling
	15:00 -PST	23:00-GMT	Position: 220° / 550 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	16	Quality: Fair Beaufort: 2 Images: 6679	Total whales 1 — 0 calves at sighting
	15:09 -PST	23:09-GMT	Position: 184° / 678 m Direction: West; Behavior: Speed slow • Traveling
	15:12 -PST	23:12-GMT	Position: 217° / 696 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	18	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	16:58 -PST	0:58; 2/24/2019-GMT	Position: 167° / 883 m Direction: West; Behavior: Speed slow • Traveling
	17:01 -PST	1:01; 2/24/2019-GMT	Position: 196° / 550 m Direction: West; Behavior: Speed slow • Traveling
Feb 24	Day 12 of 99		Daily Totals whales 12 calves 0
Sighting Number	01	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	09:51 -PST	17:51-GMT	Position: 166° / 883 m Direction: West; Behavior: Speed slow • Traveling
	09:58 -PST	17:58-GMT	Position: 208° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	02	Quality: Fair Beaufort: 0 Images: 6684-95	Total whales 2 — 0 calves at sighting
	10:51 -PST	18:51-GMT	Position: 113° / 1674 m Direction: West; Behavior: Speed slow • Traveling just off kelp
	10:55 -PST	18:55-GMT	Position: 122° / 1020 m Direction: West; Behavior: Speed slow • Traveling
	11:03 -PST	19:03-GMT	Position: 136° / 883 m Direction: West; Behavior: Speed slow • Traveling
	11:10 -PST	19:10-GMT	Position: 170° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	03	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	10:53 -PST	18:53-GMT	Position: 132° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	11:03 -PST	19:03-GMT	Position: 136° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	11:07 -PST	19:07-GMT	Position: 146° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	11:20 -PST	19:20-GMT	Position: 161° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	11:32 -PST	19:32-GMT	Position: 145° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:53 -PST	19:53-GMT	Position: 240° / 1483 m Direction: West; Behavior: Speed slow • Traveling no blows
Sighting Number	06	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	12:09 -PST	20:09-GMT	Position: 142° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	12:21 -PST	20:21-GMT	Position: 179° / 1674 m Direction: West; Behavior: Speed slow • Traveling another long downtime

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number	08	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		14:41 -PST 22:41-GMT	Position: 195° / 678 m Direction: West; Behavior: Speed slow • Traveling
		14:42 -PST 22:42-GMT	Position: 213° / 696 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
		15:33 -PST 23:33-GMT	Position: 154° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		15:38 -PST 23:38-GMT	Position: 175° / 946 m Direction: West; Behavior: Speed slow • Traveling
		15:41 -PST 23:41-GMT	Position: 192° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		15:58 -PST 23:58-GMT	Position: 181° / 778 m Direction: West; Behavior: Speed slow • Traveling
		16:07 -PST 0:07; 2/25/2019-GMT	Position: 249° / 1020 m Direction: West; Behavior: Speed slow • Traveling
Feb 25	Day 13 of 99	Daily Totals whales 16 calves 0	
Sighting Number	01	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
		09:09 -PST 17:09-GMT	Position: 170° / 3528 m Direction: West; Behavior: Speed slow • Traveling
		09:11 -PST 17:11-GMT	Position: 173° / 3528 m Direction: West; Behavior: Speed slow • Traveling
		09:16 -PST 17:16-GMT	Position: 180° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	02	Quality: Fair Beaufort: 4	Total whales 2 — 0 calves at sighting
		09:14 -PST 17:14-GMT	Position: 145° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		09:24 -PST 17:24-GMT	Position: 185° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting
		10:50 -PST 18:50-GMT	Position: 172° / 1331 m Direction: West; Behavior: Speed slow • Traveling
		11:05 -PST 19:05-GMT	Position: 222° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
		11:48 -PST 19:48-GMT	Position: 146° / 827 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		11:48 -PST 19:48-GMT	Position: 156° / 778 m Direction: West; Behavior: Speed slow • Traveling
		11:55 -PST 19:55-GMT	Position: 217° / 778 m Direction: West; Behavior: Speed slow • Traveling along kelp
		11:58 -PST 19:58-GMT	Position: 243° / 600 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Fair Beaufort: 3 Images: 6726-9	Total whales 1 — 0 calves at sighting
		12:35 -PST 20:35-GMT	Position: 142° / 696 m Direction: West; Behavior: Speed slow • Traveling
		12:41 -PST 20:41-GMT	Position: 202° / 550 m Direction: West; Behavior: Speed slow • Traveling • Fluke along kelp
Sighting Number	11	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
		13:06 -PST 21:06-GMT	Position: 142° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		13:12 -PST 21:12-GMT	Position: 180° / 1208 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number	13	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 2	
		15:12 -PST 23:12-GMT	Position: 145° / 735 m Direction: West; Behavior: Speed slow • Traveling
		15:17 -PST 23:17-GMT	Position: 208° / 574 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	14	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 2	
		15:25 -PST 23:25-GMT	Position: 136° / 1020 m Direction: West; Behavior: Speed slow • Traveling
		15:27 -PST 23:27-GMT	Position: 156° / 946 m Direction: West; Behavior: Speed slow • Traveling
		15:30 -PST 23:30-GMT	Position: 174° / 827 m Direction: West; Behavior: Speed slow • Traveling
		15:34 -PST 23:34-GMT	Position: 213° / 827 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	15	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 2	
		15:26 -PST 23:26-GMT	Position: 138° / 3088 m Direction: West; Behavior: Speed slow • Traveling
		15:36 -PST 23:36-GMT	Position: 149° / 3088 m Direction: West; Behavior: Speed slow • Traveling
		15:39 -PST 23:39-GMT	Position: 155° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		15:46 -PST 23:46-GMT	Position: 167° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		15:49 -PST 23:49-GMT	Position: 178° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	16	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 3	
		16:45 -PST 0:45; 2/26/2019-GMT	Position: 136° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		16:51 -PST 0:51; 2/26/2019-GMT	Position: 167° / 946 m Direction: West; Behavior: Speed slow • Traveling
		16:52 -PST 0:52; 2/26/2019-GMT	Position: 177° / 946 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Feb 28	Day 16 of 99	Daily Totals	whales 1 calves 0
Sighting Number	04	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 1	
		12:36 -PST 20:36-GMT	Position: 116° / 1331 m Direction: West; Behavior: Speed slow • Traveling along kelp
		12:42 -PST 20:42-GMT	Position: 128° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		12:45 -PST 20:45-GMT	Position: 144° / 913 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Mar 01	Day 17 of 99	Daily Totals	whales 17 calves 0
Sighting Number	02	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 2	
		09:09 -PST 17:09-GMT	Position: 141° / 1403 m Direction: West; Behavior: Speed slow • Traveling
		09:10 -PST 17:10-GMT	Position: 148° / 1208 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		09:16 -PST 17:16-GMT	Position: 188° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	03	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 2	
		09:17 -PST 17:17-GMT	Position: 166° / 883 m Direction: West; Behavior: Speed slow • Traveling
		09:23 -PST 17:23-GMT	Position: 214° / 913 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 2	
		09:25 -PST 17:25-GMT	Position: 162° / 735 m Direction: West; Behavior: Speed slow • Traveling
		09:31 -PST 17:31-GMT	Position: 220° / 661 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 06	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	10:31 -PST 18:31-GMT	Position: 138° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	10:39 -PST 18:39-GMT	Position: 166° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 07	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	10:50 -PST 18:50-GMT	Position: 199° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 08	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	11:40 -PST 19:40-GMT	Position: 133° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 09	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	13:04 -PST 21:04-GMT	Position: 168° / 735 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 10	Quality: Poor Beaufort: 1	Total whales 2 — 0 calves at sighting
	13:47 -PST 21:47-GMT	Position: 124° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	13:52 -PST 21:52-GMT	Position: 141° / 946 m Direction: West; Behavior: Speed slow • Traveling
	13:53 -PST 21:53-GMT	Position: 150° / 778 m Direction: West; Behavior: Speed slow • Traveling
	13:57 -PST 21:57-GMT	Position: 187° / 661 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 11	Quality: Poor Beaufort: 1	Total whales 2 — 0 calves at sighting
	13:57 -PST 21:57-GMT	Position: 177° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:03 -PST 22:03-GMT	Position: 186° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 12	Quality: Poor Beaufort: 1	Total whales 2 — 0 calves at sighting
	14:38 -PST 22:38-GMT	Position: 165° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:46 -PST 22:46-GMT	Position: 171° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:59 -PST 22:59-GMT	Position: 185° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 13	Quality: Poor Beaufort: 1	Total whales 1 — 0 calves at sighting
	15:10 -PST 23:10-GMT	Position: 184° / 678 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:22 -PST 23:22-GMT	Position: 272° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Breach breach

Mar 03

Day 19 of 99

Daily Totals whales 13 calves 0

Sighting Number 02	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	10:36 -PST 18:36-GMT	Position: 121° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:48 -PST 18:48-GMT	Position: 123° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:56 -PST 18:56-GMT	Position: 138° / 778 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:59 -PST 18:59-GMT	Position: 168° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 03	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	10:42 -PST 18:42-GMT	Position: 137° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	10:51 -PST 18:51-GMT	Position: 147° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	11:03 -PST 19:03-GMT	Position: 167° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	11:06 -PST 19:06-GMT	Position: 176° / 2749 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 05	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	11:21 -PST 19:21-GMT	Position: 145° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	11:26 -PST 19:26-GMT	Position: 151° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	11:29 -PST 19:29-GMT	Position: 156° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	11:34 -PST 19:34-GMT	Position: 166° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 09	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	12:42 -PST 20:42-GMT	Position: 135° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	12:44 -PST 20:44-GMT	Position: 143° / 946 m Direction: West; Behavior: Speed slow • Traveling
	12:52 -PST 20:52-GMT	Position: 212° / 696 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 10	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	13:22 -PST 21:22-GMT	Position: 153° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	13:26 -PST 21:26-GMT	Position: 165° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	13:29 -PST 21:29-GMT	Position: 176° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 11	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	13:28 -PST 21:28-GMT	Position: 152° / 946 m Direction: West; Behavior: Speed slow • Traveling
	13:30 -PST 21:30-GMT	Position: 162° / 883 m Direction: West; Behavior: Speed slow • Traveling
	13:31 -PST 21:31-GMT	Position: 174° / 778 m Direction: West; Behavior: Speed slow • Traveling
	13:34 -PST 21:34-GMT	Position: 184° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 13	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting
	13:46 -PST 21:46-GMT	Position: 125° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	14:00 -PST 22:00-GMT	Position: 180° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 14	Quality: Fair Beaufort: 4	Total whales 2 — 0 calves at sighting
	15:55 -PST 23:55-GMT	Position: 176° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	16:15 -PST 0:15; 3/4/2019-GMT	Position: 193° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Mar 04	Day 20 of 99	Daily Totals whales 12 calves 0
Sighting Number 01	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	09:05 -PST 17:05-GMT	Position: 154° / 696 m Direction: West; Behavior: Speed slow • Traveling close to kelp
Sighting Number 03	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	10:05 -PST 18:05-GMT	Position: 159° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	10:09 -PST 18:09-GMT	Position: 167° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:17 -PST 18:17-GMT	Position: 195° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 04	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	10:42 -PST 18:42-GMT	Position: 150° / 696 m Direction: West; Behavior: Speed slow • Traveling
	10:44 -PST 18:44-GMT	Position: 176° / 778 m Direction: West; Behavior: Speed slow • Traveling in kelp

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number	05	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
		10:49 -PST 18:49-GMT	Position: 177° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	06	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
		11:30 -PST 19:30-GMT	Position: 136° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Good Beaufort: 2	Total whales 3 — 0 calves at sighting
		13:11 -PST 21:11-GMT	Position: 146° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		13:22 -PST 21:22-GMT	Position: 160° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Poor Beaufort: 4	Total whales 3 — 0 calves at sighting
		16:26 -PST 0:26; 3/5/2019-GMT	Position: 153° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		16:32 -PST 0:32; 3/5/2019-GMT	Position: 171° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Poor Beaufort: 4	Total whales 3 — 0 calves at sighting
		16:36 -PST 0:36; 3/5/2019-GMT	Position: 192° / 1020 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting
		16:45 -PST 0:45; 3/5/2019-GMT	Position: 191° / 735 m Direction: West; Behavior: Speed slow • Traveling
Mar 07	Day 23 of 99		Daily Totals whales 19 calves 0
Sighting Number	01	Quality: Fair Beaufort: 2	Total whales 3 — 0 calves at sighting
		09:12 -PST 17:12-GMT	Position: 134° / 3528 m Direction: West; Behavior: Speed slow • Traveling
		09:31 -PST 17:31-GMT	Position: 151° / 3088 m Direction: West; Behavior: Speed slow • Traveling
		09:39 -PST 17:39-GMT	Position: 162° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	03	Quality: Fair Beaufort: 2	Total whales 3 — 0 calves at sighting
		09:46 -PST 17:46-GMT	Position: 140° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		09:54 -PST 17:54-GMT	Position: 151° / 1483 m Direction: West; Behavior: Speed slow • Traveling
		09:57 -PST 17:57-GMT	Position: 163° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	04	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
		10:03 -PST 18:03-GMT	Position: 147° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		10:06 -PST 18:06-GMT	Position: 168° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
		10:12 -PST 18:12-GMT	Position: 162° / 946 m Direction: West; Behavior: Speed slow • Traveling
		10:16 -PST 18:16-GMT	Position: 196° / 827 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	06	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting
		10:35 -PST 18:35-GMT	Position: 119° / 827 m Direction: West; Behavior: Speed slow • Traveling on kelp
		10:47 -PST 18:47-GMT	Position: 213° / 696 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number	07	Quality: Poor	Total whales 2 — 0 calves at sighting
		Beaufort: 4	
		10:53 -PST 18:53-GMT	Position: 125° / 1208 m Direction: West; Behavior: Speed slow • Traveling
		10:55 -PST 18:55-GMT	Position: 120° / 1020 m Direction: West; Behavior: Speed slow • Traveling
		10:59 -PST 18:59-GMT	Position: 168° / 678 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Poor	Total whales 3 — 0 calves at sighting
		Beaufort: 4	
		11:06 -PST 19:06-GMT	Position: 124° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		11:17 -PST 19:17-GMT	Position: 129° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		11:25 -PST 19:25-GMT	Position: 151° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		11:31 -PST 19:31-GMT	Position: 183° / 1331 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Poor	Total whales 1 — 0 calves at sighting
		Beaufort: 4	
		11:59 -PST 19:59-GMT	Position: 137° / 1331 m Direction: West; Behavior: Speed slow • Traveling
		12:06 -PST 20:06-GMT	Position: 167° / 883 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Poor	Total whales 2 — 0 calves at sighting
		Beaufort: 4	
		12:39 -PST 20:39-GMT	Position: 119° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		12:48 -PST 20:48-GMT	Position: 125° / 600 m Direction: West; Behavior: Speed slow • Traveling
		12:51 -PST 20:51-GMT	Position: 169° / 550 m Direction: West; Behavior: Speed slow • Traveling
Mar 08	Day 24 of 99	Daily Totals	whales 1 calves 0
Sighting Number	01	Quality: Poor	Total whales 1 — 0 calves at sighting
		Beaufort: 4	
		09:23 -PST 17:23-GMT	Position: 154° / 2260 m Direction: West; Behavior: Speed slow • Traveling
		09:31 -PST 17:31-GMT	Position: 178° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Mar 09	Day 25 of 99	Daily Totals	whales 27 calves 0
Sighting Number	01	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 1	
		09:04 -PST 17:04-GMT	Position: 151° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		09:13 -PST 17:13-GMT	Position: 162° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	03	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 1	
		09:33 -PST 17:33-GMT	Position: 173° / 1208 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		09:39 -PST 17:39-GMT	Position: 230° / 827 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 1	
		09:35 -PST 17:35-GMT	Position: 148° / 735 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		09:40 -PST 17:40-GMT	Position: 200° / 600 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 1	
		09:46 -PST 17:46-GMT	Position: 134° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		09:55 -PST 17:55-GMT	Position: 142° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		10:03 -PST 18:03-GMT	Position: 153° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 06	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:10 -PST 18:10-GMT	Position: 156° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	10:15 -PST 18:15-GMT	Position: 166° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 07	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:42 -PST 18:42-GMT	Position: 132° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	10:48 -PST 18:48-GMT	Position: 140° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:58 -PST 18:58-GMT	Position: 175° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 08	Quality: Fair Beaufort: 0	Total whales 4 — 0 calves at sighting
	10:56 -PST 18:56-GMT	Position: 147° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	11:08 -PST 19:08-GMT	Position: 157° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	11:09 -PST 19:09-GMT	Position: 159° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Breach 2 breaches
	11:25 -PST 19:25-GMT	Position: 176° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 10	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:54 -PST 19:54-GMT	Position: 134° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	11:57 -PST 19:57-GMT	Position: 149° / 913 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:03 -PST 20:03-GMT	Position: 199° / 778 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 11	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	13:10 -PST 21:10-GMT	Position: 137° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	13:20 -PST 21:20-GMT	Position: 152° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 12	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	13:20 -PST 21:20-GMT	Position: 149° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	13:25 -PST 21:25-GMT	Position: 186° / 1020 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 13	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	13:32 -PST 21:32-GMT	Position: 177° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	13:37 -PST 21:37-GMT	Position: 189° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 14	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting
	13:35 -PST 21:35-GMT	Position: 171° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 15	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting
	13:38 -PST 21:38-GMT	Position: 175° / 678 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 16	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting
	14:50 -PST 22:50-GMT	Position: 166° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	15:00 -PST 23:00-GMT	Position: 180° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 17	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting
	15:34 -PST 23:34-GMT	Position: 147° / 1483 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

		15:43 -PST	23:43-GMT	Position: 197° / 946 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	18	Quality: Poor Beaufort: 4		Total whales 1 — 0 calves at sighting	
		16:00 -PST	0:00; 3/10/2019-GMT	Position: 141° / 3088 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	19	Quality: Poor Beaufort: 4		Total whales 3 — 0 calves at sighting	
		16:43 -PST	0:43; 3/10/2019-GMT	Position: 170° / 3088 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		16:59 -PST	0:59; 3/10/2019-GMT	Position: 190° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
Mar 10	Day 26 of 99				Daily Totals whales 65 calves 0
Sighting Number	01	Quality: Poor Beaufort: 1		Total whales 1 — 0 calves at sighting	
		09:01 -PDT	16:01-GMT	Position: 143° / 827 m	Direction: West; Behavior: Speed slow • Traveling
		09:11 -PDT	16:11-GMT	Position: 196° / 600 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	02	Quality: Poor Beaufort: 1		Total whales 1 — 0 calves at sighting	
		09:11 -PDT	16:11-GMT	Position: 138° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
		09:16 -PDT	16:16-GMT	Position: 143° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
		09:23 -PDT	16:23-GMT	Position: 151° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
		09:31 -PDT	16:31-GMT	Position: 173° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	03	Quality: Poor Beaufort: 1		Total whales 2 — 0 calves at sighting	
		09:12 -PDT	16:12-GMT	Position: 140° / 3528 m	Direction: West; Behavior: Speed slow • Traveling
		09:18 -PDT	16:18-GMT	Position: 143° / 3528 m	Direction: West; Behavior: Speed slow • Traveling
		09:34 -PDT	16:34-GMT	Position: 149° / 3088 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Poor Beaufort: 1		Total whales 1 — 0 calves at sighting	
		09:32 -PDT	16:32-GMT	Position: 136° / 1922 m	Direction: West; Behavior: Speed slow • Traveling
		09:38 -PDT	16:38-GMT	Position: 166° / 1483 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	05	Quality: Poor Beaufort: 1		Total whales 1 — 0 calves at sighting	
		09:39 -PDT	16:39-GMT	Position: 138° / 3528 m	Direction: West; Behavior: Speed slow • Traveling
		09:48 -PDT	16:48-GMT	Position: 141° / 3528 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	06	Quality: Poor Beaufort: 1		Total whales 2 — 0 calves at sighting	
		09:52 -PDT	16:52-GMT	Position: 141° / 3528 m	Direction: West; Behavior: Speed slow • Traveling close to S#4 -- now with S#4
		10:00 -PDT	17:00-GMT	Position: 146° / 3088 m	Direction: West; Behavior: Speed slow • Traveling
		10:16 -PDT	17:16-GMT	Position: 155° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Poor Beaufort: 1		Total whales 4 — 0 calves at sighting	
		10:09 -PDT	17:09-GMT	Position: 137° / 2749 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		10:18 -PDT	17:18-GMT	Position: 146° / 2260 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		10:30 -PDT	17:30-GMT	Position: 156° / 1922 m	Direction: West; Behavior: Speed slow • Traveling • Rolling 3 + 1

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 09	Quality: Poor Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:21 -PDT 17:21-GMT	Position: 177° / 382 m Direction: West; Behavior: Speed slow • Traveling inside kelp
	10:27 -PDT 17:27-GMT	Position: 262° / 440 m Direction: West; Behavior: Speed slow • Traveling inside kelp
Sighting Number 10	Quality: Poor Beaufort: 1	Total whales 2 — 0 calves at sighting
	10:36 -PDT 17:36-GMT	Position: 149° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	10:54 -PDT 17:54-GMT	Position: 175° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 11	Quality: Poor Beaufort: 1	Total whales 2 — 0 calves at sighting
	10:51 -PDT 17:51-GMT	Position: 117° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:58 -PDT 17:58-GMT	Position: 134° / 827 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 12	Quality: Poor Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:15 -PDT 18:15-GMT	Position: 157° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:20 -PDT 18:20-GMT	Position: 168° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 13	Quality: Poor Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:33 -PDT 18:33-GMT	Position: 138° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	11:51 -PDT 18:51-GMT	Position: 153° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 14	Quality: Poor Beaufort: 1	Total whales 3 — 0 calves at sighting
	11:43 -PDT 18:43-GMT	Position: 171° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	11:53 -PDT 18:53-GMT	Position: 176° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 16	Quality: Poor Beaufort: 1	Total whales 1 — 0 calves at sighting
	12:52 -PDT 19:52-GMT	Position: 120° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:01 -PDT 20:01-GMT	Position: 155° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	13:05 -PDT 20:05-GMT	Position: 176° / 883 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 17	Quality: Poor Beaufort: 1	Total whales 2 — 0 calves at sighting
	13:10 -PDT 20:10-GMT	Position: 147° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:27 -PDT 20:27-GMT	Position: 153° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Breach
	13:40 -PDT 20:40-GMT	Position: 162° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 18	Quality: Poor Beaufort: 1	Total whales 3 — 0 calves at sighting
	13:11 -PDT 20:11-GMT	Position: 147° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:16 -PDT 20:16-GMT	Position: 162° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:22 -PDT 20:22-GMT	Position: 169° / 1403 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 19	Quality: Poor Beaufort: 1	Total whales 1 — 0 calves at sighting
	13:30 -PDT 20:30-GMT	Position: 179° / 735 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 20	Quality: Poor Beaufort: 0	Total whales 2 — 0 calves at sighting
	13:46 -PDT 20:46-GMT	Position: 125° / 1403 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

	13:48 -PDT	20:48-GMT	Position: 134° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	13:50 -PDT	20:50-GMT	Position: 140° / 946 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:53 -PDT	20:53-GMT	Position: 152° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	21	Quality: Poor Beaufort: 0	Total whales 5 — 0 calves at sighting
	14:09 -PDT	21:09-GMT	Position: 148° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:14 -PDT	21:14-GMT	Position: 158° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	14:18 -PDT	21:18-GMT	Position: 165° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	22	Quality: Poor Beaufort: 0	Total whales 2 — 0 calves at sighting
	14:12 -PDT	21:12-GMT	Position: 148° / 5027 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	23	Quality: Poor Beaufort: 0	Total whales 1 — 0 calves at sighting
	14:17 -PDT	21:17-GMT	Position: 151° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	14:27 -PDT	21:27-GMT	Position: 168° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	24	Quality: Poor Beaufort: 0	Total whales 2 — 0 calves at sighting
	14:23 -PDT	21:23-GMT	Position: 171° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	25	Quality: Poor Beaufort: 0	Total whales 2 — 0 calves at sighting
	14:55 -PDT	21:55-GMT	Position: 158° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	15:06 -PDT	22:06-GMT	Position: 202° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	26	Quality: Poor Beaufort: 0	Total whales 5 — 0 calves at sighting
	14:57 -PDT	21:57-GMT	Position: 167° / 5027 m Direction: West; Behavior: Speed slow • Traveling
	15:08 -PDT	22:08-GMT	Position: 175° / 5027 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:35 -PDT	22:35-GMT	Position: 199° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	27	Quality: Poor Beaufort: 0	Total whales 2 — 0 calves at sighting
	15:22 -PDT	22:22-GMT	Position: 166° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	15:29 -PDT	22:29-GMT	Position: 185° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	28	Quality: Poor Beaufort: 0	Total whales 2 — 0 calves at sighting
	15:29 -PDT	22:29-GMT	Position: 133° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	15:37 -PDT	22:37-GMT	Position: 140° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	15:47 -PDT	22:47-GMT	Position: 156° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	29	Quality: Poor Beaufort: 2	Total whales 1 — 0 calves at sighting
	16:10 -PDT	23:10-GMT	Position: 160° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	16:14 -PDT	23:14-GMT	Position: 180° / 946 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	30	Quality: Poor Beaufort: 3	Total whales 5 — 0 calves at sighting
	16:33 -PDT	23:33-GMT	Position: 135° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	16:41 -PDT	23:41-GMT	Position: 145° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	16:50 -PDT	23:50-GMT	Position: 154° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 31	Quality: Poor Beaufort: 3	Total whales 3 — 0 calves at sighting
	16:37 -PDT 23:37-GMT	Position: 134° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	16:44 -PDT 23:44-GMT	Position: 138° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	16:52 -PDT 23:52-GMT	Position: 144° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 32	Quality: Poor Beaufort: 3	Total whales 2 — 0 calves at sighting
	16:45 -PDT 23:45-GMT	Position: 134° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 33	Quality: Poor Beaufort: 3	Total whales 2 — 0 calves at sighting
	16:59 -PDT 23:59-GMT	Position: 138° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Mar 11	Day 27 of 99	Daily Totals whales 49 calves 0
Sighting Number 01	Quality: Fair Beaufort: 1	Total whales 3 — 0 calves at sighting
	09:00 -PDT 16:00-GMT	Position: 134° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	09:06 -PDT 16:06-GMT	Position: 143° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	09:17 -PDT 16:17-GMT	Position: 149° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 02	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	09:02 -PDT 16:02-GMT	Position: 143° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	09:07 -PDT 16:07-GMT	Position: 148° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	09:24 -PDT 16:24-GMT	Position: 183° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 03	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	09:12 -PDT 16:12-GMT	Position: 144° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	09:15 -PDT 16:15-GMT	Position: 155° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 04	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	09:26 -PDT 16:26-GMT	Position: 178° / 661 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 05	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	09:45 -PDT 16:45-GMT	Position: 158° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	09:51 -PDT 16:51-GMT	Position: 177° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 06	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	09:48 -PDT 16:48-GMT	Position: 134° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	09:55 -PDT 16:55-GMT	Position: 148° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 07	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	10:03 -PDT 17:03-GMT	Position: 159° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	10:14 -PDT 17:14-GMT	Position: 168° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 08	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:18 -PDT 17:18-GMT	Position: 171° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 09	Quality: Fair Beaufort: 1	Total whales 5 — 0 calves at sighting
	10:27 -PDT 17:27-GMT	Position: 133° / 5027 m Direction: West; Behavior: Speed slow • Traveling • Fluke 2 + 3
	10:42 -PDT 17:42-GMT	Position: 141° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:58 -PDT 17:58-GMT	Position: 152° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:05 -PDT 18:05-GMT	Position: 161° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 11	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	10:58 -PDT 17:58-GMT	Position: 135° / 5027 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:11 -PDT 18:11-GMT	Position: 137° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:15 -PDT 18:15-GMT	Position: 148° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 12	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:35 -PDT 18:35-GMT	Position: 137° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:42 -PDT 18:42-GMT	Position: 166° / 883 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 13	Quality: Fair Beaufort: 1	Total whales 3 — 0 calves at sighting
	11:53 -PDT 18:53-GMT	Position: 172° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:58 -PDT 18:58-GMT	Position: 178° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:02 -PDT 19:02-GMT	Position: 184° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 14	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:56 -PDT 18:56-GMT	Position: 128° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	12:07 -PDT 19:07-GMT	Position: 155° / 1331 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 15	Quality: Fair Beaufort: 1	Total whales 3 — 0 calves at sighting
	12:18 -PDT 19:18-GMT	Position: 138° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:22 -PDT 19:22-GMT	Position: 162° / 946 m Direction: West; Behavior: Speed slow • Traveling
	12:23 -PDT 19:23-GMT	Position: 168° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 16	Quality: Fair Beaufort: 1	Total whales 4 — 0 calves at sighting
	12:48 -PDT 19:48-GMT	Position: 138° / 5027 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:57 -PDT 19:57-GMT	Position: 143° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	13:06 -PDT 20:06-GMT	Position: 151° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 17	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	12:54 -PDT 19:54-GMT	Position: 143° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:58 -PDT 19:58-GMT	Position: 153° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 18	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	13:09 -PDT 20:09-GMT	Position: 152° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 19	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	13:12 -PDT 20:12-GMT	Position: 163° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 20	Quality: Fair Beaufort: 1	Total whales 3 — 0 calves at sighting
	13:53 -PDT 20:53-GMT	Position: 136° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:00 -PDT 21:00-GMT	Position: 142° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:10 -PDT 21:10-GMT	Position: 145° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
14:22 -PDT 21:22-GMT	Position: 171° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke	
Sighting Number 21	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	14:09 -PDT 21:09-GMT	Position: 141° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:19 -PDT 21:19-GMT	Position: 156° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 23	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	15:02 -PDT 22:02-GMT	Position: 156° / 946 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 24	Quality: Fair Beaufort: 2	Total whales 4 — 0 calves at sighting
	15:13 -PDT 22:13-GMT	Position: 158° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:24 -PDT 22:24-GMT	Position: 166° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 25	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	15:16 -PDT 22:16-GMT	Position: 143° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	15:30 -PDT 22:30-GMT	Position: 155° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 27	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	15:56 -PDT 22:56-GMT	Position: 149° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Mar 13	Day 29 of 99	Daily Totals whales 51 calves 0
Sighting Number 01	Quality: Poor Beaufort: 4	Total whales 3 — 0 calves at sighting
	09:06 -PDT 16:06-GMT	Position: 188° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	09:19 -PDT 16:19-GMT	Position: 223° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 02	Quality: Poor Beaufort: 4	Total whales 3 — 0 calves at sighting
	09:15 -PDT 16:15-GMT	Position: 159° / 1020 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	09:24 -PDT 16:24-GMT	Position: 218° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 04	Quality: Fair Beaufort: 3	Total whales 3 — 0 calves at sighting
	10:34 -PDT 17:34-GMT	Position: 158° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:44 -PDT 17:44-GMT	Position: 177° / 1674 m Direction: West; Behavior: Speed slow • Traveling
10:53 -PDT 17:53-GMT	Position: 209° / 1922 m Direction: West; Behavior: Speed slow • Traveling	
Sighting Number 05	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	10:41 -PDT 17:41-GMT	Position: 177° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	10:43 -PDT 17:43-GMT	Position: 188° / 1403 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 06	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	11:12 -PDT 18:12-GMT	Position: 137° / 1922 m Direction: West; Behavior: Speed slow • Traveling in glare

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

	11:21 -PDT	18:21-GMT	Position: 163° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	11:29 -PDT	18:29-GMT	Position: 166° / 1020 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
Images: 6853-6868			
	11:15 -PDT	18:15-GMT	Position: 125° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	11:23 -PDT	18:23-GMT	Position: 150° / 946 m Direction: West; Behavior: Speed slow • Traveling
	11:28 -PDT	18:28-GMT	Position: 155° / 661 m Direction: West; Behavior: Speed slow • Traveling
	11:34 -PDT	18:34-GMT	Position: 202° / 574 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting
	12:03 -PDT	19:03-GMT	Position: 133° / 883 m Direction: West; Behavior: Speed slow • Traveling
	12:05 -PDT	19:05-GMT	Position: 146° / 913 m Direction: West; Behavior: Speed slow • Traveling
	12:13 -PDT	19:13-GMT	Position: 208° / 550 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting
	12:11 -PDT	19:11-GMT	Position: 208° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	12:15 -PDT	19:15-GMT	Position: 215° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	12:17 -PDT	19:17-GMT	Position: 226° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	11	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting
	12:24 -PDT	19:24-GMT	Position: 132° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	12:26 -PDT	19:26-GMT	Position: 142° / 1020 m Direction: West; Behavior: Speed slow • Traveling
	12:34 -PDT	19:34-GMT	Position: 198° / 735 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	12	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting
	12:59 -PDT	19:59-GMT	Position: 129° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	13:05 -PDT	20:05-GMT	Position: 146° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	13:11 -PDT	20:11-GMT	Position: 159° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	13:21 -PDT	20:21-GMT	Position: 209° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	13	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting
	13:02 -PDT	20:02-GMT	Position: 137° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	13:24 -PDT	20:24-GMT	Position: 174° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	14	Quality: Poor Beaufort: 4	Total whales 3 — 0 calves at sighting
	13:38 -PDT	20:38-GMT	Position: 152° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	13:44 -PDT	20:44-GMT	Position: 164° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	13:53 -PDT	20:53-GMT	Position: 190° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	15	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting
	13:46 -PDT	20:46-GMT	Position: 167° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	16	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	14:05 -PDT	21:05-GMT	Position: / m Direction: West; Behavior: Speed slow • Traveling

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Sighting Number 17	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	14:07 -PDT 21:07-GMT	Position: 173° / 1331 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 18	Quality: Fair Beaufort: 3	Total whales 3 — 0 calves at sighting
	14:28 -PDT 21:28-GMT	Position: 144° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	14:39 -PDT 21:39-GMT	Position: 162° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:46 -PDT 21:46-GMT	Position: 167° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Rolling
Sighting Number 19	Quality: Fair Beaufort: 3	Total whales 4 — 0 calves at sighting
	14:29 -PDT 21:29-GMT	Position: 140° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	14:52 -PDT 21:52-GMT	Position: 147° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 20	Quality: Fair Beaufort: 3	Total whales 3 — 0 calves at sighting
	15:00 -PDT 22:00-GMT	Position: 142° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	15:07 -PDT 22:07-GMT	Position: 144° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	15:09 -PDT 22:09-GMT	Position: 148° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 21	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	15:09 -PDT 22:09-GMT	Position: 146° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	15:17 -PDT 22:17-GMT	Position: 168° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 22	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	15:11 -PDT 22:11-GMT	Position: 157° / 5027 m Direction: West; Behavior: Speed slow • Traveling
	15:14 -PDT 22:14-GMT	Position: 162° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 23	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	15:23 -PDT 22:23-GMT	Position: 167° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	15:23 -PDT 22:23-GMT	Position: 167° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 24	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	15:49 -PDT 22:49-GMT	Position: 133° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:56 -PDT 22:56-GMT	Position: 150° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 25	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	16:18 -PDT 23:18-GMT	Position: 152° / 1403 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 26	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	16:29 -PDT 23:29-GMT	Position: 208° / 3528 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 27	Quality: Fair	Total whales 3 — 0 calves at sighting
	Beaufort: 2	
	16:41 -PDT 23:41-GMT	Position: 148° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	16:53 -PDT 23:53-GMT	Position: 162° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
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Mar 14	Day 30 of 99	Daily Totals whales 53 calves 0
Sighting Number 01	Quality: Fair	Total whales 3 — 0 calves at sighting
	Beaufort: 0	
	09:04 -PDT 16:04-GMT	Position: 148° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	09:11 -PDT 16:11-GMT	Position: 154° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	09:25 -PDT 16:25-GMT	Position: 160° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 02	Quality: Fair	Total whales 2 — 0 calves at sighting
	Beaufort: 0	
	09:04 -PDT 16:04-GMT	Position: 132° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	09:18 -PDT 16:18-GMT	Position: 144° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke joined S#3
Sighting Number 03	Quality: Fair	Total whales 3 — 0 calves at sighting
	Beaufort: 0	
	09:09 -PDT 16:09-GMT	Position: 135° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	09:13 -PDT 16:13-GMT	Position: 139° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	09:22 -PDT 16:22-GMT	Position: 154° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	09:26 -PDT 16:26-GMT	Position: 162° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 04	Quality: Fair	Total whales 1 — 0 calves at sighting
	Beaufort: 0	
	09:23 -PDT 16:23-GMT	Position: 122° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	09:31 -PDT 16:31-GMT	Position: 160° / 574 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 05	Quality: Fair	Total whales 1 — 0 calves at sighting
	Beaufort: 0	
	09:29 -PDT 16:29-GMT	Position: 169° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 06	Quality: Fair	Total whales 2 — 0 calves at sighting
	Beaufort: 0	
	09:43 -PDT 16:43-GMT	Position: 134° / 5027 m Direction: West; Behavior: Speed slow • Traveling another whale behind @ horizon; not part of S#6 group; not entered (see T); saw in scope and binos.
	09:50 -PDT 16:50-GMT	Position: 138° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	10:01 -PDT 17:01-GMT	Position: 144° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	10:12 -PDT 17:12-GMT	Position: 156° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 08	Quality: Fair	Total whales 2 — 0 calves at sighting
	Beaufort: 0	
	10:18 -PDT 17:18-GMT	Position: 140° / 5027 m Direction: West; Behavior: Speed slow • Traveling
	10:33 -PDT 17:33-GMT	Position: 149° / 5027 m Direction: West; Behavior: Speed slow • Traveling
	10:47 -PDT 17:47-GMT	Position: 150° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	11:00 -PDT 18:00-GMT	Position: 161° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 09	Quality: Fair	Total whales 2 — 0 calves at sighting
	Beaufort: 0	
	11:03 -PDT 18:03-GMT	Position: 161° / 5027 m Direction: West; Behavior: Speed slow • Traveling
	11:09 -PDT 18:09-GMT	Position: 163° / 5027 m Direction: West; Behavior: Speed slow • Traveling • Fluke

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 10	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	11:37 -PDT 18:37-GMT	Position: 151° / 1020 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 11	Quality: Fair Beaufort: 0	Total whales 4 — 0 calves at sighting
	11:40 -PDT 18:40-GMT	Position: 135° / 5027 m Direction: West; Behavior: Speed slow • Traveling
	11:55 -PDT 18:55-GMT	Position: 142° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	12:05 -PDT 19:05-GMT	Position: 150° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 12	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	12:16 -PDT 19:16-GMT	Position: 135° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	12:32 -PDT 19:32-GMT	Position: 152° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	12:41 -PDT 19:41-GMT	Position: 164° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 13	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	12:19 -PDT 19:19-GMT	Position: 148° / 827 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 14	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	12:58 -PDT 19:58-GMT	Position: 157° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	13:03 -PDT 20:03-GMT	Position: 166° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 15	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	13:07 -PDT 20:07-GMT	Position: 177° / 778 m Direction: West; Behavior: Speed slow • Traveling
	13:10 -PDT 20:10-GMT	Position: 210° / 574 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 16	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	13:13 -PDT 20:13-GMT	Position: 159° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	13:18 -PDT 20:18-GMT	Position: 188° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 17	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	13:47 -PDT 20:47-GMT	Position: 141° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	13:51 -PDT 20:51-GMT	Position: 146° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:57 -PDT 20:57-GMT	Position: 159° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:07 -PDT 21:07-GMT	Position: 193° / 1331 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 18	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	14:16 -PDT 21:16-GMT	Position: 162° / 1208 m Direction: West; Behavior: Speed slow • Traveling
	14:20 -PDT 21:20-GMT	Position: 177° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 19	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	14:21 -PDT 21:21-GMT	Position: 142° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:27 -PDT 21:27-GMT	Position: 185° / 827 m Direction: West; Behavior: Speed slow • Traveling
	14:31 -PDT 21:31-GMT	Position: 196° / 883 m Direction: West; Behavior: Speed slow • Traveling • Rolling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 20	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	14:23 -PDT 21:23-GMT	Position: 136° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:28 -PDT 21:28-GMT	Position: 188° / 600 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 21	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	14:27 -PDT 21:27-GMT	Position: 170° / 827 m Direction: West; Behavior: Speed slow • Traveling
	14:28 -PDT 21:28-GMT	Position: 176° / 827 m Direction: West; Behavior: Speed slow • Traveling
	14:29 -PDT 21:29-GMT	Position: 184° / 735 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 22	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	14:39 -PDT 21:39-GMT	Position: 131° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	14:42 -PDT 21:42-GMT	Position: 140° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	14:57 -PDT 21:57-GMT	Position: 174° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 23	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	15:12 -PDT 22:12-GMT	Position: 149° / 735 m Direction: West; Behavior: Speed slow • Traveling • Rolling
	15:19 -PDT 22:19-GMT	Position: 173° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 24	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	15:13 -PDT 22:13-GMT	Position: 130° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	15:21 -PDT 22:21-GMT	Position: 186° / 678 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 25	Quality: Fair Beaufort: 3	Total whales 3 — 0 calves at sighting
	15:28 -PDT 22:28-GMT	Position: 131° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	15:30 -PDT 22:30-GMT	Position: 138° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:31 -PDT 22:31-GMT	Position: 149° / 1208 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:36 -PDT 22:36-GMT	Position: 178° / 913 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 26	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	15:46 -PDT 22:46-GMT	Position: 147° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	15:56 -PDT 22:56-GMT	Position: 177° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 27	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	15:58 -PDT 22:58-GMT	Position: 150° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	16:04 -PDT 23:04-GMT	Position: 195° / 696 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 29	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	16:29 -PDT 23:29-GMT	Position: 127° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	16:35 -PDT 23:35-GMT	Position: 147° / 678 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 30	Quality: Fair Beaufort: 3	Total whales 3 — 0 calves at sighting
	16:32 -PDT 23:32-GMT	Position: 130° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	16:49 -PDT 23:49-GMT	Position: 149° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	16:53 -PDT 23:53-GMT	Position: 157° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number 31	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	16:55 -PDT 23:55-GMT	Position: 122° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	16:58 -PDT 23:58-GMT	Position: 127° / 2749 m Direction: West; Behavior: Speed slow • Traveling
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Mar 15	Day 31 of 99	Daily Totals whales 38 calves 0
Sighting Number 02	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	09:30 -PDT 16:30-GMT	Position: 120° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	09:42 -PDT 16:42-GMT	Position: 169° / 629 m Direction: West; Behavior: Speed slow • Traveling just off kelp
Sighting Number 03	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	09:44 -PDT 16:44-GMT	Position: 139° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	09:48 -PDT 16:48-GMT	Position: 145° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	09:49 -PDT 16:49-GMT	Position: 148° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 04	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	09:47 -PDT 16:47-GMT	Position: 129° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	09:54 -PDT 16:54-GMT	Position: 163° / 913 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 06	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	10:33 -PDT 17:33-GMT	Position: 115° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:41 -PDT 17:41-GMT	Position: 122° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	10:45 -PDT 17:45-GMT	Position: 130° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 08	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	10:39 -PDT 17:39-GMT	Position: 129° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	10:52 -PDT 17:52-GMT	Position: 133° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	11:14 -PDT 18:14-GMT	Position: 147° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	11:26 -PDT 18:26-GMT	Position: 167° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 10	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:31 -PDT 18:31-GMT	Position: 124° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:35 -PDT 18:35-GMT	Position: 169° / 883 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 11	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	11:41 -PDT 18:41-GMT	Position: 121° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:53 -PDT 18:53-GMT	Position: 133° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	11:58 -PDT 18:58-GMT	Position: 142° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:10 -PDT 19:10-GMT	Position: 185° / 1020 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 12	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	11:48 -PDT 18:48-GMT	Position: 125° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	11:54 -PDT 18:54-GMT	Position: 129° / 3088 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number	14	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 0	
		12:12 -PDT 19:12-GMT	Position: 137° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	15	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 0	
		12:16 -PDT 19:16-GMT	Position: 125° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		12:23 -PDT 19:23-GMT	Position: 157° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		12:27 -PDT 19:27-GMT	Position: 175° / 735 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	17	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 0	
		12:50 -PDT 19:50-GMT	Position: 136° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		12:55 -PDT 19:55-GMT	Position: 144° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		13:01 -PDT 20:01-GMT	Position: 164° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	18	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 0	
		13:02 -PDT 20:02-GMT	Position: 189° / 778 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	19	Quality: Fair	Total whales 5 — 0 calves at sighting
		Beaufort: 0	
		13:09 -PDT 20:09-GMT	Position: 130° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke 4 blows at same time
		13:25 -PDT 20:25-GMT	Position: 148° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke flukes - 3 then 2
		13:30 -PDT 20:30-GMT	Position: 159° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	20	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 2	
		13:12 -PDT 20:12-GMT	Position: 137° / 661 m Direction: West; Behavior: Speed slow • Traveling
		13:18 -PDT 20:18-GMT	Position: 196° / 508 m Direction: West; Behavior: Speed slow • Traveling
		13:20 -PDT 20:20-GMT	Position: 220° / 550 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	21	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 2	
		13:30 -PDT 20:30-GMT	Position: 130° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		13:37 -PDT 20:37-GMT	Position: 152° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	22	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 2	
		13:34 -PDT 20:34-GMT	Position: 136° / 3528 m Direction: West; Behavior: Speed slow • Traveling
		13:56 -PDT 20:56-GMT	Position: 158° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		14:05 -PDT 21:05-GMT	Position: 181° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	23	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 2	
		13:51 -PDT 20:51-GMT	Position: 152° / 735 m Direction: West; Behavior: Speed slow • Traveling
		14:26 -PDT 21:26-GMT	Position: 134° / 3528 m Direction: West; Behavior: Speed slow • Traveling
		14:34 -PDT 21:34-GMT	Position: 144° / 3088 m Direction: West; Behavior: Speed slow • Traveling
		14:41 -PDT 21:41-GMT	Position: 150° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	24	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 2	
		14:32 -PDT 21:32-GMT	Position: 134° / 3528 m Direction: West; Behavior: Speed slow • Traveling

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

	14:49 -PDT	21:49-GMT	Position: 160° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	25	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	15:17 -PDT	22:17-GMT	Position: 125° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:24 -PDT	22:24-GMT	Position: 151° / 946 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	26	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	15:53 -PDT	22:53-GMT	Position: 204° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	15:59 -PDT	22:59-GMT	Position: 217° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	27	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	16:13 -PDT	23:13-GMT	Position: 160° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	16:18 -PDT	23:18-GMT	Position: 167° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	28	Quality: Fair Beaufort: 3	Total whales 5 — 0 calves at sighting
	16:24 -PDT	23:24-GMT	Position: 140° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Breach • Fluke 2 breaches - lots of flukes - 8 more breaches - plus scimming
	16:31 -PDT	23:31-GMT	Position: 145° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Breach • Fluke
	16:48 -PDT	23:48-GMT	Position: 158° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Breach • Fluke
	16:58 -PDT	23:58-GMT	Position: 171° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Mar 16	Day 32 of 99		Daily Totals whales 24 calves 0
Sighting Number	01	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	08:57 -PDT	15:57-GMT	Position: 192° / 600 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	02	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	08:59 -PDT	15:59-GMT	Position: 131° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	09:06 -PDT	16:06-GMT	Position: 162° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	09:12 -PDT	16:12-GMT	Position: 196° / 827 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	09:32 -PDT	16:32-GMT	Position: 156° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	09:39 -PDT	16:39-GMT	Position: 136° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	09:49 -PDT	16:49-GMT	Position: 154° / 1020 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	09:52 -PDT	16:52-GMT	Position: 136° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	10:01 -PDT	17:01-GMT	Position: 156° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	06	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	10:04 -PDT	17:04-GMT	Position: 144° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	10:13 -PDT	17:13-GMT	Position: 165° / 1674 m Direction: West; Behavior: Speed slow • Traveling

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Sighting Number 07	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	10:21 -PDT 17:21-GMT	Position: 135° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:29 -PDT 17:29-GMT	Position: 167° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 08	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	10:39 -PDT 17:39-GMT	Position: 137° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	10:48 -PDT 17:48-GMT	Position: 149° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:55 -PDT 17:55-GMT	Position: 167° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 09	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	11:06 -PDT 18:06-GMT	Position: 130° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	11:14 -PDT 18:14-GMT	Position: 138° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	11:24 -PDT 18:24-GMT	Position: 160° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 10	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:30 -PDT 18:30-GMT	Position: 131° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	11:36 -PDT 18:36-GMT	Position: 142° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	11:15 -PDT 18:15-GMT	Position: 147° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 11	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:41 -PDT 18:41-GMT	Position: 151° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	11:48 -PDT 18:48-GMT	Position: 169° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 13	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	12:18 -PDT 19:18-GMT	Position: 135° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	12:35 -PDT 19:35-GMT	Position: 156° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	12:42 -PDT 19:42-GMT	Position: 163° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 14	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	12:27 -PDT 19:27-GMT	Position: 127° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	12:47 -PDT 19:47-GMT	Position: 184° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 15	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	12:31 -PDT 19:31-GMT	Position: 170° / 1208 m Direction: West; Behavior: Speed slow • Traveling
	12:44 -PDT 19:44-GMT	Position: 220° / 1020 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 16	Quality: Fair Beaufort: 1	Total whales 3 — 0 calves at sighting
	13:10 -PDT 20:10-GMT	Position: 125° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	13:18 -PDT 20:18-GMT	Position: 130° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:27 -PDT 20:27-GMT	Position: 137° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:44 -PDT 20:44-GMT	Position: 167° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 17	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	13:42 -PDT 20:42-GMT	Position: 140° / 3528 m Direction: West; Behavior: Speed slow • Traveling

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	13:51 -PDT	20:51-GMT	Position: 145° / 3528 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:02 -PDT	21:02-GMT	Position: 154° / 3088 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	18	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting	
	16:01 -PDT	23:01-GMT	Position: 139° / 1020 m	Direction: West; Behavior: Speed slow • Traveling
	16:07 -PDT	23:07-GMT	Position: 174° / 735 m	Direction: West; Behavior: Speed slow • Traveling
	16:13 -PDT	23:13-GMT	Position: 224° / 735 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	20	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting	
Images: 6870-6881				
	16:38 -PDT	23:38-GMT	Position: 132° / 946 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
	16:46 -PDT	23:46-GMT	Position: 185° / 778 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Mar 17	Day 33 of 99		Daily Totals whales 35 calves 0	
Sighting Number	01	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting	
	09:00 -PDT	16:00-GMT	Position: 189° / 778 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	03	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting	
	09:25 -PDT	16:25-GMT	Position: 120° / 1922 m	Direction: West; Behavior: Speed slow • Traveling
	09:35 -PDT	16:35-GMT	Position: 150° / 913 m	Direction: West; Behavior: Speed slow • Traveling
	09:44 -PDT	16:44-GMT	Position: 237° / 946 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	04	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting	
	10:10 -PDT	17:10-GMT	Position: 133° / 3088 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:19 -PDT	17:19-GMT	Position: 141° / 2749 m	Direction: West; Behavior: Speed slow • Traveling • Fluke 1+1 separation of 20 meters
Sighting Number	07	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting	
	10:57 -PDT	17:57-GMT	Position: 135° / 3528 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:12 -PDT	18:12-GMT	Position: 162° / 3528 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	09	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting	
	11:14 -PDT	18:14-GMT	Position: 148° / 3088 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	10	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting	
	11:29 -PDT	18:29-GMT	Position: 148° / 3528 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	11	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting	
	11:32 -PDT	18:32-GMT	Position: 142° / 3088 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:47 -PDT	18:47-GMT	Position: 166° / 3088 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	12	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting	
	11:57 -PDT	18:57-GMT	Position: 136° / 3088 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:11 -PDT	19:11-GMT	Position: 156° / 3088 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:22 -PDT	19:22-GMT	Position: 181° / 2749 m	Direction: West; Behavior: Speed slow • Traveling • Fluke

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Sighting Number	13	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
		11:59 -PDT 18:59-GMT	Position: 142° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	14	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
		12:38 -PDT 19:38-GMT	Position: 161° / 3528 m Direction: West; Behavior: Speed slow • Traveling
		12:54 -PDT 19:54-GMT	Position: 202° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	15	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
		12:56 -PDT 19:56-GMT	Position: 138° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		12:59 -PDT 19:59-GMT	Position: 147° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		13:11 -PDT 20:11-GMT	Position: 157° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		13:16 -PDT 20:16-GMT	Position: 162° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number Images: 6882-93	16	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
		13:56 -PDT 20:56-GMT	Position: 124° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		14:04 -PDT 21:04-GMT	Position: 150° / 735 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		14:12 -PDT 21:12-GMT	Position: 210° / 661 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	17	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
		15:38 -PDT 22:38-GMT	Position: 117° / 1483 m Direction: West; Behavior: Speed slow • Traveling
		15:44 -PDT 22:44-GMT	Position: 129° / 1483 m Direction: West; Behavior: Speed slow • Traveling
		15:46 -PDT 22:46-GMT	Position: 139° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		15:56 -PDT 22:56-GMT	Position: 200° / 913 m Direction: West; Behavior: Speed slow • Traveling
		16:03 -PDT 23:03-GMT	Position: 246° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	18	Quality: Fair Beaufort: 2	Total whales 3 — 0 calves at sighting
		16:17 -PDT 23:17-GMT	Position: 113° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Breach
		16:24 -PDT 23:24-GMT	Position: 130° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		16:31 -PDT 23:31-GMT	Position: 157° / 1020 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	19	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
		16:21 -PDT 23:21-GMT	Position: 136° / 3528 m Direction: West; Behavior: Speed slow • Traveling
		16:28 -PDT 23:28-GMT	Position: 149° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	20	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
		16:38 -PDT 23:38-GMT	Position: 131° / 2260 m Direction: West; Behavior: Speed slow • Traveling
		16:53 -PDT 23:53-GMT	Position: 136° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		16:59 -PDT 23:59-GMT	Position: 157° / 1020 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	21	Quality: Fair Beaufort: 2	Total whales 3 — 0 calves at sighting
		16:39 -PDT 23:39-GMT	Position: 125° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		16:45 -PDT 23:45-GMT	Position: 129° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Breach 2 breaches
		16:49 -PDT 23:49-GMT	Position: 136° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke

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		16:58 -PDT	23:58-GMT	Position: 157° / 1331 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	22	Quality: Fair Beaufort: 2		Total whales 2 — 0 calves at sighting	
		16:43 -PDT	23:43-GMT	Position: 124° / 3088 m	Direction: West; Behavior: Speed slow • Traveling
		16:54 -PDT	23:54-GMT	Position: 128° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
Mar 18		Day 34 of 99		Daily Totals whales 57 calves 0	
Sighting Number	01	Quality: Fair Beaufort: 0		Total whales 5 — 0 calves at sighting	
		09:07 -PDT	16:07-GMT	Position: 119° / 5027 m	Direction: West; Behavior: Speed slow • Traveling
		09:26 -PDT	16:26-GMT	Position: 123° / 3528 m	Direction: West; Behavior: Speed slow • Traveling separation: 3 leading 2
		09:36 -PDT	16:36-GMT	Position: 134° / 3088 m	Direction: West; Behavior: Speed slow • Traveling
		09:43 -PDT	16:43-GMT	Position: 141° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	02	Quality: Fair Beaufort: 0		Total whales 1 — 0 calves at sighting	
		09:09 -PDT	16:09-GMT	Position: 132° / 661 m	Direction: West; Behavior: Speed slow • Traveling
		09:12 -PDT	16:12-GMT	Position: 153° / 356 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	03	Quality: Fair Beaufort: 0		Total whales 1 — 0 calves at sighting	
		09:23 -PDT	16:23-GMT	Position: 148° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
		09:27 -PDT	16:27-GMT	Position: 161° / 1922 m	Direction: West; Behavior: Speed slow • Traveling
		09:34 -PDT	16:34-GMT	Position: 182° / 1922 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	04	Quality: Fair Beaufort: 0		Total whales 4 — 0 calves at sighting	
		09:58 -PDT	16:58-GMT	Position: 134° / 3088 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		10:04 -PDT	17:04-GMT	Position: 139° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
		10:20 -PDT	17:20-GMT	Position: 157° / 2749 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	05	Quality: Fair Beaufort: 0		Total whales 2 — 0 calves at sighting	
		10:04 -PDT	17:04-GMT	Position: 138° / 3528 m	Direction: West; Behavior: Speed slow • Traveling
		10:13 -PDT	17:13-GMT	Position: 144° / 3528 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		10:23 -PDT	17:23-GMT	Position: 151° / 3528 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	06	Quality: Fair Beaufort: 0		Total whales 1 — 0 calves at sighting	
		10:29 -PDT	17:29-GMT	Position: 139° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
		10:39 -PDT	17:39-GMT	Position: 149° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Fair Beaufort: 0		Total whales 2 — 0 calves at sighting	
		10:56 -PDT	17:56-GMT	Position: 138° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Fair Beaufort: 0		Total whales 1 — 0 calves at sighting	
		10:57 -PDT	17:57-GMT	Position: 136° / 3528 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		11:20 -PDT	18:20-GMT	Position: 175° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Fair Beaufort: 0		Total whales 4 — 0 calves at sighting	
		11:25 -PDT	18:25-GMT	Position: 124° / 3088 m	Direction: West; Behavior: Speed slow • Traveling

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	11:34 -PDT	18:34-GMT	Position: 129° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:42 -PDT	18:42-GMT	Position: 134° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:55 -PDT	18:55-GMT	Position: 159° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	11	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	11:26 -PDT	18:26-GMT	Position: 122° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:30 -PDT	18:30-GMT	Position: 130° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	11:31 -PDT	18:31-GMT	Position: 135° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	12	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	11:30 -PDT	18:30-GMT	Position: 130° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	11:31 -PDT	18:31-GMT	Position: 135° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	14	Quality: Fair Beaufort: 0	Total whales 3 — 0 calves at sighting
Images: 6901-6910			
	12:00 -PDT	19:00-GMT	Position: 128° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	12:07 -PDT	19:07-GMT	Position: 153° / 778 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	15	Quality: Fair Beaufort: 0	Total whales 3 — 0 calves at sighting
	12:20 -PDT	19:20-GMT	Position: 137° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	12:26 -PDT	19:26-GMT	Position: 143° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:39 -PDT	19:39-GMT	Position: 163° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:46 -PDT	19:46-GMT	Position: 174° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	16	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	12:38 -PDT	19:38-GMT	Position: 184° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Breach
Sighting Number	17	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	12:40 -PDT	19:40-GMT	Position: 134° / 913 m Direction: West; Behavior: Speed slow • Traveling
	12:44 -PDT	19:44-GMT	Position: 162° / 778 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	18	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	12:50 -PDT	19:50-GMT	Position: 114° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:56 -PDT	19:56-GMT	Position: 132° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:08 -PDT	20:08-GMT	Position: 233° / 1403 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	20	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	13:15 -PDT	20:15-GMT	Position: 154° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	13:26 -PDT	20:26-GMT	Position: 179° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	21	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	13:24 -PDT	20:24-GMT	Position: 154° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	13:28 -PDT	20:28-GMT	Position: 164° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	22	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
Images: 6924-6929			
	13:30 -PDT	20:30-GMT	Position: 161° / 600 m Direction: West; Behavior: Speed slow • Traveling

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		13:34 -PDT 20:34-GMT	Position: 187° / 528 m Direction: West; Behavior: Speed slow • Traveling along kelp - no calf
Sighting Number	23	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		13:36 -PDT 20:36-GMT	Position: 197° / 1331 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	24	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		13:37 -PDT 20:37-GMT	Position: 208° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	25	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		13:41 -PDT 20:41-GMT	Position: 179° / 550 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	27	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		14:16 -PDT 21:16-GMT	Position: 180° / 2260 m Direction: West; Behavior: Speed slow • Traveling
		14:22 -PDT 21:22-GMT	Position: 134° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	28	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
		14:30 -PDT 21:30-GMT	Position: 186° / 1483 m Direction: West; Behavior: Speed slow • Traveling
		14:34 -PDT 21:34-GMT	Position: 211° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	29	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		14:49 -PDT 21:49-GMT	Position: 124° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		14:55 -PDT 21:55-GMT	Position: 152° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		14:59 -PDT 21:59-GMT	Position: 177° / 550 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		15:05 -PDT 22:05-GMT	Position: 220° / 678 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	30	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
		14:51 -PDT 21:51-GMT	Position: 146° / 1331 m Direction: West; Behavior: Speed slow • Traveling
		14:58 -PDT 21:58-GMT	Position: 173° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		15:06 -PDT 22:06-GMT	Position: 250° / 696 m Direction: West; Behavior: Speed slow • Traveling • Breach
Sighting Number	31	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		14:52 -PDT 21:52-GMT	Position: 151° / 3088 m Direction: West; Behavior: Speed slow • Traveling
		15:08 -PDT 22:08-GMT	Position: 175° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	32	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
		15:20 -PDT 22:20-GMT	Position: 144° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		15:26 -PDT 22:26-GMT	Position: 156° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		15:32 -PDT 22:32-GMT	Position: 192° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	33	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
		15:43 -PDT 22:43-GMT	Position: 193° / 1403 m Direction: West; Behavior: Speed slow • Traveling Barely breaking surface, until blow. Followed from 160.
		15:45 -PDT 22:45-GMT	Position: 203° / 1403 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	34	Quality: Fair Beaufort: 0	Total whales 4 — 0 calves at sighting
		15:51 -PDT 22:51-GMT	Position: 135° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke

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	15:58 -PDT	22:58-GMT	Position: 154° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	16:05 -PDT	23:05-GMT	Position: 194° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	35	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	16:25 -PDT	23:25-GMT	Position: 136° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	16:30 -PDT	23:30-GMT	Position: 149° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	16:34 -PDT	23:34-GMT	Position: 185° / 1208 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	36	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	16:36 -PDT	23:36-GMT	Position: 175° / 883 m Direction: West; Behavior: Speed slow • Traveling
	16:38 -PDT	23:38-GMT	Position: 197° / 883 m Direction: West; Behavior: Speed slow • Traveling
Mar 20	Day 36 of 99		Daily Totals whales 22 calves 0
Sighting Number	01	Quality: Good Beaufort: 1	Total whales 1 — 0 calves at sighting
	09:01 -PDT	16:01-GMT	Position: 176° / 696 m Direction: West; Behavior: Speed slow • Traveling
	09:05 -PDT	16:05-GMT	Position: 192° / 696 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	02	Quality: Good Beaufort: 1	Total whales 3 — 0 calves at sighting
	10:31 -PDT	17:31-GMT	Position: 135° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	10:36 -PDT	17:36-GMT	Position: 142° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	10:45 -PDT	17:45-GMT	Position: 153° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	03	Quality: Good Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:35 -PDT	17:35-GMT	Position: 187° / 735 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Good Beaufort: 1	Total whales 2 — 0 calves at sighting
	10:37 -PDT	17:37-GMT	Position: 137° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke following S#2
	10:54 -PDT	17:54-GMT	Position: 173° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	05	Quality: Good Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:00 -PDT	18:00-GMT	Position: 146° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:05 -PDT	18:05-GMT	Position: 162° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	06	Quality: Good Beaufort: 1	Total whales 2 — 0 calves at sighting
	11:20 -PDT	18:20-GMT	Position: 181° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	07	Quality: Good Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:26 -PDT	18:26-GMT	Position: 185° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	08	Quality: Good Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:35 -PDT	18:35-GMT	Position: 177° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	11	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	12:42 -PDT	19:42-GMT	Position: 127° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	12:47 -PDT	19:47-GMT	Position: 141° / 1674 m Direction: West; Behavior: Speed slow • Traveling

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	12:52 -PDT	19:52-GMT	Position: 166° / 1331 m	Direction: West; Behavior: Speed slow • Traveling
	12:54 -PDT	19:54-GMT	Position: 180° / 1020 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	12	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting	
	14:07 -PDT	21:07-GMT	Position: 143° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
	14:20 -PDT	21:20-GMT	Position: 186° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	13	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting	
	14:35 -PDT	21:35-GMT	Position: 134° / 1674 m	Direction: West; Behavior: Speed slow • Traveling
	14:41 -PDT	21:41-GMT	Position: 156° / 1208 m	Direction: West; Behavior: Speed slow • Traveling
	14:50 -PDT	21:50-GMT	Position: 205° / 1020 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	14	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting	
	15:22 -PDT	22:22-GMT	Position: 130° / 1483 m	Direction: West; Behavior: Speed slow • Traveling
	15:26 -PDT	22:26-GMT	Position: 142° / 1106 m	Direction: West; Behavior: Speed slow • Traveling
	15:32 -PDT	22:32-GMT	Position: 188° / 600 m	Direction: West; Behavior: Speed slow • Traveling along kelp
Sighting Number	15	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting	
	15:52 -PDT	22:52-GMT	Position: 127° / 1331 m	Direction: West; Behavior: Speed slow • Traveling
	15:56 -PDT	22:56-GMT	Position: 145° / 946 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	16	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting	
	16:07 -PDT	23:07-GMT	Position: 115° / 1922 m	Direction: West; Behavior: Speed slow • Traveling
	16:15 -PDT	23:15-GMT	Position: 124° / 1331 m	Direction: West; Behavior: Speed slow • Traveling
	16:24 -PDT	23:24-GMT	Position: 180° / 574 m	Direction: West; Behavior: Speed slow • Traveling
	16:29 -PDT	23:29-GMT	Position: 231° / 574 m	Direction: West; Behavior: Speed slow • Traveling along kelp
Sighting Number	18	Quality: Poor Beaufort: 4	Total whales 2 — 0 calves at sighting	
	16:44 -PDT	23:44-GMT	Position: 120° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
	16:51 -PDT	23:51-GMT	Position: 137° / 1331 m	Direction: West; Behavior: Speed slow • Traveling
	16:53 -PDT	23:53-GMT	Position: 146° / 1106 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Mar 21	Day 37 of 99		Daily Totals whales 29 calves 0	
Sighting Number	01	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting	
	11:10 -PDT	18:10-GMT	Position: 161° / 5027 m	Direction: West; Behavior: Speed slow • Traveling
	11:16 -PDT	18:16-GMT	Position: 168° / 3528 m	Direction: West; Behavior: Speed slow • Traveling
	11:19 -PDT	18:19-GMT	Position: 174° / 3528 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	02	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting	
	11:30 -PDT	18:30-GMT	Position: 161° / 3528 m	Direction: West; Behavior: Speed slow • Traveling
Sighting Number	03	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting	
	11:37 -PDT	18:37-GMT	Position: 129° / 2749 m	Direction: West; Behavior: Speed slow • Traveling

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	11:41 -PDT	18:41-GMT	Position: 133° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:46 -PDT	18:46-GMT	Position: 142° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	11:41 -PDT	18:41-GMT	Position: 139° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	11:46 -PDT	18:46-GMT	Position: 142° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	06	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	13:09 -PDT	20:09-GMT	Position: 137° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:09 -PDT	20:09-GMT	Position: 149° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:32 -PDT	20:32-GMT	Position: 203° / 1331 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	13:37 -PDT	20:37-GMT	Position: 128° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	13:38 -PDT	20:38-GMT	Position: 136° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	13:40 -PDT	20:40-GMT	Position: 146° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	13:44 -PDT	20:44-GMT	Position: 161° / 1208 m Direction: West; Behavior: Speed slow • Traveling S#7 & S#8 together now
	13:49 -PDT	20:49-GMT	Position: 186° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	14:13 -PDT	21:13-GMT	Position: 169° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:21 -PDT	21:21-GMT	Position: 190° / 1483 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	14:38 -PDT	21:38-GMT	Position: 158° / 1020 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	11	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	15:00 -PDT	22:00-GMT	Position: 177° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:13 -PDT	22:13-GMT	Position: 206° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	12	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	15:02 -PDT	22:02-GMT	Position: 142° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	15:07 -PDT	22:07-GMT	Position: 160° / 1483 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	13	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	15:08 -PDT	22:08-GMT	Position: 161° / 696 m Direction: West; Behavior: Speed slow • Traveling
	15:09 -PDT	22:09-GMT	Position: 168° / 661 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	14	Quality: Fair Beaufort: 3	Total whales 2 — 0 calves at sighting
	15:18 -PDT	22:18-GMT	Position: 113° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	15:32 -PDT	22:32-GMT	Position: 140° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	15:35 -PDT	22:35-GMT	Position: 154° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke

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Sighting Number 15	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	15:19 -PDT 22:19-GMT	Position: 153° / 778 m Direction: West; Behavior: Speed slow • Traveling
	15:20 -PDT 22:20-GMT	Position: 166° / 696 m Direction: West; Behavior: Speed slow • Traveling
	15:37 -PDT 22:37-GMT	Position: 190° / 574 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 16	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	15:34 -PDT 22:34-GMT	Position: 163° / 827 m Direction: West; Behavior: Speed slow • Traveling
	15:39 -PDT 22:39-GMT	Position: 179° / 827 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 17	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	15:51 -PDT 22:51-GMT	Position: 131° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	15:57 -PDT 22:57-GMT	Position: 131° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	16:08 -PDT 23:08-GMT	Position: 134° / 550 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 18	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	16:14 -PDT 23:14-GMT	Position: 137° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	16:24 -PDT 23:24-GMT	Position: 158° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	16:33 -PDT 23:33-GMT	Position: 205° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 19	Quality: Fair Beaufort: 3	Total whales 1 — 0 calves at sighting
	16:18 -PDT 23:18-GMT	Position: 129° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	16:30 -PDT 23:30-GMT	Position: 183° / 1020 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 20	Quality: Fair Beaufort: 3	Total whales 3 — 0 calves at sighting
	16:44 -PDT 23:44-GMT	Position: 129° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	16:50 -PDT 23:50-GMT	Position: 136° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	16:54 -PDT 23:54-GMT	Position: 147° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	16:58 -PDT 23:58-GMT	Position: 156° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Breach 4 breaches

Mar 22 Day 38 of 99 Daily Totals whales 39 calves 0

Sighting Number 01	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	09:02 -PDT 16:02-GMT	Position: 148° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	09:09 -PDT 16:09-GMT	Position: 158° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 02	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	09:07 -PDT 16:07-GMT	Position: 210° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 03	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	09:14 -PDT 16:14-GMT	Position: 130° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	09:20 -PDT 16:20-GMT	Position: 154° / 735 m Direction: West; Behavior: Speed slow • Traveling
	09:22 -PDT 16:22-GMT	Position: 137° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 04	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	09:17 -PDT 16:17-GMT	Position: 128° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke

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	09:20 -PDT	16:20-GMT	Position: 144° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	09:23 -PDT	16:23-GMT	Position: 196° / 696 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	09:26 -PDT	16:26-GMT	Position: 187° / 913 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	06	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	09:53 -PDT	16:53-GMT	Position: 128° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	09:57 -PDT	16:57-GMT	Position: 151° / 735 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Fair Beaufort: 1	Total whales 3 — 0 calves at sighting
	10:02 -PDT	17:02-GMT	Position: 130° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	10:11 -PDT	17:11-GMT	Position: 149° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Rolling
	10:24 -PDT	17:24-GMT	Position: 217° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	10:27 -PDT	17:27-GMT	Position: 135° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:39 -PDT	17:39-GMT	Position: 140° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	10:42 -PDT	17:42-GMT	Position: 170° / 1331 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:57 -PDT	17:57-GMT	Position: 131° / 827 m Direction: West; Behavior: Speed slow • Traveling
	11:01 -PDT	18:01-GMT	Position: 157° / 661 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:05 -PDT	18:05-GMT	Position: 144° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	11:12 -PDT	18:12-GMT	Position: 166° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	12	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	11:46 -PDT	18:46-GMT	Position: 162° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	13	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	12:05 -PDT	19:05-GMT	Position: 126° / 913 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:10 -PDT	19:10-GMT	Position: 170° / 696 m Direction: West; Behavior: Speed slow • Traveling
	12:13 -PDT	19:13-GMT	Position: 185° / 661 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	14	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	12:21 -PDT	19:21-GMT	Position: 136° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke separated
	12:26 -PDT	19:26-GMT	Position: 161° / 913 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	15	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	12:58 -PDT	19:58-GMT	Position: 134° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	13:06 -PDT	20:06-GMT	Position: 167° / 1403 m Direction: West; Behavior: Speed slow • Traveling

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Sighting Number 16	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	13:14 -PDT 20:14-GMT	Position: 135° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	13:18 -PDT 20:18-GMT	Position: 157° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 17	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	13:36 -PDT 20:36-GMT	Position: 135° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	13:41 -PDT 20:41-GMT	Position: 144° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	13:53 -PDT 20:53-GMT	Position: 168° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	14:00 -PDT 21:00-GMT	Position: 184° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 18	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	13:49 -PDT 20:49-GMT	Position: 184° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	13:53 -PDT 20:53-GMT	Position: 194° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	13:57 -PDT 20:57-GMT	Position: 204° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 19	Quality: Fair Beaufort: 0	Total whales 3 — 0 calves at sighting
	14:03 -PDT 21:03-GMT	Position: 149° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	14:11 -PDT 21:11-GMT	Position: 162° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 20	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	14:38 -PDT 21:38-GMT	Position: 169° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	14:43 -PDT 21:43-GMT	Position: 175° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 21	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	14:43 -PDT 21:43-GMT	Position: 137° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	14:51 -PDT 21:51-GMT	Position: 150° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	14:56 -PDT 21:56-GMT	Position: 159° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 23	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	15:08 -PDT 22:08-GMT	Position: 141° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	15:21 -PDT 22:21-GMT	Position: 173° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 24	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	15:45 -PDT 22:45-GMT	Position: 188° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	15:48 -PDT 22:48-GMT	Position: 199° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 25	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	16:11 -PDT 23:11-GMT	Position: 101° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	16:16 -PDT 23:16-GMT	Position: 113° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	16:22 -PDT 23:22-GMT	Position: 113° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	16:29 -PDT 23:29-GMT	Position: 117° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 26	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
	16:16 -PDT 23:16-GMT	Position: 116° / 3528 m Direction: West; Behavior: Speed slow • Traveling

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	16:19 -PDT	23:19-GMT	Position: 121° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	16:22 -PDT	23:22-GMT	Position: 126° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	16:26 -PDT	23:26-GMT	Position: 134° / 2260 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	27	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	16:53 -PDT	23:53-GMT	Position: 102° / 3088 m Direction: West; Behavior: Speed slow • Traveling just past Campus Pt
	16:59 -PDT	23:59-GMT	Position: 107° / 3088 m Direction: West; Behavior: Speed slow • Traveling
Mar 23	Day 39 of 99		Daily Totals whales 29 calves 0
Sighting Number	01	Quality: Poor Beaufort: 1	Total whales 3 — 0 calves at sighting
	09:09 -PDT	16:09-GMT	Position: 168° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	09:16 -PDT	16:16-GMT	Position: 189° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	09:23 -PDT	16:23-GMT	Position: 221° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	03	Quality: Poor Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:02 -PDT	17:02-GMT	Position: 193° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke Saw twice before 115° - did not enter
Sighting Number	04	Quality: Poor Beaufort: 1	Total whales 4 — 0 calves at sighting
	10:08 -PDT	17:08-GMT	Position: 153° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	10:21 -PDT	17:21-GMT	Position: 169° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Poor Beaufort: 1	Total whales 1 — 0 calves at sighting
	10:37 -PDT	17:37-GMT	Position: 142° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:45 -PDT	17:45-GMT	Position: 181° / 1331 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Poor Beaufort: 1	Total whales 5 — 0 calves at sighting
	12:34 -PDT	19:34-GMT	Position: 131° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:40 -PDT	19:40-GMT	Position: 140° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:49 -PDT	19:49-GMT	Position: 162° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:49 -PDT	19:49-GMT	Position: 162° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:51 -PDT	19:51-GMT	Position: 175° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	08	Quality: Fair Beaufort: 1	Total whales 4 — 0 calves at sighting
	13:39 -PDT	20:39-GMT	Position: 187° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:47 -PDT	20:47-GMT	Position: 201° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	13:44 -PDT	20:44-GMT	Position: 196° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	13:52 -PDT	20:52-GMT	Position: 213° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	10	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
	13:57 -PDT	20:57-GMT	Position: 204° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	14:06 -PDT	21:06-GMT	Position: 237° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke

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Sighting Number	11	Quality: Fair Beaufort: 1	Total whales 3 — 0 calves at sighting
		14:15 -PDT 21:15-GMT	Position: 196° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		14:24 -PDT 21:24-GMT	Position: 229° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	12	Quality: Fair Beaufort: 1	Total whales 3 — 0 calves at sighting
		14:30 -PDT 21:30-GMT	Position: 190° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		14:35 -PDT 21:35-GMT	Position: 220° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	13	Quality: Good Beaufort: 2	Total whales 2 — 0 calves at sighting
		14:37 -PDT 21:37-GMT	Position: 122° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		14:40 -PDT 21:40-GMT	Position: 128° / 1483 m Direction: West; Behavior: Speed slow • Traveling
		14:43 -PDT 21:43-GMT	Position: 135° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		14:49 -PDT 21:49-GMT	Position: 189° / 696 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Mar 24	Day 40 of 99	Daily Totals whales 19 calves 0	
Sighting Number	02	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
		09:23 -PDT 16:23-GMT	Position: 130° / 1331 m Direction: West; Behavior: Speed slow • Traveling
		09:30 -PDT 16:30-GMT	Position: 172° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	05	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
		10:45 -PDT 17:45-GMT	Position: 113° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		10:55 -PDT 17:55-GMT	Position: 123° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		10:58 -PDT 17:58-GMT	Position: 134° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	06	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
		11:42 -PDT 18:42-GMT	Position: 128° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		11:49 -PDT 18:49-GMT	Position: 150° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		11:51 -PDT 18:51-GMT	Position: 172° / 1208 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
		11:59 -PDT 18:59-GMT	Position: 144° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		12:04 -PDT 19:04-GMT	Position: 179° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
		12:29 -PDT 19:29-GMT	Position: 123° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		12:35 -PDT 19:35-GMT	Position: 136° / 1922 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Fair Beaufort: 1	Total whales 2 — 0 calves at sighting
		13:03 -PDT 20:03-GMT	Position: 138° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		13:13 -PDT 20:13-GMT	Position: 191° / 1331 m Direction: West; Behavior: Speed slow • Traveling

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Sighting Number 10	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	13:32 -PDT 20:32-GMT	Position: 117° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	13:38 -PDT 20:38-GMT	Position: 131° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	13:42 -PDT 20:42-GMT	Position: 144° / 1020 m Direction: West; Behavior: Speed slow • Traveling
	13:48 -PDT 20:48-GMT	Position: 199° / 550 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 11	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	14:09 -PDT 21:09-GMT	Position: 138° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	14:16 -PDT 21:16-GMT	Position: 162° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	14:24 -PDT 21:24-GMT	Position: 206° / 1674 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 12	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	15:02 -PDT 22:02-GMT	Position: 140° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	15:09 -PDT 22:09-GMT	Position: 190° / 696 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 13	Quality: Fair Beaufort: 1	Total whales 3 — 0 calves at sighting
	15:05 -PDT 22:05-GMT	Position: 138° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:13 -PDT 22:13-GMT	Position: 160° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	15:23 -PDT 22:23-GMT	Position: 205° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 14	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	16:54 -PDT 23:54-GMT	Position: 138° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	16:59 -PDT 23:59-GMT	Position: 156° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Mar 25	Day 41 of 99	Daily Totals whales 17 calves 0
Sighting Number 03	Quality: Poor Beaufort: 1	Total whales 2 — 0 calves at sighting
	09:22 -PDT 16:22-GMT	Position: 131° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	09:31 -PDT 16:31-GMT	Position: 143° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 04	Quality: Poor Beaufort: 1	Totals not indicated
	09:36 -PDT 16:36-GMT	Position: 151° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	09:40 -PDT 16:40-GMT	Position: 167° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	09:23 -PDT 16:23-GMT	Position: 138° / 1483 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 07	Quality: Fair Beaufort: 2	Total whales 3 — 0 calves at sighting
	11:01 -PDT 18:01-GMT	Position: 141° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	11:07 -PDT 18:07-GMT	Position: 154° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 08	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
	11:09 -PDT 18:09-GMT	Position: 135° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	11:10 -PDT 18:10-GMT	Position: 144° / 946 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:15 -PDT 18:15-GMT	Position: 165° / 1106 m Direction: West; Behavior: Speed slow • Traveling

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Sighting Number	09	Quality: Fair Beaufort: 2	Total whales 4 — 0 calves at sighting
		11:22 -PDT 18:22-GMT	Position: 145° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Rolling
		11:30 -PDT 18:30-GMT	Position: 164° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	12	Quality: Fair Beaufort: 4	Total whales 3 — 0 calves at sighting
		15:22 -PDT 22:22-GMT	Position: 116° / 2260 m Direction: West; Behavior: Speed slow • Traveling
		15:32 -PDT 22:32-GMT	Position: 136° / 1208 m Direction: West; Behavior: Speed slow • Traveling
		15:40 -PDT 22:40-GMT	Position: 190° / 778 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	13	Quality: Fair Beaufort: 4	Total whales 2 — 0 calves at sighting
		16:59 -PDT 23:59-GMT	Position: 135° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		17:00 -PDT 0:00; 3/26/2019-GMT	Position: 138° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Breach 2 breaches
Mar 28	Day 44 of 99	Daily Totals whales 10 calves 0	
Sighting Number	01	Quality: Fair Beaufort: 1	Total whales 4 — 0 calves at sighting
		09:02 -PDT 16:02-GMT	Position: 122° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		09:11 -PDT 16:11-GMT	Position: 134° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		09:23 -PDT 16:23-GMT	Position: 185° / 735 m Direction: West; Behavior: Speed slow • Traveling • Rolling mating behavior
Sighting Number	04	Quality: Fair Beaufort: 3	Total whales 4 — 0 calves at sighting
		09:41 -PDT 16:41-GMT	Position: 134° / 2260 m Direction: West; Behavior: Speed slow • Traveling 2 + 2
		09:47 -PDT 16:47-GMT	Position: 147° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Rolling
		09:57 -PDT 16:57-GMT	Position: 180° / 1208 m Direction: West; Behavior: Speed slow • Traveling • Rolling moving fast amongst Dsp, while rolling thru oil seeps
		09:59 -PDT 16:59-GMT	Position: 196° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Rolling
Sighting Number	05	Quality: Fair Beaufort: 4	Total whales 2 — 0 calves at sighting
		11:23 -PDT 18:23-GMT	Position: 125° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		11:27 -PDT 18:27-GMT	Position: 144° / 883 m Direction: West; Behavior: Speed slow • Traveling
		11:31 -PDT 18:31-GMT	Position: 177° / 629 m Direction: West; Behavior: Speed slow • Traveling
Mar 29	Day 45 of 99	Daily Totals whales 3 calves 0	
Sighting Number	01	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
		09:04 -PDT 16:04-GMT	Position: 221° / 661 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	07	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting
		13:35 -PDT 20:35-GMT	Position: 114° / 2260 m Direction: West; Behavior: Speed slow • Traveling
		13:45 -PDT 20:45-GMT	Position: 133° / 1483 m Direction: West; Behavior: Speed slow • Traveling
		13:56 -PDT 20:56-GMT	Position: 195° / 735 m Direction: West; Behavior: Speed slow • Traveling
Mar 30	Day 46 of 99	Daily Totals whales 20 calves 0	

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Sighting Number 05	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	10:14 -PDT 17:14-GMT	Position: 136° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	10:26 -PDT 17:26-GMT	Position: 209° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 06	Quality: Fair Beaufort: 0	Total whales 4 — 0 calves at sighting
	10:28 -PDT 17:28-GMT	Position: 147° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 07	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	10:48 -PDT 17:48-GMT	Position: 126° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	10:58 -PDT 17:58-GMT	Position: 177° / 827 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 08	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	11:33 -PDT 18:33-GMT	Position: 136° / 3088 m Direction: West; Behavior: Speed slow • Traveling
	11:41 -PDT 18:41-GMT	Position: 147° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	11:49 -PDT 18:49-GMT	Position: 157° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 09	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	11:54 -PDT 18:54-GMT	Position: 135° / 3528 m Direction: West; Behavior: Speed slow • Traveling Breaches earlier @ 112°/1
	12:00 -PDT 19:00-GMT	Position: 142° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	12:05 -PDT 19:05-GMT	Position: 146° / 3528 m Direction: West; Behavior: Speed slow • Traveling
	12:13 -PDT 19:13-GMT	Position: 155° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 10	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	12:06 -PDT 19:06-GMT	Position: 147° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	12:12 -PDT 19:12-GMT	Position: 154° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 11	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	13:21 -PDT 20:21-GMT	Position: 193° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	13:24 -PDT 20:24-GMT	Position: 199° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 12	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	13:51 -PDT 20:51-GMT	Position: 187° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number 13	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	14:01 -PDT 21:01-GMT	Position: 182° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	14:09 -PDT 21:09-GMT	Position: 194° / 2749 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 14	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting
	15:35 -PDT 22:35-GMT	Position: 133° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:42 -PDT 22:42-GMT	Position: 208° / 550 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number 16	Quality: Fair Beaufort: 1	Total whales 1 — 0 calves at sighting
	15:50 -PDT 22:50-GMT	Position: 189° / 661 m Direction: West; Behavior: Speed slow • Traveling along kelp
	15:55 -PDT 22:55-GMT	Position: 237° / 528 m Direction: West; Behavior: Speed slow • Traveling

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Sighting Number 17	Quality: Fair	Total whales 2 — 0 calves at sighting
	Beaufort: 1	
	16:38 -PDT 23:38-GMT	Position: 155° / 883 m Direction: West; Behavior: Speed slow • Traveling
	16:42 -PDT 23:42-GMT	Position: 183° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke
16:49 -PDT 23:49-GMT	Position: 235° / 946 m Direction: West; Behavior: Speed slow • Traveling	
Sighting Number 18	Quality: Fair	Total whales 2 — 0 calves at sighting
	Beaufort: 2	
16:41 -PDT 23:41-GMT	Position: 161° / 3088 m Direction: West; Behavior: Speed slow • Traveling	
Mar 31	Day 47 of 99	Daily Totals whales 10 calves 0
Sighting Number 03 Images: 7025-7033	Quality: Fair	Total whales 2 — 0 calves at sighting
	Beaufort: 1	
	10:42 -PDT 17:42-GMT	Position: 107° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	10:54 -PDT 17:54-GMT	Position: 115° / 1674 m Direction: West; Behavior: Speed slow • Traveling along kelp
11:08 -PDT 18:08-GMT	Position: 161° / 678 m Direction: West; Behavior: Speed slow • Traveling	
Sighting Number 04	Quality: Fair	Total whales 3 — 0 calves at sighting
	Beaufort: 1	
	12:33 -PDT 19:33-GMT	Position: 130° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
12:42 -PDT 19:42-GMT	Position: 160° / 946 m Direction: West; Behavior: Speed slow • Traveling • Fluke	
Sighting Number 05 Images: 7035-7046	Quality: Fair	Total whales 1 — 0 calves at sighting
	Beaufort: 1	
	12:48 -PDT 19:48-GMT	Position: 129° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	12:54 -PDT 19:54-GMT	Position: 181° / 600 m Direction: West; Behavior: Speed slow • Traveling
13:00 -PDT 20:00-GMT	Position: 232° / 1020 m Direction: West; Behavior: Speed slow • Traveling • Fluke	
Sighting Number 08	Quality: Fair	Total whales 3 — 0 calves at sighting
	Beaufort: 2	
	15:47 -PDT 22:47-GMT	Position: 126° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke 2 + 1
	15:55 -PDT 22:55-GMT	Position: 135° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
16:07 -PDT 23:07-GMT	Position: 187° / 883 m Direction: West; Behavior: Speed slow • Traveling • Fluke	
Sighting Number 10	Quality: Fair	Total whales 1 — 0 calves at sighting
	Beaufort: 2	
16:27 -PDT 23:27-GMT	Position: 130° / 1331 m Direction: West; Behavior: Speed slow • Traveling	
Apr 01	Day 48 of 99	Daily Totals whales 13 calves 0
Sighting Number 01 Images: 7047-7061	Quality: Fair	Total whales 3 — 0 calves at sighting
	Beaufort: 0	
	09:13 -PDT 16:13-GMT	Position: 112° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	09:23 -PDT 16:23-GMT	Position: 125° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
09:31 -PDT 16:31-GMT	Position: 172° / 678 m Direction: West; Behavior: Speed slow • Traveling	
Sighting Number 03	Quality: Fair	Total whales 1 — 0 calves at sighting
	Beaufort: 0	
	09:53 -PDT 16:53-GMT	Position: 144° / 1922 m Direction: West; Behavior: Speed slow • Traveling
10:01 -PDT 17:01-GMT	Position: 120° / 1208 m Direction: West; Behavior: Speed slow • Traveling	
Sighting Number 04	Quality: Fair	Total whales 1 — 0 calves at sighting
	Beaufort: 0	
10:10 -PDT 17:10-GMT	Position: 117° / 3088 m Direction: West; Behavior: Speed slow • Traveling	

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

	10:20 -PDT	17:20-GMT	Position: 122° / 1403 m Direction: West; Behavior: Speed slow • Traveling
	10:43 -PDT	17:43-GMT	Position: 173° / 661 m Direction: West; Behavior: Speed slow • Traveling along kelp
Sighting Number	09	Quality: Poor Beaufort: 0	Total whales 3 — 0 calves at sighting
	11:42 -PDT	18:42-GMT	Position: 134° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	11:55 -PDT	18:55-GMT	Position: 137° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke very slow
	12:02 -PDT	19:02-GMT	Position: 144° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	10	Quality: Poor Beaufort: 0	Total whales 2 — 0 calves at sighting
	15:51 -PDT	22:51-GMT	Position: 130° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	16:03 -PDT	23:03-GMT	Position: 171° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	16:08 -PDT	23:08-GMT	Position: 208° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	11	Quality: Poor Beaufort: 0	Total whales 2 — 0 calves at sighting
Images: 7063-7075	16:36 -PDT	23:36-GMT	Position: 130° / 1483 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	16:46 -PDT	23:46-GMT	Position: 179° / 946 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	12	Quality: Poor Beaufort: 0	Total whales 1 — 0 calves at sighting
	16:50 -PDT	23:50-GMT	Position: 107° / 3088 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	16:57 -PDT	23:57-GMT	Position: 111° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Apr 03	Day 50 of 99		Daily Totals whales 6 calves 0
Sighting Number	01	Quality: Fair Beaufort: 0	Total whales 2 — 0 calves at sighting
	09:16 -PDT	16:16-GMT	Position: 103° / 2749 m Direction: West; Behavior: Speed slow • Traveling just off kelp
	09:23 -PDT	16:23-GMT	Position: 103° / 2749 m Direction: West; Behavior: Speed slow • Traveling maybe 2 M/c pairs
	09:56 -PDT	16:56-GMT	Position: 105° / 2749 m Direction: Circling; Behavior: Speed slow • Traveling next to kelp
	10:02 -PDT	17:02-GMT	Position: 108° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	10:10 -PDT	17:10-GMT	Position: 109° / 1922 m Direction: West; Behavior: Speed slow • Traveling at kelp
	10:17 -PDT	17:17-GMT	Position: 115° / 1674 m Direction: West; Behavior: Speed slow • Traveling pairs separated
	10:36 -PDT	17:36-GMT	Position: 144° / 946 m Direction: West; Behavior: Speed slow • Traveling unable to confirm calves - Project coordinator had to leave
Sighting Number	02	Quality: Fair Beaufort:	Total whales 1 — 0 calves at sighting
	14:14 -PDT	21:14-GMT	Position: 156° / 883 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Fair Beaufort:	Total whales 2 — 0 calves at sighting
	15:54 -PDT	22:54-GMT	Position: 120° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
	15:58 -PDT	22:58-GMT	Position: 130° / 883 m Direction: West; Behavior: Speed slow • Traveling
	16:10 -PDT	23:10-GMT	Position: 141° / 678 m Direction: West; Behavior: Speed slow • Traveling • Fluke

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number Images: 7077-7099	05	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 1	
		16:12 -PDT 23:12-GMT	Position: 166° / 735 m Direction: West; Behavior: Speed slow • Traveling
		16:22 -PDT 23:22-GMT	Position: 214° / 778 m Direction: West; Behavior: Speed slow • Traveling
Apr 04		Day 51 of 99	Daily Totals whales 7 calves 0
Sighting Number	02	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 1	
		10:57 -PDT 17:57-GMT	Position: 233° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	04	Quality: Fair	Total whales 3 — 0 calves at sighting
		Beaufort: 1	
		12:17 -PDT 19:17-GMT	Position: 165° / 3528 m Direction: West; Behavior: Speed slow • Traveling • Rolling
		12:38 -PDT 19:38-GMT	Position: 193° / 3528 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 1	
		14:58 -PDT 21:58-GMT	Position: 132° / 2749 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		15:09 -PDT 22:09-GMT	Position: 143° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		15:19 -PDT 22:19-GMT	Position: 170° / 1331 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	09	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 1	
		16:18 -PDT 23:18-GMT	Position: 109° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		16:24 -PDT 23:24-GMT	Position: 113° / 2260 m Direction: West; Behavior: Speed slow • Traveling
		16:32 -PDT 23:32-GMT	Position: 119° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		16:41 -PDT 23:41-GMT	Position: 135° / 1106 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		16:46 -PDT 23:46-GMT	Position: 194° / 574 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	10	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 1	
		16:26 -PDT 23:26-GMT	Position: 113° / 3088 m Direction: West; Behavior: Speed slow • Traveling
		16:58 -PDT 23:58-GMT	Position: 143° / 1674 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Apr 05		Day 52 of 99	Daily Totals whales 3 calves 0
Sighting Number	04	Quality: Fair	Total whales 2 — 0 calves at sighting
		Beaufort: 0	
		09:47 -PDT 16:47-GMT	Position: 154° / 913 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	06	Quality: Poor	Total whales 1 — 0 calves at sighting
		Beaufort: 4	
		14:21 -PDT 21:21-GMT	Position: 111° / 2260 m Direction: West; Behavior: Speed slow • Traveling edge of kelp ... big blow & back
		14:29 -PDT 21:29-GMT	Position: 121° / 1483 m Direction: West; Behavior: Speed slow • Traveling little blow — very likely M/c pair — can't call it. Did not see body of calf.
Apr 06		Day 53 of 99	Daily Totals whales 7 calves 0
Sighting Number	04	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 4	
		10:20 -PDT 17:20-GMT	Position: 141° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		10:29 -PDT 17:29-GMT	Position: 206° / 778 m Direction: West; Behavior: Speed slow • Traveling traveled underwater, close to surface, off kelp for 25 m

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

Sighting Number	05	Quality: Fair Beaufort: 3	Total whales 3 — 0 calves at sighting
		11:19 -PDT 18:19-GMT	Position: 129° / 2260 m Direction: West; Behavior: Speed slow • Traveling • Fluke
		11:28 -PDT 18:28-GMT	Position: 151° / 1403 m Direction: West; Behavior: Speed slow • Traveling • Fluke
Sighting Number	07	Quality: Good Beaufort: 2	Total whales 1 — 0 calves at sighting
		14:11 -PDT 21:11-GMT	Position: 188° / 600 m Direction: West; Behavior: Speed slow • Traveling
		14:16 -PDT 21:16-GMT	Position: 229° / 678 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	08	Quality: Good Beaufort: 2	Total whales 1 — 0 calves at sighting
		14:22 -PDT 21:22-GMT	Position: 255° / 1403 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	09	Quality: Good Beaufort: 2	Total whales 1 — 0 calves at sighting
		15:40 -PDT 22:40-GMT	Position: 131° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		15:49 -PDT 22:49-GMT	Position: 131° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		15:55 -PDT 22:55-GMT	Position: 150° / 678 m Direction: West; Behavior: Speed slow • Traveling along kelp
		16:05 -PDT 23:05-GMT	Position: 241° / 735 m Direction: West; Behavior: Speed slow • Traveling
Apr 07	Day 54 of 99	Daily Totals whales 1 calves 0	
Sighting Number	02	Quality: Fair Beaufort: 2	Total whales 1 — 0 calves at sighting
		11:13 -PDT 18:13-GMT	Position: 105° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		11:30 -PDT 18:30-GMT	Position: 114° / 1922 m Direction: West; Behavior: Speed slow • Traveling
		11:36 -PDT 18:36-GMT	Position: 124° / 1106 m Direction: West; Behavior: Speed slow • Traveling
		11:42 -PDT 18:42-GMT	Position: 166° / 600 m Direction: West; Behavior: Speed slow • Traveling
		11:52 -PDT 18:52-GMT	Position: 260° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Apr 08	Day 55 of 99	Daily Totals whales 8 calves 3	
Sighting Number	03	Quality: Fair Beaufort: 1	Total whales 2 — 1 calf at sighting
		11:56 -PDT 18:56-GMT	Position: 104° / 2749 m Direction: Circling; Behavior: Speed slow • Traveling M/c in kelp - calf head up and down in kelp
		12:09 -PDT 19:09-GMT	Position: 120° / 1483 m Direction: West; Behavior: Speed slow • Traveling
		12:19 -PDT 19:19-GMT	Position: 134° / 629 m Direction: West; Behavior: Speed slow • Traveling
		12:37 -PDT 19:37-GMT	Position: 237° / 307 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	04	Quality: Fair Beaufort: 1	Total whales 4 — 2 calves at sighting
		12:10 -PDT 19:10-GMT	Position: 113° / 2749 m Direction: West; Behavior: Speed slow • Traveling with (just behind) S#3
		12:09 -PDT 19:09-GMT	Position: 118° / 2260 m Direction: West; Behavior: Speed slow • Traveling
		12:40 -PDT 19:40-GMT	Position: 196° / 574 m Direction: West; Behavior: Speed slow • Traveling just outside kelp, when S#3 was inside kelp in surf zone
		12:46 -PDT 19:46-GMT	Position: 249° / 661 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	05	Quality: Fair Beaufort: 2	Total whales 2 — 0 calves at sighting
		13:30 -PDT 20:30-GMT	Position: 101° / 2749 m Direction: West; Behavior: Speed slow • Traveling

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		13:42 -PDT	20:42-GMT	Position: 116° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
		13:53 -PDT	20:53-GMT	Position: 129° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
		13:59 -PDT	20:59-GMT	Position: 134° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
		14:07 -PDT	21:07-GMT	Position: 149° / 1674 m	Direction: West; Behavior: Speed slow • Traveling
Apr 10	Day 57 of 99				Daily Totals whales 4 calves 1
	Sighting Number 02	Quality: Fair Beaufort: 4	Total whales 2 — 1 calf at sighting		
		13:22 -PDT	20:22-GMT	Position: 119° / 1331 m	Direction: West; Behavior: Speed slow • Traveling
		13:29 -PDT	20:29-GMT	Position: 128° / 883 m	Direction: West; Behavior: Speed slow • Traveling
		12:35 -PDT	19:35-GMT	Position: 176° / 696 m	Direction: West; Behavior: Speed slow • Traveling along kelp
		13:39 -PDT	20:39-GMT	Position: 216° / 600 m	Direction: West; Behavior: Speed slow • Traveling
	Sighting Number 04	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting		
		14:03 -PDT	21:03-GMT	Position: 109° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
		14:12 -PDT	21:12-GMT	Position: 114° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
	Sighting Number 05	Quality: Poor Beaufort: 4	Total whales 1 — 0 calves at sighting		
		14:26 -PDT	21:26-GMT	Position: 150° / 883 m	Direction: West; Behavior: Speed slow • Traveling
Apr 12	Day 59 of 99				Daily Totals whales 1 calves 0
	Sighting Number 01	Quality: Fair Beaufort: 4	Total whales 1 — 0 calves at sighting		
		09:01 -PDT	16:01-GMT	Position: 134° / 1483 m	Direction: West; Behavior: Speed slow • Traveling big whale
		09:07 -PDT	16:07-GMT	Position: 148° / 827 m	Direction: West; Behavior: Speed slow • Traveling not able to find calf
		09:16 -PDT	16:16-GMT	Position: 200° / 696 m	Direction: West; Behavior: Speed slow • Traveling traveled off kelp a bit, not right along
		09:23 -PDT	16:23-GMT	Position: 252° / 1483 m	Direction: West; Behavior: Speed slow • Traveling
Apr 13	Day 60 of 99				Daily Totals whales 1 calves 0
	Sighting Number 02	Quality: Fair Beaufort: 0	Total whales 1 — 0 calves at sighting		
		11:20 -PDT	18:20-GMT	Position: 153° / 2749 m	Direction: West; Behavior: Speed slow • Traveling • Breach 2 breaches
Apr 14	Day 61 of 99				Daily Totals whales 1 calves 0
	Sighting Number 03	Quality: Poor Beaufort: 1	Total whales 1 — 0 calves at sighting		
		11:40 -PDT	18:40-GMT	Position: 170° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
		11:50 -PDT	18:50-GMT	Position: 194° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
Apr 17	Day 64 of 99				Daily Totals whales 4 calves 1
	Sighting Number 03	Quality: Fair Beaufort: 2	Total whales 2 — 1 calf at sighting		
		10:11 -PDT	17:11-GMT	Position: 119° / 1674 m	Direction: West; Behavior: Speed slow • Traveling
		10:17 -PDT	17:17-GMT	Position: 134° / 946 m	Direction: West; Behavior: Speed slow • Traveling
		10:35 -PDT	17:35-GMT	Position: 286° / 1674 m	Direction: West; Behavior: Speed slow • Traveling long time under water

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Sighting Number	04	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 2	
		11:07 -PDT 18:07-GMT	Position: 110° / 3088 m Direction: West; Behavior: Speed slow • Traveling
		11:15 -PDT 18:15-GMT	Position: 112° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		11:21 -PDT 18:21-GMT	Position: 126° / 1922 m Direction: West; Behavior: Speed slow • Traveling • Fluke
11:30 -PDT 18:30-GMT	Position: 167° / 1331 m Direction: West; Behavior: Speed slow • Traveling		
Sighting Number	05	Quality: Fair	Total whales 1 — 0 calves at sighting
		Beaufort: 2	
		11:32 -PDT 18:32-GMT	Position: 144° / 827 m Direction: West; Behavior: Speed slow • Traveling
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Apr 18	Day 65 of 99	Daily Totals whales 8 calves 3	
Sighting Number	01	Quality: Poor	Total whales 2 — 1 calf at sighting
		Beaufort: 0	
		09:48 -PDT 16:48-GMT	Position: 119° / 1674 m Direction: West; Behavior: Speed slow • Traveling next to kelp
		08:54 -PDT 15:54-GMT	Position: 136° / 946 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	03	Quality: Fair	Total whales 2 — nd calves at sighting
		Beaufort: 1	
		11:23 -PDT 18:23-GMT	Position: 121° / 2260 m Direction: West; Behavior: Speed slow • Traveling likely M/c pair
Sighting Number	04	Quality: Fair	Total whales 2 — 1 calf at sighting
		Beaufort: 2	
		13:42 -PDT 20:42-GMT	Position: 113° / 1922 m Direction: Circling in kelp "lake" - calf & mom "bathing" - mom raised up covered in kelp, then submerged to nurse
		14:00 -PDT 21:00-GMT	Position: 118° / 883 m Direction: West; Behavior: Speed slow • Traveling out of kelp and heading towards us - calf on inside
		14:09 -PDT 21:09-GMT	Position: 168° / 412 m Direction: West; Behavior: Speed slow • Traveling
		14:20 -PDT 21:20-GMT	Position: 260° / 539 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	06	Quality: Fair	Total whales 2 — 1 calf at sighting
		Beaufort: 3	
		16:25 -PDT 23:25-GMT	Position: 118° / 1674 m Direction: West; Behavior: Speed slow • Traveling
		16:30 -PDT 23:30-GMT	Position: 123° / 1331 m Direction: West; Behavior: Speed slow • Traveling
		16:36 -PDT 23:36-GMT	Position: 132° / 678 m Direction: West; Behavior: Speed slow • Traveling
		16:48 -PDT 23:48-GMT	Position: 239° / 661 m Direction: West; Behavior: Speed slow • Traveling
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Apr 19	Day 66 of 99	Daily Totals whales 3 calves 1	
Sighting Number	01	Quality: Poor	Total whales 2 — 1 calf at sighting
		Beaufort: 1	
		08:58 -PDT 15:58-GMT	Position: 179° / 550 m Direction: West; Behavior: Speed slow • Traveling
		08:59 -PDT 15:59-GMT	Position: 193° / 574 m Direction: West; Behavior: Speed slow • Traveling
		09:07 -PDT 16:07-GMT	Position: 264° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number	03	Quality: Poor	Total whales 1 — 0 calves at sighting
		Beaufort: 4	
		15:53 -PDT 22:53-GMT	Position: 110° / 2749 m Direction: West; Behavior: Speed slow • Traveling
		16:05 -PDT 23:05-GMT	Position: 132° / 1020 m Direction: West; Behavior: Speed slow • Traveling
		16:15 -PDT 23:15-GMT	Position: 219° / 629 m Direction: West; Behavior: Speed slow • Traveling • Fluke not entangled whale
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Apr 20	Day 67 of 99	Daily Totals whales 8 calves 4	

2019 GRAY WHALE (northbound) Sighting + Tracking, On-Effort

	Sighting Number	02	Quality: Fair Beaufort: 0	Total whales 8 — 4 calves at sighting
	Images: 7394 - 7577			
	09:50 -PDT	16:50-GMT	Position: 107° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
	09:57 -PDT	16:57-GMT	Position: 113° / 1922 m	Direction: West; Behavior: Speed slow • Traveling
	10:10 -PDT	17:10-GMT	Position: 118° / 1106 m	Direction: West; Behavior: Speed slow • Traveling
			BIG blow	
Apr 21	Day 68 of 99			Daily Totals whales 6 calves 3
	Sighting Number	02	Quality: Fair Beaufort: 2	Total whales 2 — 1 calf at sighting
	09:11 -PDT	16:11-GMT	Position: 103° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
	09:24 -PDT	16:24-GMT	Position: 116° / 1922 m	Direction: West; Behavior: Speed slow • Traveling
	Sighting Number	04	Quality: Fair Beaufort: 2	Total whales 4 — 2 calves at sighting
	Images: 7589 - 7667			
	10:35 -PDT	17:35-GMT	Position: 110° / 2749 m	Direction: Circling; Behavior: Speed slow • Traveling • Spyhop
			kelp edge	
	10:44 -PDT	17:44-GMT	Position: 114° / 1922 m	Direction: West; Behavior: Speed slow • Traveling
			edge	
	10:48 -PDT	17:48-GMT	Position: 121° / 1106 m	Direction: West; Behavior: Speed slow • Traveling
Apr 22	Day 69 of 99			Daily Totals whales 6 calves 3
	Sighting Number	03	Quality: Fair Beaufort: 1	Total whales 2 — 1 calf at sighting
	10:42 -PDT	17:42-GMT	Position: 130° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
			a bit further out	
	10:46 -PDT	17:46-GMT	Position: 144° / 1674 m	Direction: West; Behavior: Speed slow • Traveling
		in a hurry — not along kelp		
	10:52 -PDT	17:52-GMT	Position: 180° / 883 m	Direction: West; Behavior: Speed slow • Traveling
	10:58 -PDT	17:58-GMT	Position: 226° / 600 m	Direction: West; Behavior: Speed slow • Traveling
	Sighting Number	05	Quality: Fair Beaufort: 1	Total whales 2 — 1 calf at sighting
	Images: 7669-7701			
	11:57 -PDT	18:57-GMT	Position: 115° / 1674 m	Direction: West; Behavior: Speed slow • Traveling
			calf had big, bronze spots	
	12:06 -PDT	19:06-GMT	Position: 133° / 827 m	Direction: West; Behavior: Speed slow • Traveling
	12:23 -PDT	19:23-GMT	Position: 265° / 827 m	Direction: West; Behavior: Speed slow • Traveling
	Sighting Number	06	Quality: Poor Beaufort: 3	Total whales 2 — 1 calf at sighting
	Images: 7704-7709			
	15:00 -PDT	22:00-GMT	Position: 135° / 778 m	Direction: West; Behavior: Speed slow • Traveling
	15:05 -PDT	22:05-GMT	Position: 179° / 600 m	Direction: West; Behavior: Speed slow • Traveling
Apr 24	Day 71 of 99			Daily Totals whales 2 calves 1
	Sighting Number	02	Quality: Poor Beaufort: 3	Total whales 2 — 1 calf at sighting
	13:49 -PDT	20:49-GMT	Position: 108° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
	13:51 -PDT	20:51-GMT	Position: 112° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
	14:02 -PDT	21:02-GMT	Position: 129° / 1208 m	Direction: West; Behavior: Speed slow • Traveling
Apr 25	Day 72 of 99			Daily Totals whales 8 calves 4

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Sighting Number Images: 7728 - 7758	01	Quality: Poor Beaufort: 1	Total whales 4 — 2 calves at sighting
	09:00 -PDT	16:00-GMT	Position: 135° / 1106 m Direction: West; Behavior: Speed slow • Traveling not in kelp - white spot on mom
	09:02 -PDT	16:02-GMT	Position: 138° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	09:05 -PDT	16:05-GMT	Position: 158° / 696 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number Images: 7760 - 7802	03	Quality: Poor Beaufort: 0	Total whales 2 — 1 calf at sighting
	12:10 -PDT	19:10-GMT	Position: 132° / 883 m Direction: West; Behavior: Speed slow • Traveling
	12:12 -PDT	19:12-GMT	Position: 141° / 600 m Direction: West; Behavior: Speed slow • Traveling just off kelp
	12:16 -PDT	19:16-GMT	Position: 162° / 489 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number Images: 7820 - 7839	07	Quality: Poor Beaufort: 0	Total whales 2 — 1 calf at sighting
	16:58 -PDT	23:58-GMT	Position: 102° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	17:20 -PDT	0:20; 4/26/2019-GMT	Position: 123° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Apr 26	Day 73 of 99	Daily Totals	whales 2 calves 1
Sighting Number Images: 7851 - 7862	07	Quality: Poor Beaufort: 1	Total whales 2 — 1 calf at sighting
	16:51 -PDT	23:51-GMT	Position: 104° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	17:07 -PDT	0:07; 4/27/2019-GMT	Position: 122° / 1403 m Direction: West; Behavior: Speed slow • Traveling
Apr 27	Day 74 of 99	Daily Totals	whales 2 calves 1
Sighting Number Images: 7868 - 7907	06	Quality: Poor Beaufort: 1	Total whales 2 — 1 calf at sighting
	14:46 -PDT	21:46-GMT	Position: 111° / 2260 m Direction: West; Behavior: Speed slow • Traveling
	14:52 -PDT	21:52-GMT	Position: 120° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	14:56 -PDT	21:56-GMT	Position: 125° / 1106 m Direction: West; Behavior: Speed slow • Traveling
Apr 28	Day 75 of 99	Daily Totals	whales 7 calves 3
Sighting Number	03	Quality: Poor Beaufort: 0	Total whales 1 — 0 calves at sighting
	10:56 -PDT	17:56-GMT	Position: 115° / 1922 m Direction: West; Behavior: Speed slow • Traveling
	11:01 -PDT	18:01-GMT	Position: 123° / 1106 m Direction: West; Behavior: Speed slow • Traveling
	11:10 -PDT	18:10-GMT	Position: 194° / 629 m Direction: West; Behavior: Speed slow • Traveling Big whale, next to kelp
Sighting Number Images: 7911 - 7939	04	Quality: Poor Beaufort: 0	Total whales 2 — 1 calf at sighting
	11:29 -PDT	18:29-GMT	Position: 147° / 661 m Direction: West; Behavior: Speed slow • Traveling just off kelp
	11:30 -PDT	18:30-GMT	Position: 153° / 600 m Direction: West; Behavior: Speed slow • Traveling
	11:33 -PDT	18:33-GMT	Position: 170° / 550 m Direction: West; Behavior: Speed slow • Traveling
Sighting Number Images: 7942 - 7975	05	Quality: Poor Beaufort: 0	Total whales 4 — 2 calves at sighting
	12:30 -PDT	19:30-GMT	Position: 106° / 2749 m Direction: West; Behavior: Speed slow • Traveling
	12:36 -PDT	19:36-GMT	Position: 109° / 2260 m Direction: West; Behavior: Speed slow • Traveling

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		12:40 -PDT	19:40-GMT	Position: 114° / 1922 m	Direction: West; Behavior: Speed slow • Traveling
		12:50 -PDT	19:50-GMT	Position: 131° / 1106 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
Apr 29	Day 76 of 99				Daily Totals whales 2 calves 1
	Sighting Number 03	Quality: Fair	Total whales 2 — 1 calf at sighting		
	Images: 7981 - 8060	Beaufort: 0			
		10:17 -PDT	17:17-GMT	Position: 130° / 661 m	Direction: West; Behavior: Speed slow • Traveling very slow
		10:24 -PDT	17:24-GMT	Position: 164° / 600 m	Direction: West; Behavior: Speed slow • Traveling
May 02	Day 79 of 99				Daily Totals whales 2 calves 1
	Sighting Number 04	Quality: Fair	Total whales 2 — 1 calf at sighting		
	Images: 8137 - 8152	Beaufort: 3			
		16:10 -PDT	23:10-GMT	Position: 107° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
		16:21 -PDT	23:21-GMT	Position: 119° / 1403 m	Direction: West; Behavior: Speed slow • Traveling
		16:28 -PDT	23:28-GMT	Position: 134° / 778 m	Direction: West; Behavior: Speed slow • Traveling
May 05	Day 82 of 99				Daily Totals whales 6 calves 2
	Sighting Number 02	Quality: Fair	Total whales 1 — 0 calves at sighting		
		Beaufort: 1			
		10:21 -PDT	17:21-GMT	Position: 111° / 2749 m	Direction: West; Behavior: Speed slow • Traveling mature whale
		10:29 -PDT	17:29-GMT	Position: 122° / 1483 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		: -PDT	7:-GMT	Position: / m	Direction: West; Behavior: Speed slow • Traveling
		10:41 -PDT	17:41-GMT	Position: 198° / 600 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		10:49 -PDT	17:49-GMT	Position: 269° / 1106 m	Direction: West; Behavior: Speed slow • Traveling a lot of oil at that seep
	Sighting Number 03	Quality: Fair	Total whales 2 — 1 calf at sighting		
	Images: 8173 - 8247	Beaufort: 1			
		10:55 -PDT	17:55-GMT	Position: 102° / 2749 m	Direction: West; Behavior: Speed slow • Traveling
		11:00 -PDT	18:00-GMT	Position: 105° / 2749 m	Direction: West; Behavior: Speed slow • Traveling in pool
		11:05 -PDT	18:05-GMT	Position: 108° / 2260 m	Direction: West; Behavior: Speed slow • Traveling
		11:17 -PDT	18:17-GMT	Position: 117° / 1331 m	Direction: West; Behavior: Speed slow • Traveling along kelp - many blows
		11:25 -PDT	18:25-GMT	Position: 130° / 827 m	Direction: West; Behavior: Speed slow • Traveling
	Sighting Number 04	Quality: Fair	Total whales 2 — 1 calf at sighting		
	Images: 8262 - 8314	Beaufort: 1			
		13:42 -PDT	20:42-GMT	Position: 116° / 1483 m	Direction: West; Behavior: Speed slow • Traveling along kelp
		13:47 -PDT	20:47-GMT	Position: 121° / 1106 m	Direction: West; Behavior: Speed slow • Traveling
	Sighting Number 05	Quality: Fair	Total whales 1 — 0 calves at sighting		
	Images: 8316 - 8325	Beaufort: 1			
		14:17 -PDT	21:17-GMT	Position: 102° / 2749 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		14:30 -PDT	21:30-GMT	Position: 115° / 1922 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
		14:34 -PDT	21:34-GMT	Position: 119° / 1331 m	Direction: West; Behavior: Speed slow • Traveling
		14:39 -PDT	21:39-GMT	Position: 138° / 735 m	Direction: West; Behavior: Speed slow • Traveling • Fluke
May 09	Day 86 of 99				Daily Totals whales 2 calves 1

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Sighting Number		Quality:	Total whales
03 Images: 8396 - 8472	03	Fair Beaufort: 0	2 — 1 calf at sighting
	09:56 -PDT	16:56-GMT	Position: 117° / 1331 m Direction: West; Behavior: Speed slow • Traveling
	10:00 -PDT	17:00-GMT	Position: 135° / 696 m Direction: West; Behavior: Speed slow • Traveling next to kelp
	10:40 -PDT	17:40-GMT	Position: 266° / 661 m Direction: West; Behavior: Speed slow • Traveling
May 19 Day 96 of 99		Daily Totals whales 1 calves 1	
Sighting Number		Quality:	Total whales
02	02	Fair Beaufort: 1	1 — 1 calf at sighting
	11:37 -PDT	18:37-GMT	Position: 111° / 2260 m Direction: West; Behavior: Speed slow • Traveling very young whale (believe it was a calf without mother) - very slow - not doing well
	11:43 -PDT	18:43-GMT	Position: 120° / 1674 m Direction: West; Behavior: Speed slow • Traveling
	11:44 -PDT	18:44-GMT	Position: 122° / 1483 m Direction: West; Behavior: Speed slow • Traveling
	12:04 -PDT	19:04-GMT	Position: 220° / 1208 m Direction: West; Behavior: Speed slow • Traveling