



2012 Gray whale (north) Sighting + Tracking

Total: 930 Calves: 226 Number of Sightings: 394

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Feb 16 Total 3 Calves 0		Er Gray whale (northbound)	
Day 4 of 98			
Sighting Number	24 Excellent - 1	Er Total 3 — 0 Calves at sighting	
	13:24:00 PST	Boat / Blow	
	21:24-GMT	151° / 3528 m Dir: West Slow travel	
	<i>Condor spotted them first</i>		
	13:34:00 PST	Blow	
	21:34-GMT	159° / 2749 m Dir: West Slow travel	
	13:41:00 PST	Blow	
	21:41-GMT	166° / 2749 m Dir: West Slow travel	
	13:46:00 PST	Blow	
	21:46-GMT	174° / 2749 m Dir: West Slow travel	
	13:52:00 PST	Blow	
	21:52-GMT	184° / 2749 m Dir: West Slow travel	
	14:00:00 PST	Blow	
	22:00-GMT	196° / 2260 m Dir: West Slow travel	
	14:12:00 PST	Blow	nd /
	22:12-GMT	232° / 2749 m Dir: West Slow travel	Outside
Feb 17 Total 1 Calves 0		Er Gray whale (northbound)	
Day 5 of 98			
Sighting Number	07 Fair - 0	Er Total 1 — 0 Calves at sighting	
	10:35:00 PST	Passerby / Blow	
	18:35-GMT	180° / 735 m Dir: West Slow travel	
	10:37:00 PST	Blow	
	18:37-GMT	190° / 696 m Dir: West Slow travel	

KEY: *Quality is overall observation quality. The number is Beaufort scale. CueTip is what tipped us to look in a particular area or direction that was other than normal scanning (SD is Surface Disturbance.). Saw is what we saw to know it was an animal. Position of animal is represented by true bearing and distance in meters from our observation platform on Counter Point, which faces south. Holly / Buoys refers to the route of the whales in relation to Platform Holly and the mooring buoys for the oil barge. They are prominent obstacles in the path of the migration through the nearshore of the Santa Barbara Channel.*

ND or nd = not determined; and NI or ni = not indicated.

part of **2012 Gray Whales Count, Survey Report** © Gray Whales Count, 2013,
prepared by Michael H Smith, Project Coordinator, Gray Whales Count, Santa Barbara, California, USA.

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2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	10:38:00 PST	Blow	
	18:38-GMT	198° / 696 m Dir: West Slow travel	
	10:45:00 PST	Body	Inside /
	18:45-GMT	245° / 1020 m Dir: West Slow travel	Outside
Feb 19	Total 3 Calves 0	Er Gray whale (northbound)	
Day 7 of 98			
Sighting Number	06 Fair - 3	Er Total 1 — 0 Calves at sighting	
	12:19:00 PST	— / Blow	
	20:19-GMT	247° / 2260 m Dir: West Slow travel	
		<i>Whale seen by observer at 126+220</i>	
Sighting Number	09 Fair - 3	Er Total 2 — 0 Calves at sighting	
	13:14:00 PST	Boat / Blow	
	21:14-GMT	128° / 3088 m Dir: West Slow travel	
		<i>Condor Express</i>	
	13:21:00 PST	Blow	
	21:21-GMT	138° / 2749 m Dir: West Slow travel	
	13:28:00 PST	Blow	
	21:28-GMT	149° / 1922 m Dir: West Slow travel	
	13:36:00 PST	Blow	
	21:36-GMT	176° / 1403 m Dir: West Slow travel	
	13:50:00 PST	Blow	Inside /
	21:50-GMT	238° / 1674 m Dir: West Slow travel	Outside
Feb 21	Total 3 Calves 0	Er Gray whale (northbound)	
Day 9 of 98			
Sighting Number	16 Good - 1	Er Total 3 — 0 Calves at sighting	
	11:14:00 PST	— / Blow	
	19:14-GMT	145° / 13138 m Dir: West Slow travel	
		<i>very tall blows in the horizon</i>	
	11:16:00 PST	Blow	
	19:16-GMT	146° / 5027 m Dir: West Slow travel • Fluke	
	11:25:00 PST	Blow	
	19:25-GMT	147° / 5027 m Dir: West Slow travel	
	11:30:00 PST	Blow	
	19:30-GMT	147° / 13138 m Dir: West Slow travel • Fluke	
		<i>saw two flukes</i>	
	11:34:00 PST	Blow	
	19:34-GMT	149° / 5027 m Dir: West Slow travel	
	11:37:00 PST	Blow	
	19:37-GMT	149° / 5027 m Dir: West Slow travel	
	11:42:00 PST	Blow	
	19:42-GMT	152° / 5027 m Dir: West Slow travel	
	11:47:00 PST	Blow	
	19:47-GMT	153° / 5027 m Dir: West Slow travel • Fluke	
		<i>saw 3 flukes</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	Time	CueTip / Saw	Holly / Buoys
		11:59:00 PST	Blow	
		19:59-GMT	155° / 5027 m Dir: West Slow travel • Fluke	
			<i>saw two flukes</i>	
		12:06:00 PST	Blow	
		20:06-GMT	164° / 3528 m Dir: West Slow travel • Fluke	
		12:11:00 PST	Blow	
		20:11-GMT	169° / 2749 m Dir: West Slow travel • Fluke	
		12:21:00 PST	Blow	
		20:21-GMT	183° / 3088 m Dir: West Slow travel • Fluke	
		12:25:00 PST	Blow	
		20:25-GMT	190° / 2749 m Dir: West Slow travel	
		12:30:00 PST	Blow	
		20:30-GMT	200° / 3088 m Dir: West Slow travel • Fluke	
		12:34:00 PST	Blow	
		20:34-GMT	209° / 3088 m Dir: West Slow travel • Fluke	
		12:40:00 PST	Blow	
		20:40-GMT	219° / 3088 m Dir: West Slow travel	
		12:48:00 PST	Blow	
		20:48-GMT	228° / 3528 m Dir: West Slow travel • Fluke	
		12:51:00 PST	Blow	Outside /
		20:51-GMT	235° / 3528 m Dir: West Slow travel • Fluke	Outside

Feb 22 Total 3 Calves 0
Day 10 of 98

Er Gray whale (northbound)

Sighting Number	26	Good - 0	Er Total 1 — 0 Calves at sighting
			14:06:00 PST — / Blow
			22:06-GMT 207° / 1674 m Dir: West Slow travel • Fluke
			14:09:00 PST Blow
			22:09-GMT 224° / 1922 m Dir: West Slow travel • Fluke
			14:13:00 PST Blow
			22:13-GMT 240° / 1922 m Dir: West Slow travel • Fluke
			Inside / Outside

Sighting Number	32	Fair - 0	Er Total 2 — 0 Calves at sighting
			16:25:00 PST — / Breach
			0:25; 2/23/2012-GMT 204° / 1922 m Dir: West Slow travel • Breach
			16:26:00 PST Blow
			0:26; 2/23/2012-GMT 211° / 1922 m Dir: West Slow travel
			16:27:00 PST Blow
			0:27; 2/23/2012-GMT 213° / 1922 m Dir: West Slow travel
			16:27:00 PST Blow
			0:27; 2/23/2012-GMT 214° / 2260 m Dir: West Slow travel
			16:28:00 PST Body
			0:28; 2/23/2012-GMT 216° / 2260 m Dir: West Slow travel • Fluke
			16:38:00 PST Blow
			0:38; 2/23/2012-GMT 240° / 2260 m Dir: West Slow travel
			16:43:00 PST Blow
			0:43; 2/23/2012-GMT 252° / 2260 m Dir: West Slow travel • Fluke
			Inside / Outside

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Feb 23	Total 1 Calves 0	Er Gray whale (northbound)	
Day 11 of 98	Sighting Number 06	Fair - 2	<i>Er</i> Total 1 — 0 Calves at sighting
	10:18:00 PST	— / Blow	
	18:18-GMT	222° / 1208 m Dir: West	Slow travel
	10:23:00 PST	Blow	
	18:23-GMT	159° / 550 m Dir: West	Slow travel
	10:24:00 PST	Blow	
	18:24-GMT	175° / 508 m Dir: West	Slow travel
	10:26:00 PST	Blow	
	18:26-GMT	187° / 489 m Dir: West	Slow travel
	10:28:00 PST	Blow	
	18:28-GMT	237° / 471 m Dir: West	Slow travel
	10:32:00 PST	Blow	
	18:32-GMT	270° / 600 m Dir: West	Slow travel
	10:35:00 PST	Blow	Inside /
	18:35-GMT	287° / 1483 m Dir: West	Slow travel Inside
Feb 24	Total 2 Calves 0	Er Gray whale (northbound)	
Day 12 of 98	Sighting Number 02	Poor - 2	<i>Er</i> Total 2 — 0 Calves at sighting
	10:14:00 PST	— / Blow	
	18:14-GMT	110° / 2749 m Dir: West	Slow travel
	10:24:00 PST	Blow	
	18:24-GMT	116° / 2749 m Dir: West	Slow travel • Fluke
	10:39:00 PST	Blow	
	18:39-GMT	139° / 827 m Dir: West	Slow travel
	10:46:00 PST	Blow	
	18:46-GMT	217° / 550 m Dir: West	Slow travel • Fluke
	11:00:00 PST	ni	Inside /
	19:00-GMT	272° / 2749 m Dir: West	Slow travel Outside
Feb 26	Total 10 Calves 0	Er Gray whale (northbound)	
Day 14 of 98	Sighting Number 06	Fair - 3	<i>Er</i> Total 3 — 0 Calves at sighting
	11:00:00 PST	— / Blow	
	19:00-GMT	135° / 2749 m Dir: West	Slow travel
	11:05:00 PST	Blow	
	19:05-GMT	138° / 3088 m Dir: West	Slow travel
	11:10:00 PST	Blow	
	19:10-GMT	142° / 3088 m Dir: West	Slow travel
	11:15:00 PST	Blow	
	19:15-GMT	147° / 2749 m Dir: West	Slow travel • Fluke
	11:21:00 PST	Blow	
	19:21-GMT	154° / 2749 m Dir: West	Slow travel
	11:26:00 PST	Blow	
	19:26-GMT	162° / 2260 m Dir: West	Slow travel • Fluke

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Time			
11:29:00 PST	Blow		
19:29-GMT	170° / 2260 m Dir: West	Slow travel	
11:31:00 PST	Blow		
19:31-GMT	174° / 2260 m Dir: West	Slow travel	
11:34:00 PST	Blow		
19:34-GMT	185° / 1922 m Dir: West	Slow travel	
11:39:00 PST	Blow		
19:39-GMT	199° / 1674 m Dir: West	Slow travel • Fluke	
11:45:00 PST	Blow		
19:45-GMT	223° / 1674 m Dir: West	Slow travel	
11:50:00 PST	Blow		Inside /
19:50-GMT	238° / 2260 m Dir: West	Slow travel	Outside
Sighting Number	13 Good - 3	Er Total 2 — 0 Calves at sighting	
12:52:00 PST	— / Blow		
20:52-GMT	130° / 3088 m Dir: West	Slow travel	
12:55:00 PST	Blow		
20:55-GMT	131° / 2749 m Dir: West	Slow travel	
12:58:00 PST	Blow		
20:58-GMT	134° / 2749 m Dir: West	Slow travel	
13:01:00 PST	Blow		
21:01-GMT	135° / 2260 m Dir: West	Slow travel	
13:05:00 PST	Blow		
21:05-GMT	138° / 1922 m Dir: West	Slow travel	
13:15:00 PST	Body		
21:15-GMT	149° / 1674 m Dir: West	Slow travel	
13:20:00 PST	Blow		
21:20-GMT	177° / m Dir: West	Slow travel	
13:23:00 PST	Blow		
21:23-GMT	206° / 1483 m Dir: West	Slow travel	
13:25:00 PST	Blow		
21:25-GMT	253° / 1208 m Dir: West	Slow travel	
13:26:00 PST	Blow		
21:26-GMT	240° / 661 m Dir: West	Slow travel	
13:27:00 PST	Blow		
21:27-GMT	256° / 629 m Dir: West	Slow travel	
13:32:00 PST	Blow		Inside /
21:32-GMT	263° / 1020 m Dir: West	Slow travel	Outside
Sighting Number	20 Good - 2	Er Total 1 — 0 Calves at sighting	
15:10:00 PST	— / Blow		
23:10-GMT	137° / 913 m Dir: West	Slow travel	
15:13:00 PST	Blow		
23:13-GMT	159° / 600 m Dir: West	Slow travel	
15:15:00 PST	Blow		
23:15-GMT	168° / 550 m Dir: West	Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:17:00 PST	Blow	
	23:17-GMT	198° / 455 m Dir: West Slow travel	
	15:19:00 PST	Blow	
	23:19-GMT	224° / 600 m Dir: West Slow travel	
	15:22:00 PST	Blow	
	23:22-GMT	250° / 696 m Dir: West Slow travel	
	15:27:00 PST	Blow	Inside /
	23:27-GMT	261° / 1331 m Dir: West Slow travel	Outside
Sighting Number	21 Good - 2	<i>Er</i> Total 1 — 0 Calves at sighting	
	15:16:00 PST	— / Blow	
	23:16-GMT	206° / 2749 m Dir: West Slow travel	
	15:21:00 PST	Blow	
	23:21-GMT	224° / 2260 m Dir: West Slow travel	
	15:44:00 PST	Blow	Inside /
	23:44-GMT	252° / 2749 m Dir: West Slow travel	Outside
Sighting Number	24 Fair - 1	<i>Er</i> Total 3 — 0 Calves at sighting	
	16:34:00 PST	— / Blow	
	0:34; 2/27/2012-GMT	159° / 3088 m Dir: West Slow travel • Fluke	
	16:42:00 PST	ni	
	0:42; 2/27/2012-GMT	168° / 3088 m Dir: West Slow travel	
	16:43:00 PST	ni	
	0:43; 2/27/2012-GMT	169° / 3088 m Dir: West Slow travel • Fluke	
	16:50:00 PST	ni	
	0:50; 2/27/2012-GMT	178° / 2749 m Dir: West Slow travel • Fluke	
	16:53:00 PST	Blow	
	0:53; 2/27/2012-GMT	184° / 3088 m Dir: West Slow travel	
	16:55:00 PST	ni	
	0:55; 2/27/2012-GMT	188° / 3088 m Dir: West Slow travel • Fluke	
	16:57:00 PST	ni	nd / nd
	0:57; 2/27/2012-GMT	189° / 3088 m Dir: West Slow travel • Fluke	
Feb 28	Total 2 Calves 0	Er Gray whale (northbound)	
Day 16 of 98			
Sighting Number	08 Fair - 4	<i>Er</i> Total 2 — 0 Calves at sighting	
	12:14:00 PST	— / Blow	
	20:14-GMT	143° / 629 m Dir: West Slow travel	
	12:18:00 PST	Blow	nd / nd
	20:18-GMT	159° / 388 m Dir: West Slow travel	
Feb 29	Total 10 Calves 0	Er Gray whale (northbound)	
Day 17 of 98			
Sighting Number	09 Fair - 4	<i>Er</i> Total 4 — 0 Calves at sighting	
	10:30:00 PST	Phone Call / Blow	
	18:30-GMT	166° / 5027 m Dir: West Slow travel	
	<i>Call from Larry at More Mesa</i>		
	10:35:00 PST	Blow	
	18:35-GMT	174° / 3528 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Time			
10:43:00 PST	Blow		
18:43-GMT	187° / 5027 m Dir: West	Slow travel • Fluke	
	<i>multiple flukes</i>		
10:52:00 PST	Blow		
18:52-GMT	197° / 3528 m Dir: West	Slow travel	
11:00:00 PST	Blow		
19:00-GMT	205° / 3528 m Dir: West	Slow travel	
11:02:00 PST	Blow		
19:02-GMT	211° / 3528 m Dir: West	Slow travel	
11:11:00 PST	Blow		Outside /
19:11-GMT	219° / 3528 m Dir: West	Slow travel	Outside
Sighting Number	12 Fair - 4	Er Total 3 — 0 Calves at sighting	
11:05:00 PST	— / Blow		
19:05-GMT	161° / 3528 m Dir: West	Slow travel	
11:12:00 PST	Blow		
19:12-GMT	174° / 3528 m Dir: West	Slow travel • Fluke	
11:16:00 PST	Blow		
19:16-GMT	182° / 3088 m Dir: West	Slow travel	
11:20:00 PST	Blow		
19:20-GMT	186° / 1922 m Dir: West	Slow travel	
11:22:00 PST	Blow		
19:22-GMT	191° / 2749 m Dir: West	Slow travel • Fluke	
11:25:00 PST	Blow		
19:25-GMT	193° / 2749 m Dir: West	Slow travel • Fluke	
11:28:00 PST	Blow		
19:28-GMT	197° / 3088 m Dir: West	Slow travel	
11:32:00 PST	Blow		
19:32-GMT	207° / 3528 m Dir: West	Slow travel	
11:35:00 PST	Blow		
19:35-GMT	208° / 3528 m Dir: West	Slow travel	
11:38:00 PST	Blow		
19:38-GMT	213° / 3528 m Dir: West	Slow travel	
11:44:00 PST	Blow		
19:44-GMT	222° / m Dir: West	Slow travel	
11:47:00 PST	Blow		
19:47-GMT	226° / 3528 m Dir: West	Slow travel	
11:50:00 PST	Blow		
19:50-GMT	227° / 3528 m Dir: West	Slow travel • Fluke	
11:58:00 PST	Blow		
19:58-GMT	236° / 3528 m Dir: West	Slow travel	
12:01:00 PST	Blow		Outside /
20:01-GMT	239° / 3528 m Dir: West	Slow travel	Outside
Sighting Number	25 Good - 2	Er Total 3 — 0 Calves at sighting	
14:41:00 PST	— / Blow		
22:41-GMT	161° / 2749 m Dir: West	Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	14:48:00 PST	Blow	
	22:48-GMT	178° / 2749 m Dir: West Slow travel	
	14:55:00 PST	Blow	
	22:55-GMT	200° / 2749 m Dir: West Slow travel	
	14:56:00 PST	Blow	nd /
	22:56-GMT	206° / 2749 m Dir: West Slow travel • Fluke	Outside
Mar 02	Total 14 Calves 0	Er Gray whale (northbound)	
Day 19 of 98			
Sighting Number	02 Fair - 0	<i>Er</i> Total 2 — 0 Calves at sighting	
	9:28:00 PST	— / Blow	
	17:28-GMT	117° / 3528 m Dir: West Slow travel	
	9:45:00 PST	Blow	
	17:45-GMT	122° / 3528 m Dir: West Slow travel	
	10:02:00 PST	Blow	
	18:02-GMT	133° / 2749 m Dir: West Slow travel	
	10:15:00 PST	Blow	
	18:15-GMT	139° / 2749 m Dir: West Slow travel	
	10:22:00 PST	Blow	
	18:22-GMT	143° / 2260 m Dir: West Slow travel • Fluke • Rolling <i>mating behavior most of the way, traveling very slowly</i>	
	10:57:00 PST	Blow	
	18:57-GMT	173° / 1331 m Dir: West Slow travel	
	11:08:00 PST	Blow	
	19:08-GMT	196° / 1020 m Dir: West Slow travel	
	11:23:00 PST	Blow	Inside /
	19:23-GMT	230° / 1020 m Dir: West Slow travel	Outside
Sighting Number	09 Good - 1	<i>Er</i> Total 4 — 0 Calves at sighting	
	12:02:00 PST	— / Blow	
	20:02-GMT	193° / 3528 m Dir: West Slow travel • Fluke	
	12:09:00 PST	Blow	
	20:09-GMT	200° / 3528 m Dir: West Slow travel • Fluke	
	12:27:00 PST	Blow	
	20:27-GMT	218° / 3528 m Dir: West Slow travel • Fluke	
	12:42:00 PST	Blow	Outside /
	20:42-GMT	232° / 5027 m Dir: West Slow travel • Fluke	Outside
Sighting Number	16 Excellent - 1	<i>Er</i> Total 3 — 0 Calves at sighting	
	13:34:00 PST	Boat / Blow	
	21:34-GMT	109° / 5027 m Dir: West Slow travel <i>Condor Express tracking whales</i>	
	13:40:00 PST	Blow	
	21:40-GMT	108° / 5027 m Dir: West Slow travel	
	13:48:00 PST	Blow	
	21:48-GMT	111° / 5027 m Dir: West Slow travel	
	14:14:00 PST	Blow	
	22:14-GMT	118° / 3528 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	14:24:00 PST	Body	
	22:24-GMT	125° / 3088 m Dir: West Slow travel	
	14:46:00 PST	Blow	
	22:46-GMT	160° / 1674 m Dir: West Slow travel	
	14:52:00 PST	Blow	
	22:52-GMT	178° / 1483 m Dir: West Slow travel	
	14:55:00 PST	Blow	
	22:55-GMT	186° / 1483 m Dir: West Slow travel • Fluke	
	15:06:00 PST	Body	
	23:06-GMT	218° / 1922 m Dir: West Slow travel • Breach	
	15:11:00 PST	Blow	Inside /
	23:11-GMT	233° / 2260 m Dir: West Slow travel • Fluke	Outside
Sighting Number	21	Excellent - 1	Er Total 3 — 0 Calves at sighting
	14:59:00 PST	— / Blow	
	22:59-GMT	246° / 3528 m Dir: West Slow travel	
	15:05:00 PST	Blow	nd / nd
	23:05-GMT	255° / 5027 m Dir: West Slow travel	
Sighting Number	29	Excellent - 1	Er Total 2 — 0 Calves at sighting
	16:27:00 PST	— / Blow	
	0:27; 3/3/2012-GMT	105° / 3528 m Dir: West Slow travel	
	16:32:00 PST	Blow	
	0:32; 3/3/2012-GMT	105° / 3528 m Dir: West Slow travel	
	16:47:00 PST	Blow	
	0:47; 3/3/2012-GMT	104° / 3088 m Dir: West Slow travel	
	16:55:00 PST	Blow	nd / nd
	0:55; 3/3/2012-GMT	106° / 2749 m Dir: West Slow travel	
Mar 03	Total 7 Calves 0	Er Gray whale (northbound)	
Day 20 of 98			
Sighting Number	01	Fair - 0	Er Total 2 — 0 Calves at sighting
	8:54:00 PST	Passerby / Blow	
	16:54-GMT	274° / 1483 m Dir: West Slow travel	
		<i>possibly mating</i>	
	8:58:00 PST	Body	
	16:58-GMT	277° / 1674 m Dir: West Slow travel	
	9:05:00 PST	Blow	Inside /
	17:05-GMT	281° / 2749 m Dir: West Slow travel	Through
Sighting Number	03	Fair - 0	Er Total 2 — 0 Calves at sighting
	9:14:00 PST	— / Blow	
	17:14-GMT	162° / 2260 m Dir: West Slow travel	
		<i>mating</i>	
	9:25:00 PST	Blow	
	17:25-GMT	173° / 2749 m Dir: West Slow travel • Fluke • Rolling	
	9:35:00 PST	Blow	
	17:35-GMT	190° / 2749 m Dir: West Slow travel • Rolling	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	9:54:00 PST	Blow	
	17:54-GMT	193° / 2749 m Dir: West Slow travel	
	10:00:00 PST	Body	
	18:00-GMT	188° / 3088 m Dir: East Slow travel • Fluke	
	10:02:00 PST	Blow	
	18:02-GMT	188° / 3088 m Dir: No direction Slow travel • Fluke	
	10:26:00 PST	Blow	
	18:26-GMT	186° / 3088 m Dir: No direction Slow travel • Rolling	
	10:36:00 PST	Blow	
	18:36-GMT	188° / 3088 m Dir: West Slow travel • Rolling	
	11:05:00 PST	Blow	nd /
	19:05-GMT	184° / 2749 m Dir: West Slow travel • Fluke	Outside
Sighting Number	27	Good - 1	Er Total 1 — 0 Calves at sighting
	13:45:00 PST	— / Blow	
	21:45-GMT	205° / 1483 m Dir: West Slow travel	
	13:48:00 PST	Body	
	21:48-GMT	224° / 1208 m Dir: West Slow travel	
	13:52:00 PST	Blow	
	21:52-GMT	236° / 1331 m Dir: West Slow travel	
	13:58:00 PST	Blow	
	21:58-GMT	255° / 1674 m Dir: West Slow travel	
	14:03:00 PST	Blow	Inside /
	22:03-GMT	264° / 2749 m Dir: West Slow travel	Outside
Sighting Number	28	Good - 1	Er Total 1 — 0 Calves at sighting
	14:11:00 PST	— / Body	
	22:11-GMT	182° / 2749 m Dir: West Slow travel	
	14:16:00 PST	Blow	
	22:16-GMT	196° / 2260 m Dir: West Slow travel	
	14:22:00 PST	Blow	
	22:22-GMT	213° / 2749 m Dir: West Slow travel • Fluke	
	14:27:00 PST	Blow	
	22:27-GMT	224° / 2749 m Dir: West Slow travel	
	14:31:00 PST	Blow	
	22:31-GMT	228° / 3088 m Dir: West Slow travel	
	14:35:00 PST	Blow	Outside /
	22:35-GMT	233° / 3088 m Dir: West Slow travel	Outside
Sighting Number	29	Good - 2	Er Total 1 — 0 Calves at sighting
	14:54:00 PST	— / Blow	
	22:54-GMT	154° / 678 m Dir: West Slow travel	
	15:03:00 PST	Blow	
	23:03-GMT	212° / 447 m Dir: West Slow travel	
	15:08:00 PST	Blow	Inside /
	23:08-GMT	258° / 696 m Dir: West Slow travel	Outside

Mar 04 Total 5 Calves 0

Er Gray whale (northbound)

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	06 Fair - 0	Er Total 2 — 0 Calves at sighting	
	9:53:00 PST	— / Blow	
	17:53-GMT	171° / 3088 m Dir: West Slow travel	
	9:58:00 PST	Blow	
	17:58-GMT	179° / 3528 m Dir: West Slow travel	
	10:01:00 PST	Body	nd / nd
	18:01-GMT	181° / 3528 m Dir: West Slow travel • Fluke	
Sighting Number	14 Fair - 2	Er Total 2 — 0 Calves at sighting	
	12:41:00 PST	— / Blow	
	20:41-GMT	98° / 3088 m Dir: West Slow travel	
	12:50:00 PST	Blow	
	20:50-GMT	104° / 2749 m Dir: West Slow travel	
	12:54:00 PST	Blow	
	20:54-GMT	105° / 2749 m Dir: West Slow travel	
	12:59:00 PST	Blow	
	20:59-GMT	104° / 2260 m Dir: West Slow travel	
	13:02:00 PST	Blow	
	21:02-GMT	103° / 1922 m Dir: West Slow travel	
	13:11:00 PST	Blow	
	21:11-GMT	106° / 1922 m Dir: West Slow travel	
	13:14:00 PST	Blow	
	21:14-GMT	114° / 1674 m Dir: West Slow travel	
	13:19:00 PST	Blow	
	21:19-GMT	124° / 1674 m Dir: West Slow travel	
	13:20:00 PST	Blow	
	21:20-GMT	128° / 1331 m Dir: West Slow travel	
	13:24:00 PST	Blow	
	21:24-GMT	145° / 913 m Dir: West Slow travel	
	13:29:00 PST	Blow	
	21:29-GMT	191° / 600 m Dir: West Slow travel	
	13:30:00 PST	Blow	
	21:30-GMT	195° / 913 m Dir: West Slow travel • Fluke	
	13:36:00 PST	Blow	
	21:36-GMT	246° / 1106 m Dir: West Slow travel	
	13:44:00 PST	Blow	Inside /
	21:44-GMT	266° / 1331 m Dir: West Slow travel • Fluke	Outside
Sighting Number	33 Fair - 2	Er Total 1 — 0 Calves at sighting	
	16:32:00 PST	— / Body	
	0:32; 3/5/2012-GMT	144° / 1483 m Dir: West Slow travel • Fluke	
	16:39:00 PST	Blow	
	0:39; 3/5/2012-GMT	144° / 1483 m Dir: West Slow travel • Fluke	
	16:48:00 PST	Body	
	0:48; 3/5/2012-GMT	154° / 1106 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	16:54:00 PST	Body	nd / nd
	0:54; 3/5/2012-GMT	190° / 883 m Dir: West Slow travel	
<hr/>			
Mar 05	Total 9 Calves 0	Er Gray whale (northbound)	
Day 22 of 98			
Sighting Number	12 Fair - 0	Er Total 1 — 0 Calves at sighting	
	10:43:00 PST	— / Blow	
	18:43-GMT	127° / 778 m Dir: West Slow travel	
	10:46:00 PST	Blow	
	18:46-GMT	151° / 661 m Dir: West Slow travel	
	10:50:00 PST	Body	
	18:50-GMT	175° / 600 m Dir: West Slow travel • Spyhop	
	10:51:00 PST	Blow	nd / nd
	18:51-GMT	187° / 528 m Dir: West Slow travel	
Sighting Number	14 Fair - 0	Er Total 1 — 0 Calves at sighting	
	11:22:00 PST	— / Blow	
	19:22-GMT	154° / 696 m Dir: West Slow travel	
	11:24:00 PST	Blow	
	19:24-GMT	170° / 661 m Dir: West Slow travel	
	11:25:00 PST	Blow	
	19:25-GMT	182° / 489 m Dir: West Slow travel	
	11:27:00 PST	Blow	
	19:27-GMT	187° / 508 m Dir: West Slow travel	
	11:29:00 PST	Body	Inside /
	19:29-GMT	219° / 574 m Dir: West Slow travel	Inside
Sighting Number	33 Fair - 2	Er Total 4 — 0 Calves at sighting	
	16:06:00 PST	— / Blow	
	0:06; 3/6/2012-GMT	177° / 2749 m Dir: West Slow travel	
	16:12:00 PST	Blow	
	0:12; 3/6/2012-GMT	192° / 2749 m Dir: West Slow travel	
	16:17:00 PST	Blow	
	0:17; 3/6/2012-GMT	204° / 2749 m Dir: West Slow travel	
	16:24:00 PST	Blow	
	0:24; 3/6/2012-GMT	219° / 3088 m Dir: West Slow travel	
	16:30:00 PST	Blow	
	0:30; 3/6/2012-GMT	230° / 3088 m Dir: West Slow travel	
	16:37:00 PST	Blow	Outside /
	0:37; 3/6/2012-GMT	240° / 3528 m Dir: West Slow travel	Outside
Sighting Number	35 Fair - 2	Er Total 3 — 0 Calves at sighting	
	16:56:00 PST	— / Blow	
	0:56; 3/6/2012-GMT	182° / 3528 m Dir: West Slow travel • Fluke	
	17:03:00 PST	Blow	nd / nd
	1:03; 3/6/2012-GMT	198° / 3528 m Dir: West Slow travel • Fluke	
		<i>a lot of common dolphins</i>	

Mar 06 Total 1 Calves 0 Er Gray whale (northbound)
Day 23 of 98

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	05 Poor - 3	Er Total 1 — 0 Calves at sighting	
	9:23:00 PST	— / Blow	
	17:23-GMT	108° / 2260 m Dir: West Slow travel	
	9:25:00 PST	Blow	
	17:25-GMT	113° / 1674 m Dir: West Slow travel	
	9:29:00 PST	Blow	
	17:29-GMT	115° / 1208 m Dir: West Slow travel	
	9:34:00 PST	Blow	
	17:34-GMT	118° / 946 m Dir: West Slow travel	
	9:38:00 PST	Blow	
	17:38-GMT	120° / 827 m Dir: West Slow travel	
	9:42:00 PST	Blow	
	17:42-GMT	142° / 696 m Dir: West Slow travel	
	9:44:00 PST	Blow	
	17:44-GMT	155° / 574 m Dir: West Slow travel	
	9:46:00 PST	Blow	
	17:46-GMT	168° / 489 m Dir: West Slow travel	
	9:47:00 PST	Blow	
	17:47-GMT	183° / 508 m Dir: West Slow travel	
	9:52:00 PST	Blow	Inside /
	17:52-GMT	227° / 883 m Dir: West Slow travel	Outside

Mar 07 Total 27 Calves 0 Er Gray whale (northbound)

Day 24 of 98

Sighting Number	05 Fair - 1	Er Total 4 — 0 Calves at sighting	
	9:14:00 PST	— / Blow	
	17:14-GMT	139° / 5027 m Dir: West Slow travel	
	9:18:00 PST	Blow	
	17:18-GMT	142° / 2749 m Dir: West Slow travel	
	9:29:00 PST	Blow	
	17:29-GMT	144° / 3528 m Dir: West Slow travel	
	9:30:00 PST	Blow	
	17:30-GMT	146° / 3528 m Dir: West Slow travel	
	9:40:00 PST	Blow	
	17:40-GMT	154° / 2749 m Dir: West Slow travel • Fluke	
	9:42:00 PST	Blow	
	17:42-GMT	157° / 3528 m Dir: West Slow travel • Fluke	
	9:46:00 PST	Blow	
	17:46-GMT	161° / 3528 m Dir: West Slow travel • Rolling	
		<i>spread into groups of 2</i>	
	9:55:00 PST	Blow	
	17:55-GMT	184° / 1922 m Dir: West Slow travel • Rolling • Fluke	
	9:57:00 PST	Blow	
	17:57-GMT	192° / 1922 m Dir: West Slow travel • Rolling	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	10:14:00 PST	Blow	Inside /
	18:14-GMT	236° / 2260 m Dir: West Slow travel	Outside
	<i>split into 2 pairs, one traveling further offshore- data indicates closer pair</i>		
Sighting Number	09 Fair - 3	Er Total 3 — 0 Calves at sighting	
	11:07:00 PST	— / Blow	
	19:07-GMT	115° / 5027 m Dir: West Slow travel	
	11:18:00 PST	Blow	
	19:18-GMT	123° / 3528 m Dir: West Slow travel	
	11:29:00 PST	Blow	
	19:29-GMT	136° / 3528 m Dir: West Slow travel	
	11:34:00 PST	Blow	
	19:34-GMT	148° / 3528 m Dir: West Slow travel	
	11:36:00 PST	Blow	
	19:36-GMT	149° / 1922 m Dir: West Slow travel	
	11:39:00 PST	Blow	
	19:39-GMT	155° / 1922 m Dir: West Slow travel	
	11:43:00 PST	Blow	
	19:43-GMT	165° / 2749 m Dir: West Slow travel • Fluke	
	11:46:00 PST	Blow	
	19:46-GMT	171° / 2749 m Dir: West Slow travel • Fluke	
	11:47:00 PST	Blow	
	19:47-GMT	174° / 2749 m Dir: West Slow travel	
	11:49:00 PST	Blow	
	19:49-GMT	179° / 2260 m Dir: West Slow travel	
	11:54:00 PST	Blow	
	19:54-GMT	192° / 2260 m Dir: West Slow travel	
	11:56:00 PST	Blow	
	19:56-GMT	199° / 2749 m Dir: West Slow travel	
	12:06:00 PST	Blow	
	20:06-GMT	217° / 3528 m Dir: West Slow travel	
	12:13:00 PST	Blow	Outside /
	20:13-GMT	226° / 3528 m Dir: West Slow travel	Outside
Sighting Number	12 Fair - 3	Er Total 2 — 0 Calves at sighting	
	11:32:00 PST	— / Blow	
	19:32-GMT	181° / 3528 m Dir: West Slow travel	
	11:33:00 PST	Blow	
	19:33-GMT	190° / 2749 m Dir: West Slow travel	
	11:38:00 PST	Blow	
	19:38-GMT	198° / 2749 m Dir: West Slow travel	
	11:41:00 PST	Blow	
	19:41-GMT	202° / 3528 m Dir: West Slow travel	
	11:43:00 PST	Blow	
	19:43-GMT	205° / 3528 m Dir: West Slow travel	
	11:46:00 PST	Blow	
	19:46-GMT	208° / 3528 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	11:49:00 PST	Blow	
	19:49-GMT	212° / 3528 m Dir: West Slow travel	
	11:56:00 PST	Blow	
	19:56-GMT	223° / 3088 m Dir: West Slow travel	
	12:04:00 PST	Blow	
	20:04-GMT	227° / 3528 m Dir: West Slow travel	
	12:06:00 PST	Blow	Outside /
	20:06-GMT	231° / 3088 m Dir: West Slow travel	Outside
Sighting Number	16 Fair - 3	Er Total 2 — 0 Calves at sighting	
	12:10:00 PST	— / Blow	
	20:10-GMT	200° / 1106 m Dir: West Slow travel	
	12:16:00 PST	Body	
	20:16-GMT	226° / 1106 m Dir: West Slow travel • Fluke	
	12:18:00 PST	Blow	Inside /
	20:18-GMT	241° / 1674 m Dir: West Slow travel • Fluke	Outside
Sighting Number	18 Fair - 3	Er Total 4 — 0 Calves at sighting	
	12:37:00 PST	— / Blow	
	20:37-GMT	166° / 3528 m Dir: West Slow travel	
	12:44:00 PST	Blow	
	20:44-GMT	179° / 3528 m Dir: West Slow travel • Fluke	
	12:49:00 PST	Blow	
	20:49-GMT	183° / 3528 m Dir: West Slow travel • Fluke	
	12:56:00 PST	Blow	
	20:56-GMT	190° / 3528 m Dir: West Slow travel	
	13:03:00 PST	Blow	
	21:03-GMT	198° / 3528 m Dir: West Slow travel	
	13:04:00 PST	Blow	
	21:04-GMT	199° / 3528 m Dir: West Slow travel	
	13:06:00 PST	Blow	
	21:06-GMT	202° / 3528 m Dir: West Slow travel	
	13:15:00 PST	Blow	
	21:15-GMT	211° / 3528 m Dir: West Slow travel	
		<i>4 blows</i>	
	13:16:00 PST	Body	
	21:16-GMT	212° / 3528 m Dir: West Slow travel • Fluke	
	13:22:00 PST	Blow	
	21:22-GMT	218° / 3528 m Dir: West Slow travel	
	13:37:00 PST	Blow	Outside /
	21:37-GMT	230° / 5027 m Dir: West Slow travel	Outside
Sighting Number	22 Fair - 3	Er Total 3 — 0 Calves at sighting	
	13:18:00 PST	— / Blow	
	21:18-GMT	111° / 3528 m Dir: West Slow travel • Fluke	
	13:28:00 PST	Blow	
	21:28-GMT	115° / 3528 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	13:32:00 PST	Blow	
	21:32-GMT	118° / 3528 m Dir: West Slow travel	
	13:35:00 PST	Blow	
	21:35-GMT	121° / 3088 m Dir: West Slow travel	
	<i>near dolphins</i>		
	13:38:00 PST	Blow	
	21:38-GMT	124° / 2749 m Dir: West Slow travel • Rolling	
	<i>saw body after blow</i>		
	13:43:00 PST	Blow	
	21:43-GMT	130° / 1922 m Dir: West Slow travel	
	13:45:00 PST	Blow	
	21:45-GMT	135° / 1922 m Dir: West Slow travel	
	13:47:00 PST	Blow	
	21:47-GMT	138° / 1922 m Dir: West Slow travel • Rolling • Fluke	
	13:50:00 PST	Blow	
	21:50-GMT	141° / 1922 m Dir: West Slow travel • Rolling	
	13:55:00 PST	Blow	
	21:55-GMT	158° / 1483 m Dir: West Slow travel • Fluke	
	<i>body after blow</i>		
	14:00:00 PST	Blow	
	22:00-GMT	197° / 1674 m Dir: West Slow travel	
	<i>body, possibly split from group</i>		
	14:01:00 PST	Blow	
	22:01-GMT	185° / 1208 m Dir: West Slow travel • Fluke	
	14:02:00 PST	Blow	
	22:02-GMT	192° / 1331 m Dir: West Slow travel	
	14:03:00 PST	Blow	Inside /
	22:03-GMT	244° / 1922 m Dir: West Slow travel	Outside
	<i>There were 3 whales at the beginning then one moved off ahead (explains why sightings have non sequential bearing readings)</i>		
	14:09:00 PST	Blow	
	22:09-GMT	226° / 1403 m Dir: West Slow travel • Fluke	
Sighting Number	28	Fair - 3	<i>Er</i> Total 1 — 0 Calves at sighting
	14:02:00 PST	— / Blow	
	22:02-GMT	189° / 2749 m Dir: West Slow travel	
	<i>white spot</i>		
	14:03:00 PST	Blow	
	22:03-GMT	191° / 2749 m Dir: West Slow travel	
	14:10:00 PST	Blow	nd /
	22:10-GMT	207° / 2749 m Dir: West Slow travel	Outside
Sighting Number	30	Fair - 3	<i>Er</i> Total 2 — 0 Calves at sighting
	14:32:00 PST	Boat / Blow	
	22:32-GMT	119° / 3528 m Dir: West Slow travel	
	<i>Double Dolphin was watching these whales</i>		
	14:40:00 PST	Blow	
	22:40-GMT	121° / 3528 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	14:51:00 PST	Blow	
	22:51-GMT	130° / 3088 m Dir: West Slow travel	
	14:54:00 PST	Blow	
	22:54-GMT	134° / 3088 m Dir: West Slow travel • Fluke	
	15:02:00 PST	Blow	
	23:02-GMT	140° / 3088 m Dir: West Slow travel • Fluke	
	15:10:00 PST	Blow	
	23:10-GMT	154° / 2260 m Dir: West Slow travel • Fluke	
		<i>body</i>	
	15:15:00 PST	Blow	
	23:15-GMT	168° / 1922 m Dir: West Slow travel • Fluke	
	15:19:00 PST	Blow	
	23:19-GMT	180° / 1922 m Dir: West Slow travel • Fluke	
	15:28:00 PST	Blow	
	23:28-GMT	217° / 1483 m Dir: West Slow travel • Fluke	
	15:47:00 PST	Blow	Inside /
	23:47-GMT	256° / 3528 m Dir: West Slow travel • Fluke	Outside
Sighting Number	32	Fair - 2	Er Total 4 — 0 Calves at sighting
	15:03:00 PST	— / Blow	
	23:03-GMT	206° / 5027 m Dir: West Slow travel • Fluke	
	15:13:00 PST	Blow	
	23:13-GMT	211° / 5027 m Dir: West Slow travel • Fluke	
		<i>3 groups and 1 further ahead</i>	
	15:16:00 PST	Blow	
	23:16-GMT	215° / 5027 m Dir: West Slow travel • Fluke	
	15:21:00 PST	Blow	
	23:21-GMT	218° / 5027 m Dir: West Slow travel	
	15:38:00 PST	Blow	Outside /
	23:38-GMT	229° / 5027 m Dir: West Slow travel	Outside
Sighting Number	37	Fair - 2	Er Total 2 — 0 Calves at sighting
	15:59:00 PST	— / Blow	
	23:59-GMT	205° / 2749 m Dir: West Slow travel	
	16:04:00 PST	Blow	
	0:04; 3/8/2012-GMT	211° / 3528 m Dir: West Slow travel	
	16:11:00 PST	Blow	
	0:11; 3/8/2012-GMT	219° / 3088 m Dir: West Slow travel	
	16:14:00 PST	Blow	
	0:14; 3/8/2012-GMT	224° / 3088 m Dir: West Slow travel	
	16:17:00 PST	Blow	
	0:17; 3/8/2012-GMT	226° / 3088 m Dir: West Slow travel	
	16:25:00 PST	Blow	Outside /
	0:25; 3/8/2012-GMT	232° / 3528 m Dir: West Slow travel	Outside
		<i>right outside Holly</i>	

Mar 08 Total 8 Calves 0
Day 25 of 98

Er Gray whale (northbound)

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number	03 Fair - 1	Er Total 1 — 0 Calves at sighting	
	9:07:00 PST	Surface	
	17:07-GMT	145° / 3088 m Dir: West Slow travel • Rolling	
	9:11:00 PST	Blow	
	17:11-GMT	148° / 3088 m Dir: West Slow travel • Rolling	
	9:17:00 PST	Body	
	17:17-GMT	150° / 3088 m Dir: West Slow travel • Rolling	
	9:19:00 PST	Body	
	17:19-GMT	151° / 3088 m Dir: West Slow travel • Rolling	
	9:28:00 PST	Blow	
	17:28-GMT	159° / 3088 m Dir: East Slow travel • Rolling	
	9:32:00 PST	Blow	
	17:32-GMT	160° / 3088 m Dir: West Slow travel • Rolling	
		<i>head surfacing</i>	
	9:39:00 PST	Body	
	17:39-GMT	162° / 2749 m Dir: West Slow travel	
	9:46:00 PST	Blow	
	17:46-GMT	171° / 3088 m Dir: West Slow travel • Rolling	
	9:51:00 PST	Body	nd / nd
	17:51-GMT	178° / 2749 m Dir: West Slow travel	
Sighting Number	06 Fair - 0	Er Total 1 — 0 Calves at sighting	
Images: MHS 6163-8	10:39:00 PST	— / Blow	
	18:39-GMT	120° / 1106 m Dir: West Slow travel	
	10:46:00 PST	Blow	
	18:46-GMT	168° / 550 m Dir: West Slow travel	
		<i>young whale</i>	
	10:49:00 PST	Blow	nd / nd
	18:49-GMT	211° / 455 m Dir: West Slow travel	
Sighting Number	26 Fair - 3	Er Total 1 — 0 Calves at sighting	
	15:11:00 PST	— / Blow	
	23:11-GMT	188° / 2260 m Dir: West Slow travel	
	15:20:00 PST	Blow	
	23:20-GMT	204° / 2749 m Dir: West Slow travel	
	15:30:00 PST	Blow	
	23:30-GMT	217° / 2749 m Dir: West Slow travel	
	15:38:00 PST	Blow	Outside /
	23:38-GMT	227° / 2749 m Dir: West Slow travel	Outside
Sighting Number	27 Fair - 2	Er Total 1 — 0 Calves at sighting	
	15:17:00 PST	— / Blow	
	23:17-GMT	215° / 3088 m Dir: West Slow travel	
	15:23:00 PST	Blow	nd / nd
	23:23-GMT	220° / 3088 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	30 Fair - 3	Er Total 2 — 0 Calves at sighting	
	16:15:00 PST	— / Blow	
	0:15; 3/9/2012-GMT	150° / 2749 m Dir: West Slow travel • Fluke	
	16:20:00 PST	Blow	
	0:20; 3/9/2012-GMT	154° / 2749 m Dir: West Slow travel	
	16:24:00 PST	Blow	
	0:24; 3/9/2012-GMT	158° / 2260 m Dir: West Slow travel • Fluke	
	16:31:00 PST	Blow	
	0:31; 3/9/2012-GMT	166° / 1922 m Dir: West Slow travel • Fluke	
	16:39:00 PST	Body	
	0:39; 3/9/2012-GMT	176° / 1922 m Dir: West Slow travel	
	16:42:00 PST	Blow	
	0:42; 3/9/2012-GMT	183° / 1922 m Dir: West Slow travel • Fluke	
	16:51:00 PST	Blow	
	0:51; 3/9/2012-GMT	204° / 1674 m Dir: West Slow travel	
	16:54:00 PST	Blow	
	0:54; 3/9/2012-GMT	213° / 1922 m Dir: West Slow travel	
	16:58:00 PST	Blow	
	0:58; 3/9/2012-GMT	224° / 1922 m Dir: West Slow travel	
Sighting Number	32 Fair - 3	Er Total 2 — 0 Calves at sighting	
	16:38:00 PST	— / Blow	
	0:38; 3/9/2012-GMT	210° / 1483 m Dir: West Slow travel • Fluke	
	16:45:00 PST	Blow	
	0:45; 3/9/2012-GMT	230° / 1922 m Dir: West Slow travel • Fluke	
Mar 09	Total 5 Calves 0	Er Gray whale (northbound)	
Day 26 of 98			
Sighting Number	14 Fair - 0	Er Total 1 — 0 Calves at sighting	
	11:02:00 PST	— / Blow	
	19:02-GMT	150° / 1483 m Dir: West Slow travel • Fluke	
	11:07:00 PST	Blow	
	19:07-GMT	178° / 1331 m Dir: West Slow travel	
		<i>5 blows</i>	
	11:12:00 PST	Blow	
	19:12-GMT	184° / 1208 m Dir: West Slow travel	
		<i>2 blows then 1 blow</i>	
Sighting Number	18 Fair - 0	Er Total 1 — 0 Calves at sighting	
	11:44:00 PST	— / Blow	
	19:44-GMT	113° / 3088 m Dir: West Slow travel	
	12:01:00 PST	Blow	
	20:01-GMT	134° / 1331 m Dir: West Slow travel	
	12:14:00 PST	Blow	
	20:14-GMT	188° / 946 m Dir: West Slow travel	
Sighting Number	23 Fair - 0	Er Total 3 — 0 Calves at sighting	
	12:42:00 PST	— / Blow	
	20:42-GMT	128° / 3528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	13:00:00 PST	Blow	
	21:00-GMT	136° / 2749 m Dir: West Slow travel	
	13:06:00 PST	Body	
	21:06-GMT	138° / 2749 m Dir: West Slow travel • Fluke	
	13:14:00 PST	Body	
	21:14-GMT	149° / 1922 m Dir: West Slow travel • Fluke	
	13:20:00 PST	Blow	
	21:20-GMT	158° / 1922 m Dir: West Slow travel	
	13:23:00 PST	Blow	
	21:23-GMT	165° / 1674 m Dir: West Slow travel	
	13:28:00 PST	Blow	
	21:28-GMT	178° / 1483 m Dir: West Slow travel	
		<i>interaction, head on going over</i>	
	13:30:00 PST	Blow	
	21:30-GMT	184° / 1674 m Dir: West Slow travel • Fluke	
	13:34:00 PST	Blow	
	21:34-GMT	199° / 1483 m Dir: West Slow travel • Fluke	
	13:35:00 PST	Breach	
	21:35-GMT	196° / 1483 m Dir: West Slow travel • Fluke • Breach	
	13:36:00 PST	Breach	
	21:36-GMT	204° / 1483 m Dir: West Slow travel • Breach	
	13:38:00 PST	Blow	
	21:38-GMT	211° / 1674 m Dir: West Slow travel • Fluke	
	13:44:00 PST	Blow	
	21:44-GMT	230° / 1922 m Dir: West Slow travel • Fluke	
	13:47:00 PST	Blow	Inside /
	21:47-GMT	234° / 1922 m Dir: West Slow travel	Outside

Mar 10 Total **20** Calves **0** Er Gray whale (northbound)

Day 27 of 98

Sighting Number	01	Fair - 2	Er Total 2 — 0 Calves at sighting
	8:52:00 PST	— / Blow	
	16:52-GMT	157° / 2749 m Dir: West Slow travel	
		<i>oil spill recovery boat half-mile outside of whales- Mr. Clean</i>	
	8:53:00 PST	Blow	
	16:53-GMT	158° / 3088 m Dir: West Slow travel	
	8:55:00 PST	Blow	
	16:55-GMT	158° / 3088 m Dir: West Slow travel • Fluke	
	9:01:00 PST	Blow	
	17:01-GMT	167° / 3088 m Dir: West Slow travel	
	9:04:00 PST	Blow	
	17:04-GMT	170° / 2749 m Dir: West Slow travel	
	9:06:00 PST	Blow	
	17:06-GMT	173° / 2749 m Dir: West Slow travel • Rolling	
	9:08:00 PST	Blow	
	17:08-GMT	176° / 2749 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	9:18:00 PST	Blow	
	17:18-GMT	193° / 3088 m Dir: West Slow travel	
	9:26:00 PST	Blow	
	17:26-GMT	215° / 3088 m Dir: West Slow travel	
	9:30:00 PST	Blow	
	17:30-GMT	218° / 3088 m Dir: West Slow travel	
	9:33:00 PST	Blow	
	17:33-GMT	222° / 3088 m Dir: West Slow travel	
	9:35:00 PST	Blow	
	17:35-GMT	226° / 3088 m Dir: West Slow travel	
	9:36:00 PST	Blow	Outside /
	17:36-GMT	230° / 3088 m Dir: West Slow travel	Outside
Sighting Number	02 Fair - 2	Er Total 1 — 0 Calves at sighting	
	9:21:00 PST	— / Blow	
	17:21-GMT	206° / 3528 m Dir: West Slow travel	
	9:22:00 PST	Blow	Outside /
	17:22-GMT	209° / 3528 m Dir: West Slow travel	Outside
		<i>part of first group S1</i>	
Sighting Number	05 Fair - 3	Er Total 2 — 0 Calves at sighting	
	9:45:00 PST	— / Blow	
	17:45-GMT	148° / 827 m Dir: West Slow travel • Fluke	
	9:52:00 PST	Blow	
	17:52-GMT	233° / 827 m Dir: West Slow travel • Fluke	
	9:57:00 PST	Blow	Inside /
	17:57-GMT	260° / 946 m Dir: West Slow travel	Outside
Sighting Number	06 Fair - 3	Er Total 3 — 0 Calves at sighting	
	9:48:00 PST	— / Blow	
	17:48-GMT	166° / 3088 m Dir: West Slow travel	
		<i>mating</i>	
	9:50:00 PST	Blow	
	17:50-GMT	170° / 3088 m Dir: West Slow travel • Rolling	
	9:55:00 PST	Blow	
	17:55-GMT	173° / 3088 m Dir: West Slow travel • Rolling	
	10:00:00 PST	Blow	
	18:00-GMT	175° / 3088 m Dir: West Slow travel	
	10:02:00 PST	Blow	
	18:02-GMT	175° / 3088 m Dir: West Slow travel • Fluke	
	10:03:00 PST	Blow	
	18:03-GMT	177° / 3088 m Dir: West Slow travel • Rolling	
	10:06:00 PST	Blow	
	18:06-GMT	181° / 3088 m Dir: West Slow travel	
	10:16:00 PST	Blow	
	18:16-GMT	190° / 3088 m Dir: West Slow travel • Fluke	
	10:18:00 PST	Blow	
	18:18-GMT	196° / 3088 m Dir: West Slow travel • Rolling	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	10:21:00 PST	Blow	
	18:21-GMT	199° / 2260 m Dir: West Slow travel	
	10:28:00 PST	Blow	
	18:28-GMT	212° / 2749 m Dir: West Slow travel	
		<i>vessel 10 approached from rear, turned to avoid whales</i>	
	10:37:00 PST	Blow	
	18:37-GMT	229° / 1922 m Dir: West Slow travel	
	10:44:00 PST	Blow	nd /
	18:44-GMT	229° / 3088 m Dir: West Slow travel	Outside
Sighting Number	07 Fair - 3	Er Total 2 — 0 Calves at sighting	
	10:07:00 PST	— / Blow	
	18:07-GMT	136° / 2260 m Dir: West Slow travel • Fluke	
	10:12:00 PST	Blow	
	18:12-GMT	147° / 2260 m Dir: West Slow travel	
	10:15:00 PST	Blow	
	18:15-GMT	153° / 1674 m Dir: West Slow travel	
	10:17:00 PST	Blow	
	18:17-GMT	160° / 1674 m Dir: West Slow travel	
	10:23:00 PST	Blow	
	18:23-GMT	185° / 1403 m Dir: West Slow travel	
	10:31:00 PST	Blow	
	18:31-GMT	229° / 913 m Dir: West Slow travel	
	10:34:00 PST	Blow	Inside /
	18:34-GMT	242° / 1483 m Dir: West Slow travel	Outside
Sighting Number	12 Fair - 3	Er Total 1 — 0 Calves at sighting	Disappeared
	10:36:00 PST	— / Blow	nd / nd
	18:36-GMT	172° / 1674 m Dir: West Slow travel	
		<i>2 blows</i>	
Sighting Number	18 Fair - 1	Er Total 2 — 0 Calves at sighting	
	12:44:00 PST	— / Blow	
	20:44-GMT	154° / 2749 m Dir: West Slow travel	
		<i>Condor S17 approaching parallel</i>	
	12:46:00 PST	Blow	
	20:46-GMT	155° / 2749 m Dir: West Slow travel	
	12:50:00 PST	Blow	
	20:50-GMT	162° / 2260 m Dir: West Slow travel	
	12:52:00 PST	Blow	
	20:52-GMT	163° / 2749 m Dir: West Slow travel	
	12:57:00 PST	Blow	
	20:57-GMT	170° / 1674 m Dir: West Slow travel • Fluke	
	13:04:00 PST	Blow	
	21:04-GMT	195° / 1674 m Dir: West Slow travel	
	13:07:00 PST	Blow	
	21:07-GMT	209° / 1674 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:11:00 PST	Blow	
	21:11-GMT	223° / 2260 m Dir: West	Slow travel
	13:13:00 PST	Blow	
	21:13-GMT	232° / 2260 m Dir: West	Slow travel
	13:16:00 PST	Blow	Inside /
	21:16-GMT	233° / 2260 m Dir: West	Outside
Sighting Number	19 Fair - 1	Er Total 1 — 0 Calves at sighting	
	13:07:00 PST	— / Blow	
	21:07-GMT	150° / 1331 m Dir: West	Slow travel
	13:12:00 PST	Body	
	21:12-GMT	195° / 913 m Dir: West	Slow travel
	13:16:00 PST	Body	
	21:16-GMT	235° / 1020 m Dir: West	Slow travel
	13:25:00 PST	Blow	Inside /
	21:25-GMT	265° / 1674 m Dir: West	Outside
Sighting Number	24 Fair - 0	Er Total 2 — 0 Calves at sighting	
	14:31:00 PST	— / Blow	
	22:31-GMT	179° / 1922 m Dir: West	Slow travel
	14:33:00 PST	Blow	
	22:33-GMT	186° / 1483 m Dir: West	Slow travel
	14:41:00 PST	Blow	
	22:41-GMT	222° / 1331 m Dir: West	Slow travel
	14:43:00 PST	Blow	Inside /
	22:43-GMT	231° / 1403 m Dir: West	Outside
Sighting Number	25 Fair - 0	Er Total 2 — 0 Calves at sighting	
	14:54:00 PST	— / Blow	
	22:54-GMT	183° / 2749 m Dir: West	Slow travel
	14:58:00 PST	Blow	
	22:58-GMT	198° / 2260 m Dir: West	Slow travel
	15:02:00 PST	Blow	
	23:02-GMT	211° / 1922 m Dir: West	Slow travel
	15:05:00 PST	Blow	
	23:05-GMT	219° / 2260 m Dir: West	Slow travel
	15:10:00 PST	Blow	Inside /
	23:10-GMT	230° / 2749 m Dir: West	Outside
Sighting Number	31 Poor - 1	Er Total 1 — 0 Calves at sighting	
	16:33:00 PST	— / Blow	
	0:33; 3/11/2012-GMT	99° / 3088 m Dir: West	Slow travel
	16:37:00 PST	Blow	
	0:37; 3/11/2012-GMT	98° / 2749 m Dir: West	Slow travel
	16:47:00 PST	Blow	
	0:47; 3/11/2012-GMT	99° / 2260 m Dir: West	Slow travel

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	16:59:00 PST	Blow	ni / ni
	0:59; 3/11/2012-GMT	103° / 1674 m Dir: West Slow travel • Rolling	
	<i>feeding in kelp</i>		
Sighting Number	32 Poor - 1	<i>Er</i> Total 1 — 0 Calves at sighting	
	16:38:00 PST	— / Blow	
	0:38; 3/11/2012-GMT	110° / 1483 m Dir: West Slow travel	
	16:42:00 PST	Blow	
	0:42; 3/11/2012-GMT	115° / 1331 m Dir: West Slow travel	
	16:48:00 PST	Blow	ni / ni
	0:48; 3/11/2012-GMT	126° / 827 m Dir: West Slow travel	
Mar 11	Total 20 Calves 0	Er Gray whale (northbound)	
Day 28 of 98			
Sighting Number	01 Poor - 2	<i>Er</i> Total 2 — 0 Calves at sighting	
	9:10:00 PDT	— / Blow	
	16:10-GMT	251° / 2749 m Dir: West Slow travel	
	9:18:00 PDT	Blow	Inside /
	16:18-GMT	252° / 2749 m Dir: West Slow travel	Outside
Sighting Number	02 Poor - 3	<i>Er</i> Total 2 — 0 Calves at sighting	
	9:29:00 PDT	— / Blow	
	16:29-GMT	142° / 2749 m Dir: West Slow travel	
	9:37:00 PDT	Blow	
	16:37-GMT	158° / 1483 m Dir: West Slow travel	
	9:42:00 PDT	Blow	
	16:42-GMT	179° / 1483 m Dir: West Slow travel	
	9:48:00 PDT	Blow	
	16:48-GMT	197° / 1674 m Dir: West Slow travel • Fluke	
	9:58:00 PDT	Blow	
	16:58-GMT	226° / 2260 m Dir: West Slow travel • Fluke	
	10:04:00 PDT	Blow	Inside /
	17:04-GMT	240° / 2260 m Dir: West Slow travel	Outside
Sighting Number	06 Fair - 2	<i>Er</i> Total 3 — 0 Calves at sighting	
	10:58:00 PDT	— / Blow	
	17:58-GMT	122° / 3528 m Dir: West Slow travel	
	<i>Sightings 6 and 8 first saw pair (6) mating not moving forward much. Then saw single (?) (8). That seemed to join 6 at about 183 and definitely passing inside of Holly as trio. Observers saw pairs that recorder thought was S8, so inaccurate data sightings (should be 3 sightings not 2)</i>		
	11:02:00 PDT	Blow	
	18:02-GMT	124° / 3088 m Dir: West Slow travel	
	11:11:00 PDT	Blow	
	18:11-GMT	127° / 3088 m Dir: West Slow travel	
	11:13:00 PDT	Blow	
	18:13-GMT	131° / 3088 m Dir: West Slow travel	
	11:15:00 PDT	Blow	
	18:15-GMT	133° / 2749 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Time			
11:17:00 PDT	Blow		
18:17-GMT	135° / 2749 m Dir: West	Slow travel	
11:20:00 PDT	Blow		
18:20-GMT	136° / 2749 m Dir: West	Slow travel	
11:23:00 PDT	Blow		
18:23-GMT	139° / 2749 m Dir: West	Slow travel	
11:26:00 PDT	Blow		
18:26-GMT	144° / 2260 m Dir: West	Slow travel • Rolling	
11:30:00 PDT	Blow		
18:30-GMT	145° / 2260 m Dir: West	Slow travel • Rolling	
11:33:00 PDT	Blow		
18:33-GMT	144° / 1922 m Dir: West	Slow travel	
11:37:00 PDT	Blow		
18:37-GMT	155° / 1922 m Dir: West	Slow travel	
11:41:00 PDT	Blow		
18:41-GMT	159° / 1922 m Dir: West	Slow travel	
11:45:00 PDT	Blow		
18:45-GMT	164° / 1674 m Dir: West	Slow travel	
11:50:00 PDT	Blow		
18:50-GMT	171° / 1403 m Dir: West	Slow travel	
11:54:00 PDT	Blow		
18:54-GMT	196° / 1483 m Dir: West	Slow travel	
12:00:00 PDT	Body		
19:00-GMT	229° / 1403 m Dir: West	Slow travel	
12:07:00 PDT	Body		Inside /
19:07-GMT	280° / 1483 m Dir: West	Slow travel	Outside
	<i>head up</i>		
Sighting Number	08 Fair - 2	<i>Er</i> Total 2 — 0 Calves at sighting	
	11:32:00 PDT	— / Blow	
	18:32-GMT	132° / 2749 m Dir: West	Slow travel
	<i>Sightings 6 and 8 first saw pair (6) mating not moving forward much. Then saw single (?) (8). That seemed to join 6 at about 183 and definitely passing inside of Holly as trio. Observers saw pairs that recorder thought was S8, so inaccurate data sightings (should be 3 sightings not 2)</i>		
	11:38:00 PDT	Blow	
	18:38-GMT	144° / 2260 m Dir: West	Slow travel
	11:48:00 PDT	Blow	
	18:48-GMT	151° / 2260 m Dir: West	Slow travel
	11:57:00 PDT	Blow	nd / nd
	18:57-GMT	185° / ni Dir: West	Slow travel
Sighting Number	11 Fair - 1	<i>Er</i> Total 3 — 0 Calves at sighting	
	12:25:00 PDT	— / Blow	
	19:25-GMT	124° / 3088 m Dir: West	Slow travel
	12:30:00 PDT	Blow	
	19:30-GMT	127° / 2260 m Dir: West	Slow travel

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	12:32:00 PDT	Blow	
	19:32-GMT	129° / 2749 m Dir: West Slow travel	
	12:34:00 PDT	Blow	
	19:34-GMT	134° / 2260 m Dir: West Slow travel	
	12:38:00 PDT	Body	
	19:38-GMT	139° / 2749 m Dir: West Slow travel	
	<i>head up</i>		
	12:40:00 PDT	Body	
	19:40-GMT	144° / 2260 m Dir: West Slow travel • Fluke	
	<i>one leading and two trailing</i>		
	12:44:00 PDT	Blow	
	19:44-GMT	152° / 1674 m Dir: West Slow travel	
	12:48:00 PDT	Body	
	19:48-GMT	156° / 1483 m Dir: West Slow travel • Fluke	
	12:52:00 PDT	Blow	
	19:52-GMT	186° / 1331 m Dir: West Slow travel	
	12:54:00 PDT	Body	
	19:54-GMT	192° / 1483 m Dir: West Slow travel • Milling	
	12:57:00 PDT	Blow	
	19:57-GMT	214° / 1483 m Dir: West Slow travel • Fluke	
	13:05:00 PDT	Blow	Inside /
	20:05-GMT	244° / 1922 m Dir: West Slow travel	Outside
Sighting Number	14 Fair - 1	<i>Er</i> Total 2 — 0 Calves at sighting	
	13:12:00 PDT	Boat / Blow	
	20:12-GMT	111° / 2749 m Dir: West Slow travel	
	13:21:00 PDT	Blow	
	20:21-GMT	119° / 1922 m Dir: West Slow travel	
	13:27:00 PDT	Body	
	20:27-GMT	132° / 1483 m Dir: West Slow travel	
	13:32:00 PDT	Body	
	20:32-GMT	149° / 1331 m Dir: West Slow travel	
	13:37:00 PDT	Blow	
	20:37-GMT	184° / 1106 m Dir: West Slow travel	
	13:42:00 PDT	Body	
	20:42-GMT	218° / 946 m Dir: West Slow travel	
	13:48:00 PDT	Blow	Inside /
	20:48-GMT	250° / 1483 m Dir: West Slow travel	Outside
Sighting Number	19 Fair - 2	<i>Er</i> Total 1 — 0 Calves at sighting	
	14:58:00 PDT	— / Blow	
	21:58-GMT	144° / 3088 m Dir: West Slow travel • Fluke	
	15:05:00 PDT	Blow	
	22:05-GMT	158° / 2749 m Dir: West Slow travel • Fluke	
	15:12:00 PDT	Blow	
	22:12-GMT	180° / 2260 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:20:00 PDT	Blow	
	22:20-GMT	211° / 2260 m Dir: West Slow travel • Fluke	
	15:26:00 PDT	Blow	
	22:26-GMT	231° / 2749 m Dir: West Slow travel • Fluke	
	15:35:00 PDT	ni	nd /
	22:35-GMT	247° / 3088 m Dir: West Slow travel	Outside
Sighting Number	22	Good - 3	Er Total 4 — 0 Calves at sighting
	16:15:00 PDT	— / Blow	
	23:15-GMT	136° / 3088 m Dir: West Slow travel	
	16:17:00 PDT	ni	
	23:17-GMT	139° / 3088 m Dir: West Slow travel	
	16:23:00 PDT	ni	
	23:23-GMT	148° / 1922 m Dir: West Slow travel	
	16:24:00 PDT	ni	
	23:24-GMT	150° / 1922 m Dir: West Slow travel • Fluke	
	16:33:00 PDT	Blow	
	23:33-GMT	181° / 1331 m Dir: West Slow travel	
	16:43:00 PDT	ni	Inside /
	23:43-GMT	228° / 1483 m Dir: West Slow travel	Outside
Sighting Number	23	Good - 3	Er Total 1 — 0 Calves at sighting
	16:52:00 PDT	— / Blow	
	23:52-GMT	129° / 1483 m Dir: West Slow travel	
	16:57:00 PDT	ni	
	23:57-GMT	143° / 1208 m Dir: West Slow travel	
	17:00:00 PDT	ni	
	0:00; 3/12/2012-GMT	155° / 1208 m Dir: West Slow travel	
	17:02:00 PDT	ni	nd / nd
	0:02; 3/12/2012-GMT	170° / 1106 m Dir: West Slow travel	
Mar 12	Total 17	Calves 0	Er Gray whale (northbound)
Day 29 of 98			
Sighting Number	07	Poor - 0	Er Total 2 — 0 Calves at sighting
	9:48:00 PDT	— / Body	
	16:48-GMT	194° / 2260 m Dir: West Slow travel	
	9:57:00 PDT	Blow	
	16:57-GMT	208° / 2749 m Dir: West Slow travel	
	10:07:00 PDT	Body	nd / nd
	17:07-GMT	219° / 2749 m Dir: West Slow travel • Fluke	
Sighting Number	08	Poor - 0	Er Total 3 — 0 Calves at sighting
	10:11:00 PDT	— / Body	
	17:11-GMT	136° / 1331 m Dir: West Slow travel • Fluke	
	10:24:00 PDT	Body	
	17:24-GMT	210° / 913 m Dir: West Slow travel • Fluke	
	10:31:00 PDT	Blow	Inside /
	17:31-GMT	251° / 1331 m Dir: West Slow travel • Fluke	Outside

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number	12 Poor - 0	Er Total 2 — 0 Calves at sighting	
	11:17:00 PDT	— / Blow	
	18:17-GMT	170° / 508 m Dir: West Slow travel	
	11:18:00 PDT	Body	
	18:18-GMT	179° / 528 m Dir: West Slow travel	
	11:20:00 PDT	Blow	
	18:20-GMT	212° / 550 m Dir: West Slow travel • Rolling	
	11:26:00 PDT	Body	
	18:26-GMT	264° / 946 m Dir: West Slow travel	
			Inside / Outside
Sighting Number	17 Poor - 1	Er Total 3 — 0 Calves at sighting	
	13:07:00 PDT	Boat / Blow	
	20:07-GMT	143° / 3088 m Dir: West Slow travel	
	13:15:00 PDT	Blow	
	20:15-GMT	154° / 3088 m Dir: West Slow travel • Fluke	
	13:25:00 PDT	Blow	
	20:25-GMT	166° / 1922 m Dir: West Slow travel	
	13:35:00 PDT	Blow	
	20:35-GMT	184° / 2260 m Dir: West Slow travel • Fluke	
	13:45:00 PDT	Blow	
	20:45-GMT	206° / 3088 m Dir: West Slow travel • Fluke	
	13:57:00 PDT	Blow	
	20:57-GMT	219° / 3088 m Dir: West Slow travel	
	14:15:00 PDT	Blow	
	21:15-GMT	233° / 3088 m Dir: West Slow travel	
			Outside / Outside
Sighting Number	21 Poor - 1	Er Total 3 — 0 Calves at sighting	
	13:30:00 PDT	— / Blow	
	20:30-GMT	226° / 3528 m Dir: West Slow travel • Fluke	
	13:43:00 PDT	Blow	
	20:43-GMT	241° / 3528 m Dir: West Slow travel	
			Outside / Outside
Sighting Number	29 Good - 3	Er Total 4 — 0 Calves at sighting	
	15:00:00 PDT	— / Blow	
	22:00-GMT	117° / 3528 m Dir: West Slow travel • Fluke	
	15:09:00 PDT	Blow	
	22:09-GMT	124° / 3088 m Dir: West Slow travel • Fluke	
	15:17:00 PDT	Blow	
	22:17-GMT	131° / 2749 m Dir: West Slow travel • Fluke	
	15:28:00 PDT	Blow	
	22:28-GMT	160° / 1403 m Dir: West Slow travel • Fluke	
	15:36:00 PDT	Blow	
	22:36-GMT	205° / 1483 m Dir: West Slow travel • Fluke	
	15:45:00 PDT	Blow	
	22:45-GMT	250° / 1674 m Dir: West Slow travel	
			Inside / Outside

Mar 13 Total 21 Calves 0
Day 30 of 98

Er Gray whale (northbound)

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	06 Poor - 2	Er Total 1 — 0 Calves at sighting	
	10:15:00 PDT	— / Body	
	17:15-GMT	201° / 508 m Dir: West Slow travel	
	10:17:00 PDT	Body	
	17:17-GMT	236° / 550 m Dir: West Slow travel	
	<i>small whale no blows</i>		
	10:22:00 PDT	Body	
	17:22-GMT	251° / 946 m Dir: West Slow travel • Fluke	
Sighting Number	10 Fair - 3	Er Total 2 — 0 Calves at sighting	
	11:16:00 PDT	— / Blow	
	18:16-GMT	155° / 2749 m Dir: West Slow travel	
	11:27:00 PDT	Blow	
	18:27-GMT	182° / 2260 m Dir: West Slow travel	
	11:31:00 PDT	Body	
	18:31-GMT	193° / 1922 m Dir: West Slow travel • Rolling	
	11:34:00 PDT	Blow	
	18:34-GMT	199° / 1922 m Dir: West Slow travel	
	11:41:00 PDT	Blow	
	18:41-GMT	224° / 2749 m Dir: West Slow travel	
Sighting Number	13 Fair - 3	Er Total 4 — 0 Calves at sighting	
	11:58:00 PDT	— / Blow	
	18:58-GMT	126° / 2749 m Dir: West Slow travel	
	12:04:00 PDT	Blow	
	19:04-GMT	132° / 1922 m Dir: West Slow travel • Fluke	
	12:09:00 PDT	Blow	
	19:09-GMT	138° / 1483 m Dir: West Slow travel • Fluke	
	12:11:00 PDT	Blow	
	19:11-GMT	145° / 1483 m Dir: West Slow travel	
	12:16:00 PDT	Blow	
	19:16-GMT	161° / 946 m Dir: West Slow travel	
	12:19:00 PDT	Blow	
	19:19-GMT	169° / 827 m Dir: West Slow travel • Fluke	
	12:22:00 PDT	Blow	
	19:22-GMT	196° / 827 m Dir: West Slow travel	
	12:25:00 PDT	Blow	
	19:25-GMT	226° / 827 m Dir: West Slow travel • Fluke	
	12:28:00 PDT	Blow	
	19:28-GMT	239° / 600 m Dir: West Slow travel	
Sighting Number	21 Good - 2	Er Total 1 — 0 Calves at sighting	
	13:34:00 PDT	— / Body	
	20:34-GMT	228° / 629 m Dir: West Slow travel	
	13:44:00 PDT	Body	
	20:44-GMT	249° / 735 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	13:48:00 PDT	Blow	Inside /
	20:48-GMT	259° / 1208 m Dir: West Slow travel • Fluke	Outside
Sighting Number	23 Good - 2	Er Total 5 — 0 Calves at sighting	
	14:52:00 PDT	— / Blow	
	21:52-GMT	139° / 5027 m Dir: West Slow travel • Fluke	
	15:02:00 PDT	Blow	
	22:02-GMT	146° / 5027 m Dir: West Slow travel	
		<i>many blows</i>	
	15:13:00 PDT	Blow	
	22:13-GMT	154° / 3528 m Dir: West Slow travel • Fluke	
	15:18:00 PDT	Blow	
	22:18-GMT	159° / 3528 m Dir: West Slow travel	
		<i>single blow</i>	
	15:19:00 PDT	Blow	
	22:19-GMT	160° / 3528 m Dir: West Slow travel	
		<i>many blows</i>	
	15:31:00 PDT	Blow	
	22:31-GMT	175° / 3528 m Dir: West Slow travel • Fast travel	
		<i>many blows</i>	
	15:43:00 PDT	Blow	
	22:43-GMT	193° / 3528 m Dir: West Slow travel • Fast travel	
		<i>many blows</i>	
	15:50:00 PDT	Blow	
	22:50-GMT	209° / 3088 m Dir: West Slow travel	
	15:55:00 PDT	Blow	Outside /
	22:55-GMT	219° / 3528 m Dir: West Slow travel • Breach	Outside
		<i>leaning breach</i>	
Sighting Number	29 Good - 3	Er	
	PDT		
	7-GMT		
	16:15:00 PDT	— / Blow	
	23:15-GMT	151° / 5027 m Dir: West Slow travel	
		<i>condor tracking whales</i>	
	16:24:00 PDT	Blow	
	23:24-GMT	154° / 5027 m Dir: West Slow travel	
	16:28:00 PDT	Blow	
	23:28-GMT	155° / 5027 m Dir: West Slow travel	
	16:38:00 PDT	Blow	
	23:38-GMT	163° / 5027 m Dir: West Slow travel	
		<i>many blows</i>	
	16:48:00 PDT	Blow	
	23:48-GMT	171° / 3528 m Dir: West Slow travel	
	16:53:00 PDT	Blow	ni / ni
	23:53-GMT	177° / 5027 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	30 Good - 3	<i>Er</i> Total 4 — 0 Calves at sighting	
	16:27:00 PDT	— / Blow	
	23:27-GMT	114° / 5027 m Dir: West Slow travel	
	16:34:00 PDT	Blow	
	23:34-GMT	115° / 5027 m Dir: West Slow travel • Fluke	
	16:42:00 PDT	Blow	
	23:42-GMT	119° / 3528 m Dir: West Slow travel • Fluke	
	16:49:00 PDT	Blow	
	23:49-GMT	127° / 3088 m Dir: West Slow travel • Fluke	
	16:58:00 PDT	Blow	
	23:58-GMT	137° / 2260 m Dir: West Slow travel • Fluke	
			ni / ni

Mar 14 Total 15 Calves 0 Er Gray whale (northbound)
Day 31 of 98

Sighting Number	08 Good - 1	<i>Er</i> Total 5 — 0 Calves at sighting	
	11:36:00 PDT	— / Blow	
	18:36-GMT	125° / 13138 m Dir: West Slow travel	
	11:57:00 PDT	Blow	
	18:57-GMT	124° / 5027 m Dir: West Slow travel	
	12:07:00 PDT	Blow	
	19:07-GMT	125° / 5027 m Dir: West Slow travel • Fluke	
	12:16:00 PDT	Blow	
	19:16-GMT	126° / 3528 m Dir: West Slow travel • Fluke	
	12:24:00 PDT	Blow	
	19:24-GMT	127° / 3528 m Dir: West Slow travel	
	12:30:00 PDT	Blow	
	19:30-GMT	130° / 2749 m Dir: West Slow travel • Fluke	
	12:35:00 PDT	Blow	
	19:35-GMT	135° / 2749 m Dir: West Slow travel	
	12:40:00 PDT	Blow	
	19:40-GMT	138° / 2749 m Dir: West Slow travel	
	12:45:00 PDT	Blow	
	19:45-GMT	149° / 1922 m Dir: West Slow travel	
	12:50:00 PDT	Blow	
	19:50-GMT	162° / 1483 m Dir: West Slow travel	
	12:54:00 PDT	Blow	
	19:54-GMT	171° / 1331 m Dir: West Slow travel	
	12:57:00 PDT	Blow	
	19:57-GMT	189° / 735 m Dir: West Slow travel	
	12:58:00 PDT	Blow	
	19:58-GMT	196° / 1483 m Dir: West Slow travel	
		<i>maybe starting to split</i>	
	12:59:00 PDT	Blow	
	19:59-GMT	200° / 1106 m Dir: West Slow travel • Fluke	
	13:03:00 PDT	Blow	
	20:03-GMT	221° / 1483 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:04:00 PDT	Blow	
	20:04-GMT	227° / 1331 m Dir: West Slow travel • Fluke	
	13:06:00 PDT	Blow	Inside /
	20:06-GMT	236° / 1331 m Dir: West Slow travel	Outside
Sighting Number	11 Good - 1	<i>Er</i> Total 2 — 0 Calves at sighting	
	12:09:00 PDT	— / Blow	
	19:09-GMT	123° / 3528 m Dir: West Slow travel	
	12:13:00 PDT	Blow	
	19:13-GMT	126° / 3528 m Dir: West Slow travel • Fluke	
	12:20:00 PDT	Blow	
	19:20-GMT	134° / 2749 m Dir: West Slow travel	
	12:27:00 PDT	Blow	
	19:27-GMT	145° / 2749 m Dir: West Slow travel	
	12:35:00 PDT	Blow	
	19:35-GMT	169° / 1922 m Dir: West Slow travel	
	12:38:00 PDT	Blow	
	19:38-GMT	177° / 1674 m Dir: West Slow travel	
	12:41:00 PDT	Blow	
	19:41-GMT	187° / 1922 m Dir: West Slow travel • Rolling	
	12:49:00 PDT	Blow	
	19:49-GMT	211° / 1331 m Dir: West Slow travel	
	12:51:00 PDT	Blow	
	19:51-GMT	219° / 1483 m Dir: West Slow travel	
	12:55:00 PDT	Blow	Inside /
	19:55-GMT	236° / 1483 m Dir: West Slow travel • Fluke	Outside
Sighting Number	18 Poor - 3	<i>Er</i> Total 2 — 0 Calves at sighting	
Images: 6354-6355	14:52:00 PDT	— / Blow	
	21:52-GMT	136° / 2260 m Dir: West Slow travel	
	14:56:00 PDT	Blow	
	21:56-GMT	141° / 2260 m Dir: West Slow travel • Fluke	
	15:04:00 PDT	Blow	
	22:04-GMT	159° / 1674 m Dir: West Slow travel	
	15:07:00 PDT	Blow	
	22:07-GMT	171° / 1403 m Dir: West Slow travel	
	15:11:00 PDT	Blow	
	22:11-GMT	188° / 1208 m Dir: West Slow travel • Fluke	
	15:19:00 PDT	Blow	Inside /
	22:19-GMT	228° / 1483 m Dir: West Slow travel	Outside
Sighting Number	19 Poor - 3	<i>Er</i> Total 2 — 0 Calves at sighting	
	15:23:00 PDT	— / Blow	
	22:23-GMT	129° / 3528 m Dir: West Slow travel	
	15:29:00 PDT	Blow	
	22:29-GMT	132° / 3528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:34:00 PDT	Blow	
	22:34-GMT	143° / 2749 m Dir: West Slow travel	
	15:43:00 PDT	Blow	
	22:43-GMT	158° / 1674 m Dir: West Slow travel	
	15:50:00 PDT	Blow	
	22:50-GMT	175° / 1922 m Dir: West Slow travel	
	15:58:00 PDT	Blow	
	22:58-GMT	199° / 1331 m Dir: West Slow travel	
	16:02:00 PDT	Blow	
	23:02-GMT	205° / 1208 m Dir: West Slow travel	
		<i>group right behind them</i>	
	16:03:00 PDT	ni	
	23:03-GMT	214° / 1208 m Dir: West Slow travel	
	16:09:00 PDT	Blow	Inside /
	23:09-GMT	237° / 1922 m Dir: West Slow travel	Outside
Sighting Number	20	Poor - 3	<i>Er</i> Total 2 — 0 Calves at sighting
	15:32:00 PDT	Boat / Blow	
	22:32-GMT	108° / 5027 m Dir: West Slow travel	
	16:04:00 PDT	Blow	
	23:04-GMT	117° / 3528 m Dir: West Slow travel	
	16:13:00 PDT	Blow	
	23:13-GMT	118° / 3528 m Dir: West Slow travel	
		<i>coming straight at point</i>	
	16:24:00 PDT	Blow	
	23:24-GMT	120° / 3088 m Dir: West Slow travel	
	16:34:00 PDT	Blow	
	23:34-GMT	126° / 2749 m Dir: West Slow travel	
	16:37:00 PDT	Blow	
	23:37-GMT	129° / 2260 m Dir: West Slow travel	
	16:45:00 PDT	Blow	
	23:45-GMT	148° / 1483 m Dir: West Slow travel	
	16:48:00 PDT	Blow	
	23:48-GMT	152° / 1331 m Dir: West Slow travel	
	16:54:00 PDT	Blow	
	23:54-GMT	189° / 1106 m Dir: West Slow travel	
	16:59:00 PDT	Blow	
	23:59-GMT	232° / 827 m Dir: West Slow travel	
Sighting Number	21	Poor - 3	<i>Er</i> Total 2 — 0 Calves at sighting
	15:46:00 PDT	— / Blow	
	22:46-GMT	151° / 2260 m Dir: West Slow travel	
	15:53:00 PDT	Blow	
	22:53-GMT	170° / 1483 m Dir: West Slow travel	
	15:58:00 PDT	Blow	Inside /
	22:58-GMT	193° / 1331 m Dir: West Slow travel	Outside
		<i>tailing very closely</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Mar 15 Total 11 Calves 0 Day 32 of 98	Er Gray whale (northbound)		
Sighting Number	04 Poor - 1	<i>Er</i> Total 1 — 0 Calves at sighting	
	9:27:00 PDT	— / Blow	
	16:27-GMT	136° / 2749 m Dir: West Slow travel	
	9:34:00 PDT	Blow	
	16:34-GMT	155° / 2749 m Dir: West Slow travel	
	9:40:00 PDT	Blow	
	16:40-GMT	170° / 1922 m Dir: West Slow travel	
	9:45:00 PDT	Breach	
	16:45-GMT	189° / 1483 m Dir: West Slow travel • Breach	
	9:47:00 PDT	Blow	
	16:47-GMT	200° / 1483 m Dir: West Slow travel	
	9:53:00 PDT	Blow	
	16:53-GMT	226° / 1922 m Dir: West Slow travel	
			Inside / Outside
Sighting Number	09 Fair - 1	<i>Er</i> Total 3 — 0 Calves at sighting	
	12:34:00 PDT	— / Blow	
	19:34-GMT	177° / 3528 m Dir: West Slow travel	
	12:40:00 PDT	Blow	
	19:40-GMT	185° / 3088 m Dir: West Slow travel	
	12:44:00 PDT	Blow	
	19:44-GMT	189° / 3088 m Dir: West Slow travel	
	12:50:00 PDT	Body	
	19:50-GMT	198° / 3088 m Dir: West Slow travel	
	12:56:00 PDT	Blow	
	19:56-GMT	206° / 3088 m Dir: West Slow travel	
	12:58:00 PDT	Blow	
	19:58-GMT	208° / 3088 m Dir: West Slow travel • Fluke	
	13:08:00 PDT	Blow	
	20:08-GMT	217° / 3088 m Dir: West Slow travel • Fluke	
	13:19:00 PDT	Blow	
	20:19-GMT	229° / 3088 m Dir: West Slow travel	
			Outside / Outside
Sighting Number	12 Fair - 3	<i>Er</i> Total 2 — 0 Calves at sighting	
	14:14:00 PDT	— / Body	
	21:14-GMT	188° / 3528 m Dir: West Slow travel • Fluke	
	14:24:00 PDT	Blow	
	21:24-GMT	200° / 3528 m Dir: West Slow travel • Fluke	
	14:32:00 PDT	Blow	
	21:32-GMT	213° / 5027 m Dir: West Slow travel	
			Outside / Outside
Sighting Number	14 Fair - 3	<i>Er</i> Total 5 — 0 Calves at sighting	
	15:12:00 PDT	— / Blow	
	22:12-GMT	147° / 5027 m Dir: West Slow travel	
	15:18:00 PDT	Blow	
	22:18-GMT	148° / 5027 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Time			
15:22:00 PDT	Blow		
22:22-GMT	149° / 5027 m Dir: West	Slow travel	
15:29:00 PDT	Blow		
22:29-GMT	152° / 5027 m Dir: West	Slow travel	
15:33:00 PDT	Blow		
22:33-GMT	163° / 3528 m Dir: West	Slow travel	
15:34:00 PDT	Blow		
22:34-GMT	153° / 3528 m Dir: West	Slow travel	
15:37:00 PDT	Blow		
22:37-GMT	155° / 3528 m Dir: West	Slow travel	
15:40:00 PDT	Blow		
22:40-GMT	158° / 3528 m Dir: West	Slow travel • Fluke	
15:46:00 PDT	Blow		
22:46-GMT	161° / 3528 m Dir: West	Slow travel	
15:49:00 PDT	Body		
22:49-GMT	161° / 3528 m Dir: West	Slow travel • Rolling	
15:55:00 PDT	Blow		
22:55-GMT	165° / 3528 m Dir: West	Slow travel • Rolling	
16:02:00 PDT	Blow		
23:02-GMT	171° / 3088 m Dir: West	Slow travel • Rolling	
16:06:00 PDT	Blow		
23:06-GMT	175° / 3088 m Dir: West	Slow travel • Rolling	
16:12:00 PDT	Blow		
23:12-GMT	177° / 2749 m Dir: West	Slow travel	
16:14:00 PDT	Blow		
23:14-GMT	176° / 2749 m Dir: West	Slow travel • Fluke	
	<i>2 flukes</i>		
16:19:00 PDT	Blow		
23:19-GMT	190° / 2749 m Dir: West	Slow travel	
16:24:00 PDT	ni		
23:24-GMT	197° / 2749 m Dir: West	Slow travel	
16:31:00 PDT	Blow		
23:31-GMT	209° / 2749 m Dir: West	Slow travel	
16:36:00 PDT	Blow		
23:36-GMT	217° / 3088 m Dir: West	Slow travel	
16:39:00 PDT	Blow		
23:39-GMT	221° / 3088 m Dir: West	Slow travel	
16:44:00 PDT	ni		Outside /
23:44-GMT	230° / 3088 m Dir: West	Slow travel • Fluke	Outside

Mar 16 Total 6 Calves 0
Day 33 of 98

Er Gray whale (northbound)

Sighting Number 16 Fair - 2 Er Total 1 — 0 Calves at sighting

13:37:00 PDT — / Blow
20:37-GMT 105° / 2260 m Dir: West Slow travel • Fluke
young whale

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:41:00 PDT	Blow	
	20:41-GMT	109° / 2260 m Dir: West Slow travel • Fluke	
	13:46:00 PDT	Blow	
	20:46-GMT	112° / 1922 m Dir: West Slow travel • Fluke	
	13:49:00 PDT	Blow	nd / nd
	20:49-GMT	119° / 1674 m Dir: West Slow travel • Fluke	
Sighting Number	21 Fair - 2	Er Total 2 — 0 Calves at sighting	
	15:29:00 PDT	— / Blow	
	22:29-GMT	110° / 2260 m Dir: West Slow travel	
	15:31:00 PDT	Blow	
	22:31-GMT	113° / 2260 m Dir: West Slow travel	
	15:35:00 PDT	Blow	
	22:35-GMT	118° / 1922 m Dir: West Slow travel	
	15:37:00 PDT	Blow	
	22:37-GMT	121° / 1674 m Dir: West Slow travel	
	15:39:00 PDT	Blow	
	22:39-GMT	126° / 1483 m Dir: West Slow travel	
	15:42:00 PDT	Blow	
	22:42-GMT	132° / 1483 m Dir: West Slow travel	
	15:43:00 PDT	Blow	
	22:43-GMT	136° / 1403 m Dir: West Slow travel	
	15:47:00 PDT	Blow	
	22:47-GMT	154° / 1020 m Dir: West Slow travel	
	15:48:00 PDT	Blow	
	22:48-GMT	161° / 946 m Dir: West Slow travel	
	15:50:00 PDT	Body	
	22:50-GMT	170° / 913 m Dir: West Slow travel	
	15:53:00 PDT	Body	
	22:53-GMT	197° / 778 m Dir: West Slow travel • Rolling	
	15:59:00 PDT	Blow	Inside /
	22:59-GMT	232° / 1020 m Dir: West Slow travel	Outside
Sighting Number	30 Fair - 2	Er Total 2 — 0 Calves at sighting	
	16:37:00 PDT	— / Body	
	23:37-GMT	150° / 2260 m Dir: West Slow travel	
	16:40:00 PDT	Body	
	23:40-GMT	157° / 2260 m Dir: West Slow travel	
	16:44:00 PDT	Blow	
	23:44-GMT	174° / 2260 m Dir: West Slow travel	
	16:47:00 PDT	Blow	
	23:47-GMT	182° / 2260 m Dir: West Slow travel	
	16:49:00 PDT	Body	nd / nd
	23:49-GMT	194° / 2260 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number 32	Fair - 2	<i>Er</i> Total 1 — 0 Calves at sighting	
	16:43:00 PDT	— / Blow	
	23:43-GMT	172° / 489 m Dir: West Slow travel	
	16:45:00 PDT	Blow	nd / nd
	23:45-GMT	197° / 455 m Dir: West Slow travel	
Mar 19	Total 25 Calves 0	Er Gray whale (northbound)	
Day 36 of 98			
Sighting Number 04	Fair - 1	<i>Er</i> Total 3 — 0 Calves at sighting	
	9:31:00 PDT	— / Blow	
	16:31-GMT	125° / 3528 m Dir: West Slow travel	
	9:39:00 PDT	Blow	
	16:39-GMT	127° / 3528 m Dir: West Slow travel	
	10:08:00 PDT	Blow	
	17:08-GMT	131° / 3528 m Dir: West Slow travel	
	10:14:00 PDT	Blow	
	17:14-GMT	132° / 3528 m Dir: West Slow travel	
	10:21:00 PDT	Blow	
	17:21-GMT	134° / 3528 m Dir: West Slow travel	
	10:23:00 PDT	Blow	
	17:23-GMT	134° / 3528 m Dir: West Slow travel	
	10:33:00 PDT	Blow	
	17:33-GMT	139° / 3528 m Dir: West Slow travel	
	10:43:00 PDT	Blow	
	17:43-GMT	144° / 3088 m Dir: West Slow travel	
	10:46:00 PDT	Blow	
	17:46-GMT	148° / 3088 m Dir: West Slow travel	
	10:54:00 PDT	Blow	
	17:54-GMT	157° / 3088 m Dir: West Slow travel	
	11:00:00 PDT	Blow	
	18:00-GMT	162° / 3088 m Dir: West Slow travel	
	11:07:00 PDT	Blow	
	18:07-GMT	178° / 2749 m Dir: West Slow travel	
	11:19:00 PDT	Blow	
	18:19-GMT	198° / 2749 m Dir: West Slow travel	
	<i>sighting 7 group and sighting 4 group joined</i>		
	11:24:00 PDT	Blow	
	18:24-GMT	208° / 3088 m Dir: West Slow travel	
	11:29:00 PDT	Blow	
	18:29-GMT	211° / 3088 m Dir: West Slow travel	
	11:38:00 PDT	Blow	Outside /
	18:38-GMT	220° / 3088 m Dir: West Slow travel	Outside
Sighting Number 05	Fair - 1	<i>Er</i> Total 4 — 0 Calves at sighting	
	9:36:00 PDT	— / Blow	
	16:36-GMT	145° / 3528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	9:41:00 PDT	Blow	
	16:41-GMT	149° / 3088 m Dir: West Slow travel	
	9:44:00 PDT	Body	
	16:44-GMT	149° / 3088 m Dir: West Slow travel • Fluke	
	9:51:00 PDT	Blow	
	16:51-GMT	152° / 3088 m Dir: West Slow travel	
	9:54:00 PDT	Blow	
	16:54-GMT	155° / 3088 m Dir: West Slow travel	
	10:01:00 PDT	Blow	
	17:01-GMT	159° / 3088 m Dir: West Slow travel • Fluke	
	10:12:00 PDT	Blow	
	17:12-GMT	172° / 3088 m Dir: West Slow travel	
	10:21:00 PDT	Blow	
	17:21-GMT	189° / 3088 m Dir: West Slow travel	
	10:28:00 PDT	Blow	
	17:28-GMT	199° / 3088 m Dir: West Slow travel	
	10:32:00 PDT	Blow	
	17:32-GMT	206° / 3088 m Dir: West Slow travel	
	10:40:00 PDT	Blow	
	17:40-GMT	218° / 3528 m Dir: West Slow travel	
	10:43:00 PDT	Blow	
	17:43-GMT	223° / 3528 m Dir: West Slow travel	
	10:49:00 PDT	Blow	
	17:49-GMT	226° / 3528 m Dir: West Slow travel	
	10:51:00 PDT	Blow	
	17:51-GMT	232° / 3528 m Dir: West Slow travel	
	10:55:00 PDT	Blow	Outside /
	17:55-GMT	236° / 3528 m Dir: West Slow travel	Outside
Sighting Number	07 Fair - 3	Er Total 4 — 0 Calves at sighting	
	9:44:00 PDT	— / Blow	
	16:44-GMT	143° / 5027 m Dir: West Slow travel	
	9:49:00 PDT	Blow	
	16:49-GMT	145° / 5027 m Dir: West Slow travel	
	9:56:00 PDT	Blow	
	16:56-GMT	147° / 5027 m Dir: West Slow travel	
	10:12:00 PDT	Blow	
	17:12-GMT	149° / 5027 m Dir: West Slow travel	
	10:35:00 PDT	Blow	
	17:35-GMT	164° / 3528 m Dir: West Slow travel	
	10:53:00 PDT	Blow	
	17:53-GMT	179° / 3528 m Dir: West Slow travel	
	11:11:00 PDT	Blow	
	18:11-GMT	195° / 3528 m Dir: West Slow travel • Fluke	
	11:20:00 PDT	Blow	ni / ni
	18:20-GMT	203° / 3528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	08 Fair - 3	Er Total 4 — 0 Calves at sighting	
	10:56:00 PDT	— / Blow	
	17:56-GMT	161° / 5027 m Dir: West Slow travel	
	11:00:00 PDT	Body	
	18:00-GMT	162° / 5027 m Dir: West Slow travel • Fluke	
	11:08:00 PDT	Blow	
	18:08-GMT	167° / 5027 m Dir: West Slow travel	
	11:23:00 PDT	Blow	
	18:23-GMT	176° / 3528 m Dir: West Slow travel	
	11:31:00 PDT	Blow	
	18:31-GMT	182° / 3528 m Dir: West Slow travel	
	11:40:00 PDT	Blow	
	18:40-GMT	188° / 3528 m Dir: West Slow travel	
	11:45:00 PDT	Blow	
	18:45-GMT	202° / 2749 m Dir: West Slow travel	
	11:57:00 PDT	Blow	
	18:57-GMT	203° / 2749 m Dir: West Slow travel	
	11:59:00 PDT	Blow	
	18:59-GMT	203° / 2749 m Dir: West Slow travel • Fluke	
	<i>playing with buoy</i>		
	12:07:00 PDT	Blow	ni / ni
	19:07-GMT	215° / 3088 m Dir: West Slow travel	
Sighting Number	10 Fair - 2	Er Total 3 — 0 Calves at sighting	
	11:55:00 PDT	— / Blow	
	18:55-GMT	202° / 5027 m Dir: West Slow travel	
	11:57:00 PDT	Blow	
	18:57-GMT	204° / 5027 m Dir: West Slow travel	
	12:03:00 PDT	Blow	
	19:03-GMT	209° / 5027 m Dir: West Slow travel	
	12:07:00 PDT	Blow	
	19:07-GMT	212° / 5027 m Dir: West Slow travel	
	12:09:00 PDT	Blow	ni / ni
	19:09-GMT	216° / 5027 m Dir: West Slow travel	
Sighting Number	11 Fair - 2	Er Total 3 — 0 Calves at sighting	
	12:06:00 PDT	— / Blow	
	19:06-GMT	161° / 3088 m Dir: West Slow travel	
	12:08:00 PDT	Blow	
	19:08-GMT	163° / 3088 m Dir: West Slow travel	
	12:10:00 PDT	Blow	
	19:10-GMT	164° / 3088 m Dir: West Slow travel • Fluke	
	12:13:00 PDT	Blow	
	19:13-GMT	170° / 3088 m Dir: West Slow travel	
	12:16:00 PDT	Blow	
	19:16-GMT	170° / 3088 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:19:00 PDT	Body	
	19:19-GMT	173° / 3088 m Dir: West Slow travel	
	12:22:00 PDT	Blow	
	19:22-GMT	177° / 3088 m Dir: West Slow travel • Fluke	
	12:26:00 PDT	Blow	
	19:26-GMT	184° / 3088 m Dir: West Slow travel	
	12:32:00 PDT	Blow	
	19:32-GMT	190° / 3088 m Dir: West Slow travel	
	12:36:00 PDT	Blow	
	19:36-GMT	197° / 3088 m Dir: West Slow travel	
	12:42:00 PDT	Blow	Outside /
	19:42-GMT	208° / 3088 m Dir: West Slow travel	Outside
Sighting Number	12 Fair - 2	Er Total 4 — 0 Calves at sighting	
	13:08:00 PDT	— / Blow	
	20:08-GMT	136° / 3528 m Dir: West Slow travel	
	13:20:00 PDT	Blow	
	20:20-GMT	143° / 3528 m Dir: West Slow travel • Fluke	
	13:26:00 PDT	Blow	
	20:26-GMT	149° / 3528 m Dir: West Slow travel	
	13:33:00 PDT	Blow	
	20:33-GMT	154° / 3088 m Dir: West Slow travel • Fluke	
	13:38:00 PDT	Blow	
	20:38-GMT	160° / 3088 m Dir: West Slow travel • Fluke	
	13:45:00 PDT	Blow	
	20:45-GMT	169° / 2749 m Dir: West Slow travel • Fluke	
	13:54:00 PDT	Blow	
	20:54-GMT	183° / 3088 m Dir: West Slow travel • Fluke	
	14:03:00 PDT	Blow	
	21:03-GMT	196° / 3088 m Dir: West Slow travel	
	14:18:00 PDT	Blow	
	21:18-GMT	209° / 3528 m Dir: West Slow travel	
	<i>group starting to spread out into 2 pairs</i>		
	14:24:00 PDT	Blow	nd /
	21:24-GMT	215° / 3088 m Dir: West Slow travel	Outside
Mar 20	Total 23 Calves 0	Er Gray whale (northbound)	
Day 37 of 98			
Sighting Number	01 Fair - 1	Er Total 2 — 0 Calves at sighting	
	9:17:00 PDT	— / Blow	
	16:17-GMT	165° / 5027 m Dir: West Slow travel	
	10:34:00 PDT	Blow	Outside /
	17:34-GMT	237° / 3528 m Dir: West Slow travel	Outside
	<i>condor with whales</i>		
Sighting Number	02 Fair - 1	Er Total 2 — 0 Calves at sighting	
Images: 6445-6452	9:27:00 PDT	— / Blow	
	16:27-GMT	154° / 550 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	03 Fair - 1	Er Total 4 — 0 Calves at sighting	
	9:51:00 PDT	— / Blow	
	16:51-GMT	155° / 5027 m Dir: West Slow travel	
	9:57:00 PDT	Blow	
	16:57-GMT	157° / 5027 m Dir: West Slow travel	
	10:03:00 PDT	Blow	
	17:03-GMT	159° / 5027 m Dir: West Slow travel • Fluke	
	10:12:00 PDT	Blow	
	17:12-GMT	170° / 5027 m Dir: West Slow travel	
	10:22:00 PDT	Blow	Outside /
	17:22-GMT	178° / 5027 m Dir: West Slow travel	Outside
Sighting Number	05 Fair - 1	Er Total 1 — 0 Calves at sighting	
	10:37:00 PDT	— / Blow	
	17:37-GMT	161° / 1922 m Dir: West Slow travel	
	10:53:00 PDT	Body	Inside /
	17:53-GMT	245° / 2260 m Dir: West Slow travel	Outside
Sighting Number	06 Fair - 2	Er Total 1 — 0 Calves at sighting	
	10:49:00 PDT	— / Blow	
	17:49-GMT	129° / 1922 m Dir: West Slow travel • Slow travel	
	10:55:00 PDT	Blow	
	17:55-GMT	147° / 1331 m Dir: West Slow travel • Fluke	
	11:02:00 PDT	Blow	
	18:02-GMT	189° / 1106 m Dir: West Slow travel	
	11:09:00 PDT	Blow	Inside /
	18:09-GMT	232° / 1208 m Dir: West Slow travel	Outside
Sighting Number	09 Fair - 1	Er	
	9:31:00 PDT	Blow	
	16:31-GMT	200° / 489 m Dir: West Slow travel • Fluke	
	9:33:00 PDT	Blow	
	16:33-GMT	209° / 508 m Dir: West Slow travel	
		<i>trail</i>	
	9:33:00 PDT	Blow	
	16:33-GMT	215° / 600 m Dir: West Slow travel	
		<i>lead</i>	
	9:39:00 PDT	Blow	
	16:39-GMT	247° / 883 m Dir: West Slow travel • Fluke	
	9:45:00 PDT	Blow	Inside /
	16:45-GMT	267° / 1483 m Dir: West Slow travel	Outside
		<i>outside buoys inside holly</i>	
Sighting Number	13 Fair - 2	Er Total 2 — 0 Calves at sighting	
	12:23:00 PDT	— / Blow	
	19:23-GMT	182° / 3528 m Dir: West Slow travel • Fluke	
		<i>probably SW</i>	
	12:30:00 PDT	Blow	
	19:30-GMT	186° / 3528 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	12:37:00 PDT	Blow	
	19:37-GMT	193° / 3528 m Dir: West Slow travel	
	12:42:00 PDT	Blow	
	19:42-GMT	197° / 3528 m Dir: West Slow travel • Fluke	
	12:50:00 PDT	Blow	
	19:50-GMT	205° / 3528 m Dir: West Slow travel • Fluke	
	<i>ship at horizon</i>		
	13:03:00 PDT	Blow	Outside /
	20:03-GMT	218° / 3528 m Dir: West Slow travel	Outside
Sighting Number	16 Fair - 2	Er Total 2 — 0 Calves at sighting	
	13:09:00 PDT	— / Blow	
	20:09-GMT	137° / 3088 m Dir: West Slow travel	
	13:10:00 PDT	Blow	
	20:10-GMT	142° / 3528 m Dir: West Slow travel	
	13:16:00 PDT	Blow	
	20:16-GMT	146° / 2749 m Dir: West Slow travel • Fluke	
	13:22:00 PDT	Blow	
	20:22-GMT	151° / 2749 m Dir: West Slow travel • Fluke	
	13:42:00 PDT	Blow	
	20:42-GMT	166° / 2260 m Dir: West Slow travel	
	13:56:00 PDT	Blow	
	20:56-GMT	194° / 2749 m Dir: West Slow travel • Fluke	
	14:03:00 PDT	Blow	
	21:03-GMT	203° / 3088 m Dir: West Slow travel • Fluke	
	14:10:00 PDT	Blow	
	21:10-GMT	212° / 2260 m Dir: West Slow travel	
	14:15:00 PDT	Blow	
	21:15-GMT	218° / 2260 m Dir: West Slow travel	
	14:20:00 PDT	Blow	Outside /
	21:20-GMT	225° / 3088 m Dir: West Slow travel	Outside
Sighting Number	17 Fair - 2	Er Total 1 — 0 Calves at sighting	
	13:12:00 PDT	— / Blow	
	20:12-GMT	153° / 1331 m Dir: West Slow travel	
	13:15:00 PDT	Blow	
	20:15-GMT	167° / 1331 m Dir: West Slow travel	
	13:25:00 PDT	Blow	Inside / nd
	20:25-GMT	219° / 883 m Dir: West Moderate travel	
	<i>V18 approached from rear and traveled over submerged whale</i>		
Sighting Number	21 Fair - 2	Er Total 2 — 0 Calves at sighting	
Images: 6467-6471	13:42:00 PDT	— / Blow	
	20:42-GMT	145° / 1483 m Dir: West Slow travel	
	13:44:00 PDT	Blow	
	20:44-GMT	153° / 1403 m Dir: West Slow travel	
	13:45:00 PDT	Blow	
	20:45-GMT	160° / 1331 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:49:00 PDT	Blow	
	20:49-GMT	179° / 1403 m Dir: West	Slow travel
	13:53:00 PDT	Blow	
	20:53-GMT	198° / 1331 m Dir: West	Slow travel
		<i>many blows</i>	
	13:58:00 PDT	Blow	
	20:58-GMT	212° / 1674 m Dir: West	Slow travel
	14:06:00 PDT	Blow	Inside /
	21:06-GMT	234° / 1922 m Dir: West	Slow travel Outside
Sighting Number	23 Fair - 1	Er Total 2 — 0 Calves at sighting	
	14:33:00 PDT	— / Blow	
	21:33-GMT	203° / 3088 m Dir: West	Slow travel • Fluke
	14:38:00 PDT	Blow	
	21:38-GMT	212° / 3088 m Dir: West	Slow travel • Fluke
	14:51:00 PDT	Blow	Outside /
	21:51-GMT	229° / 3528 m Dir: West	Slow travel Outside
Sighting Number	26 Fair - 1	Er Total 1 — 0 Calves at sighting	
	15:02:00 PDT	— / Blow	
	22:02-GMT	192° / 3088 m Dir: West	Slow travel
	15:13:00 PDT	Blow	
	22:13-GMT	208° / 3088 m Dir: West	Slow travel
	15:16:00 PDT	Blow	
	22:16-GMT	214° / 3088 m Dir: West	Slow travel
	15:21:00 PDT	Blow	Outside /
	22:21-GMT	223° / 3088 m Dir: West	Slow travel Outside
Sighting Number	28 Fair - 1	Er Total 3 — 0 Calves at sighting	
	15:20:00 PDT	— / Blow	
	22:20-GMT	182° / 3528 m Dir: West	Slow travel
	15:29:00 PDT	Blow	
	22:29-GMT	189° / 3528 m Dir: West	Slow travel
	15:36:00 PDT	Blow	
	22:36-GMT	193° / 5027 m Dir: West	Slow travel
	15:44:00 PDT	Blow	Outside /
	22:44-GMT	198° / 5027 m Dir: West	Slow travel Outside
Mar 21	Total 6 Calves 0	Er Gray whale (northbound)	
Day 38 of 98			
Sighting Number	01 Fair - 0	Er Total 2 — 0 Calves at sighting	
	8:59:00 PDT	— / Blow	
	15:59-GMT	122° / 3528 m Dir: West	Slow travel • Fluke
	9:09:00 PDT	Blow	
	16:09-GMT	126° / 3528 m Dir: West	Slow travel • Fluke
	9:16:00 PDT	Blow	
	16:16-GMT	132° / 2749 m Dir: West	Slow travel
	9:26:00 PDT	Blow	
	16:26-GMT	147° / 2260 m Dir: West	Slow travel • Fluke

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	9:34:00 PDT	Body	
	16:34-GMT	168° / 1674 m Dir: West Slow travel	
	9:39:00 PDT	Body	Inside /
	16:39-GMT	189° / 1403 m Dir: West Slow travel • Fluke	Outside
Sighting Number	13 Fair - 0	Er Total 2 — 0 Calves at sighting	
	13:50:00 PDT	— / Blow	
	20:50-GMT	223° / 3528 m Dir: West Slow travel	
	13:57:00 PDT	Blow	Outside /
	20:57-GMT	228° / 3528 m Dir: West Slow travel	Outside
Sighting Number	14 Fair - 0	Er Total 2 — 0 Calves at sighting	
	14:02:00 PDT	— / Blow	
	21:02-GMT	166° / 883 m Dir: West Slow travel	
	14:06:00 PDT	Blow	
	21:06-GMT	194° / 827 m Dir: West Slow travel • Fluke	
	14:14:00 PDT	Blow	Inside /
	21:14-GMT	249° / 913 m Dir: West Slow travel	Outside
Mar 22	Total 39 Calves 0	Er Gray whale (northbound)	
Day 39 of 98			
Sighting Number	01 Poor - 1	Er Total 5 — 0 Calves at sighting	
	9:06:00 PDT	— / Blow	
	16:06-GMT	120° / 2260 m Dir: West Slow travel	
	9:09:00 PDT	Blow	
	16:09-GMT	144° / 2260 m Dir: West Slow travel	
	9:22:00 PDT	Blow	
	16:22-GMT	146° / 2260 m Dir: West Slow travel	
	9:26:00 PDT	Blow	
	16:26-GMT	155° / 1674 m Dir: West Slow travel	
	9:33:00 PDT	Blow	
	16:33-GMT	181° / 1483 m Dir: West Slow travel	
	9:37:00 PDT	Blow	
	16:37-GMT	201° / 1483 m Dir: West Slow travel	
	9:39:00 PDT	Blow	
	16:39-GMT	212° / 1208 m Dir: West Slow travel	
	9:41:00 PDT	Blow	Inside /
	16:41-GMT	232° / 1483 m Dir: West Slow travel	Outside
Sighting Number	02 Poor - 1	Er Total 4 — 0 Calves at sighting	
	9:07:00 PDT	— / Blow	
	16:07-GMT	123° / 3528 m Dir: West Slow travel	
	9:09:00 PDT	Blow	
	16:09-GMT	144° / 1483 m Dir: West Slow travel	
	9:21:00 PDT	Blow	
	16:21-GMT	169° / 1483 m Dir: West Slow travel	
	9:24:00 PDT	Blow	
	16:24-GMT	182° / 1483 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	9:43:00 PDT	Blow	Inside /
	16:43-GMT	227° / 1483 m Dir: West Slow travel	Outside
Sighting Number	03 Poor - 1	<i>Er</i> Total 3 — 0 Calves at sighting	
	9:10:00 PDT	— / Blow	
	16:10-GMT	151° / 1922 m Dir: West Slow travel	
	9:14:00 PDT	Blow	
	16:14-GMT	157° / 1922 m Dir: West Slow travel	
	9:17:00 PDT	Blow	
	16:17-GMT	158° / 1922 m Dir: West Slow travel	
	9:32:00 PDT	Blow	Inside /
	16:32-GMT	231° / 1483 m Dir: West Slow travel	Outside
Sighting Number	04 Poor - 1	<i>Er</i> Total 4 — 0 Calves at sighting	
	9:11:00 PDT	— / Blow	
	16:11-GMT	144° / 2749 m Dir: West Slow travel	
	9:15:00 PDT	Blow	
	16:15-GMT	154° / 2749 m Dir: West Slow travel	
	9:20:00 PDT	Blow	
	16:20-GMT	164° / 2749 m Dir: West Slow travel	
	9:23:00 PDT	Blow	
	16:23-GMT	168° / 2749 m Dir: West Slow travel	
	9:36:00 PDT	Blow	Inside /
	16:36-GMT	244° / 1922 m Dir: West Slow travel	Outside
Sighting Number	05 Poor - 1	<i>Er</i> Total 4 — 0 Calves at sighting	
	9:15:00 PDT	— / Blow	
	16:15-GMT	132° / 3528 m Dir: West Slow travel	
	9:17:00 PDT	Blow	
	16:17-GMT	135° / 1483 m Dir: West Slow travel	
	9:18:00 PDT	Blow	
	16:18-GMT	136° / 1208 m Dir: West Slow travel	
	9:22:00 PDT	Blow	
	16:22-GMT	142° / 1208 m Dir: West Slow travel • Fluke	
	9:25:00 PDT	Blow	
	16:25-GMT	154° / 1106 m Dir: West Slow travel	
	9:28:00 PDT	Blow	
	16:28-GMT	157° / 1106 m Dir: West Slow travel	
	9:30:00 PDT	Blow	Inside /
	16:30-GMT	197° / 696 m Dir: West Slow travel	Outside
Sighting Number	07 Poor - 1	<i>Er</i> Total 2 — 0 Calves at sighting	
	9:37:00 PDT	— / Blow	
	16:37-GMT	132° / 3528 m Dir: West Slow travel	
	9:41:00 PDT	Blow	
	16:41-GMT	135° / 3528 m Dir: West Slow travel	
	9:44:00 PDT	Blow	
	16:44-GMT	138° / 3528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	9:47:00 PDT	Blow	
	16:47-GMT	139° / 3528 m Dir: West Slow travel	
	9:49:00 PDT	Blow	
	16:49-GMT	139° / 3528 m Dir: West Slow travel	
	9:55:00 PDT	Blow	
	16:55-GMT	146° / 3528 m Dir: West Slow travel	
	9:58:00 PDT	Blow	
	16:58-GMT	148° / 3088 m Dir: West Slow travel	
	10:00:00 PDT	Blow	
	17:00-GMT	152° / 2749 m Dir: West Slow travel	
	10:06:00 PDT	Blow	
	17:06-GMT	163° / 2749 m Dir: West Slow travel • Fluke	
	10:09:00 PDT	Blow	
	17:09-GMT	169° / 2260 m Dir: West Slow travel	
	10:16:00 PDT	Blow	
	17:16-GMT	183° / 1922 m Dir: West Slow travel • Fluke	
	10:24:00 PDT	Blow	
	17:24-GMT	205° / 2260 m Dir: West Slow travel	
	10:30:00 PDT	Blow	
	17:30-GMT	218° / 2749 m Dir: West Slow travel	
	10:33:00 PDT	Blow	
	17:33-GMT	224° / 2749 m Dir: West Slow travel	
	10:38:00 PDT	Blow	
	17:38-GMT	233° / 2749 m Dir: West Slow travel	
	10:42:00 PDT	Blow	Inside /
	17:42-GMT	235° / 2260 m Dir: West Slow travel	Outside
		<i>with crew boat</i>	
Sighting Number	08	Poor - 3	<i>Er</i> Total 1 — 0 Calves at sighting
	9:51:00 PDT	— / Blow	
	16:51-GMT	153° / 574 m Dir: West Slow travel	
	9:53:00 PDT	Blow	Inside /
	16:53-GMT	176° / 508 m Dir: West Slow travel	Outside
Sighting Number	09	Poor - 3	<i>Er</i> Total 1 — 0 Calves at sighting
	9:55:00 PDT	— / Body	Inside / nd
	16:55-GMT	135° / 550 m Dir: West Slow travel	
		<i>in kelp, juvenile</i>	
Sighting Number	10	Poor - 3	<i>Er</i> Total 3 — 0 Calves at sighting
	10:05:00 PDT	— / Blow	
	17:05-GMT	136° / 2749 m Dir: West Slow travel	
	10:07:00 PDT	Blow	
	17:07-GMT	140° / 2749 m Dir: West Slow travel	
	10:13:00 PDT	Blow	Inside /
	17:13-GMT	151° / 2749 m Dir: West Slow travel • Fluke	Outside
		<i>joined with sighting 7</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	18 Poor - 2	Er Total 2 — 0 Calves at sighting	
	12:01:00 PDT	— / Blow	
	19:01-GMT	135° / 3088 m Dir: West Slow travel	
	12:08:00 PDT	Blow	
	19:08-GMT	145° / 3088 m Dir: West Slow travel	
	12:17:00 PDT	Blow	
	19:17-GMT	162° / 2749 m Dir: West Slow travel	
	12:22:00 PDT	Body	
	19:22-GMT	176° / 2260 m Dir: West Slow travel • Fluke	
	12:28:00 PDT	Blow	
	19:28-GMT	197° / 1922 m Dir: West Slow travel	
	<i>able to track whales through fog</i>		
	12:40:00 PDT	Blow	
	19:40-GMT	238° / 2260 m Dir: West Slow travel	
Sighting Number	20 Poor - 2	Er Total 3 — 0 Calves at sighting	
	12:56:00 PDT	— / Blow	
	19:56-GMT	228° / 5027 m Dir: West Slow travel	
	12:57:00 PDT	Breach	
	19:57-GMT	232° / 5027 m Dir: West Slow travel • Breach	
Sighting Number	25 Good - 2	Er Total 2 — 0 Calves at sighting	
	13:51:00 PDT	— / Blow	
	20:51-GMT	150° / 5027 m Dir: West Slow travel • Fluke	
	14:03:00 PDT	Blow	
	21:03-GMT	154° / 5027 m Dir: West Slow travel • Fluke	
	14:20:00 PDT	Blow	
	21:20-GMT	164° / 5027 m Dir: West Slow travel • Fluke	
	14:29:00 PDT	Blow	
	21:29-GMT	174° / 3528 m Dir: West Slow travel • Fluke	
	14:37:00 PDT	Blow	
	21:37-GMT	182° / 3528 m Dir: West Slow travel • Fluke	
	14:45:00 PDT	Blow	
	21:45-GMT	198° / 3088 m Dir: West Slow travel	
	15:07:00 PDT	Blow	
	22:07-GMT	234° / 3088 m Dir: West Slow travel	
Sighting Number	28 Good - 2	Er Total 2 — 0 Calves at sighting	
	15:21:00 PDT	— / Blow	
	22:21-GMT	127° / 1483 m Dir: West Slow travel	
	15:34:00 PDT	Blow	
	22:34-GMT	179° / 1106 m Dir: West Slow travel	
	15:41:00 PDT	Blow	
	22:41-GMT	209° / 1106 m Dir: West Slow travel	
Sighting Number	30 Good - 2	Er Total 3 — 0 Calves at sighting	
	16:24:00 PDT	— / Blow	
	23:24-GMT	179° / 1922 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	16:30:00 PDT	Blow	
	23:30-GMT	191° / 1922 m Dir: West Slow travel	
	16:33:00 PDT	Blow	
	23:33-GMT	200° / 1922 m Dir: West Slow travel	
	16:36:00 PDT	Blow	
	23:36-GMT	206° / 2260 m Dir: West Slow travel	
	16:39:00 PDT	Blow	
	23:39-GMT	214° / 1922 m Dir: West Slow travel	
	16:46:00 PDT	Blow	ni / ni
	23:46-GMT	227° / 2749 m Dir: West Slow travel	
Mar 23	Total 7 Calves 0	Er Gray whale (northbound)	
Day 40 of 98			
Sighting Number	04	Poor - 2	Er Total 1 — 0 Calves at sighting
	9:30:00 PDT	— / Blow	
	16:30-GMT	164° / 946 m Dir: West Slow travel	
	9:37:00 PDT	Body	
	16:37-GMT	211° / 913 m Dir: West Slow travel	
	9:46:00 PDT	Blow	Inside /
	16:46-GMT	260° / 1483 m Dir: West Slow travel • Breach	Outside
Sighting Number	11	Poor - 3	Er Total 1 — 0 Calves at sighting
	12:10:00 PDT	— / Blow	
	19:10-GMT	135° / 1922 m Dir: West Slow travel • Fluke	
	12:24:00 PDT	Blow	
	19:24-GMT	197° / 1331 m Dir: West Slow travel	
	12:31:00 PDT	Blow	Inside /
	19:31-GMT	242° / 1483 m Dir: West Slow travel	Outside
Sighting Number	14	Poor - 3	Er Total 2 — 0 Calves at sighting
	12:42:00 PDT	Boat / ni	
	19:42-GMT	105° / 3528 m Dir: West Slow travel	
	12:51:00 PDT	Blow	
	19:51-GMT	112° / 2749 m Dir: West Slow travel	
	12:56:00 PDT	Blow	
	19:56-GMT	119° / 2260 m Dir: West Slow travel	
	13:03:00 PDT	Blow	
	20:03-GMT	130° / 1483 m Dir: West Slow travel	
	13:06:00 PDT	Blow	
	20:06-GMT	141° / 1922 m Dir: West Slow travel • Fluke	
	13:12:00 PDT	Blow	nd / nd
	20:12-GMT	162° / 1331 m Dir: West Slow travel • Rolling	
Sighting Number	16	Poor - 3	Er Total 1 — 0 Calves at sighting
	13:15:00 PDT	— / Blow	nd / nd
	20:15-GMT	177° / 264 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	18 Poor - 2	Er Total 1 — 0 Calves at sighting	
	13:59:00 PDT	— / Blow	
	20:59-GMT	130° / 2749 m Dir: West Slow travel • Fluke	
	14:07:00 PDT	Blow nd / nd	
	21:07-GMT	149° / 1483 m Dir: West Slow travel • Fluke	
Sighting Number	25 Poor - 1	Er Total 1 — 0 Calves at sighting	
	16:05:00 PDT	Boat / Blow	
	23:05-GMT	112° / 3528 m Dir: West Slow travel	
	16:13:00 PDT	Blow	
	23:13-GMT	113° / 3528 m Dir: West Slow travel	
	16:20:00 PDT	Blow	
	23:20-GMT	116° / 3528 m Dir: West Slow travel	
	16:25:00 PDT	Blow	
	23:25-GMT	118° / 3088 m Dir: West Slow travel	
	16:32:00 PDT	Blow	
	23:32-GMT	124° / 2749 m Dir: West Slow travel	
	16:41:00 PDT	Blow	
	23:41-GMT	135° / 2749 m Dir: West Slow travel	
	16:46:00 PDT	Body	
	23:46-GMT	143° / 2260 m Dir: West Slow travel	
	16:53:00 PDT	Blow	
	23:53-GMT	160° / 1483 m Dir: West Slow travel	
	16:59:00 PDT	Blow nd / nd	
	23:59-GMT	193° / 1331 m Dir: West Slow travel	
Mar 24	Total 29 Calves 0	Er Gray whale (northbound)	
Day 41 of 98			
Sighting Number	02 Poor - 1	Er Total 3 — 0 Calves at sighting	
	9:54:00 PDT	— / Blow	
	16:54-GMT	152° / 2749 m Dir: West Slow travel • Fluke	
	9:59:00 PDT	Body	
	16:59-GMT	165° / 2260 m Dir: West Slow travel • Fluke	
	10:06:00 PDT	Blow	
	17:06-GMT	189° / 1922 m Dir: West Slow travel • Fluke	
	10:14:00 PDT	Blow	
	17:14-GMT	221° / 1483 m Dir: West Slow travel • Fluke	
	10:16:00 PDT	Blow	
	17:16-GMT	232° / 2260 m Dir: West Slow travel • Fluke Inside / Outside	
Sighting Number	04 Poor - 1	Er Total 3 — 0 Calves at sighting	
	10:21:00 PDT	— / Blow	
	17:21-GMT	117° / 3528 m Dir: West Slow travel • Fluke	
	10:33:00 PDT	Blow	
	17:33-GMT	119° / 3528 m Dir: West Slow travel • Fluke	
	10:54:00 PDT	Blow	
	17:54-GMT	127° / 2749 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	10:58:00 PDT	Blow	
	17:58-GMT	129° / 3528 m Dir: West Slow travel	
	11:32:00 PDT	Blow	
	18:32-GMT	167° / 1020 m Dir: West Slow travel • Fluke	
	11:42:00 PDT	Blow	
	18:42-GMT	226° / 1922 m Dir: West Slow travel	
	11:46:00 PDT	Blow	Inside /
	18:46-GMT	230° / 2260 m Dir: West Slow travel	Outside
Sighting Number	08 Poor - 1	<i>Er</i> Total 3 — 0 Calves at sighting	
Images: 6589; 6597-6599	11:17:00 PDT	— / Blow	
	18:17-GMT	119° / 2260 m Dir: West Slow travel • Fluke	
	11:24:00 PDT	Blow	
	18:24-GMT	131° / 1483 m Dir: West Slow travel • Fluke	
	11:27:00 PDT	Blow	
	18:27-GMT	144° / 1106 m Dir: West Slow travel • Fluke	
	11:31:00 PDT	Blow	
	18:31-GMT	192° / 1106 m Dir: West Slow travel • Fluke	
	11:39:00 PDT	Blow	
	18:39-GMT	197° / 1106 m Dir: West Slow travel • Fluke	
	11:49:00 PDT	Blow	Inside /
	18:49-GMT	234° / 1403 m Dir: West Slow travel • Fluke	Outside
Sighting Number	12 Poor - 2	<i>Er</i> Total 4 — 0 Calves at sighting	
	12:22:00 PDT	— / Blow	
	19:22-GMT	186° / 3088 m Dir: West Slow travel	
	12:32:00 PDT	Blow	
	19:32-GMT	210° / 2749 m Dir: West Slow travel • Fluke	
	12:39:00 PDT	Blow	
	19:39-GMT	222° / 2749 m Dir: West Slow travel	
	12:48:00 PDT	Blow	Outside /
	19:48-GMT	237° / 3528 m Dir: West Slow travel	Outside
Sighting Number	18 Poor - 1	<i>Er</i> Total 2 — 0 Calves at sighting	
	13:27:00 PDT	— / Blow	
	20:27-GMT	126° / 3528 m Dir: West Slow travel	
	13:53:00 PDT	Blow	
	20:53-GMT	136° / 1922 m Dir: West Slow travel	
	13:58:00 PDT	Blow	
	20:58-GMT	152° / 1674 m Dir: West Slow travel	
	14:12:00 PDT	Blow	Inside /
	21:12-GMT	212° / 1483 m Dir: West Slow travel	Outside
Sighting Number	20 Poor - 1	<i>Er</i> Total 2 — 0 Calves at sighting	
	13:36:00 PDT	— / Blow	
	20:36-GMT	107° / 3528 m Dir: West Slow travel	
	13:42:00 PDT	Blow	
	20:42-GMT	107° / 3528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:48:00 PDT	Blow	
	20:48-GMT	109° / 3528 m Dir: West Slow travel	
	13:55:00 PDT	Blow	
	20:55-GMT	117° / 2260 m Dir: West Slow travel	
	14:00:00 PDT	Blow	
	21:00-GMT	142° / 2749 m Dir: West Slow travel	
	14:09:00 PDT	Blow	
	21:09-GMT	158° / 1922 m Dir: West Slow travel • Fluke	
	14:14:00 PDT	Blow	
	21:14-GMT	172° / 1674 m Dir: West Slow travel • Fluke	
	14:20:00 PDT	Blow	Inside /
	21:20-GMT	201° / 1483 m Dir: West Slow travel • Fluke	Outside
Sighting Number	21	Poor - 1	<i>Er</i> Total 2 — 0 Calves at sighting
	14:04:00 PDT	— / Blow	
	21:04-GMT	130° / 2749 m Dir: West Slow travel	
	14:11:00 PDT	Blow	
	21:11-GMT	148° / 1674 m Dir: West Slow travel	
	14:20:00 PDT	Blow	Inside /
	21:20-GMT	179° / 1483 m Dir: West Slow travel	Outside
Sighting Number	24	Good - 1	<i>Er</i> Total 1 — 0 Calves at sighting
	14:58:00 PDT	— / Body	Inside /
	21:58-GMT	228° / 2260 m Dir: West Slow travel	Outside
Sighting Number	25	Good - 1	<i>Er</i> Total 4 — 0 Calves at sighting
	15:22:00 PDT	— / Breach	
	22:22-GMT	126° / 2749 m Dir: West Slow travel • Fluke	
	15:31:00 PDT	Blow	
	22:31-GMT	131° / 2749 m Dir: West Slow travel • Fluke	
	15:35:00 PDT	Blow	
	22:35-GMT	137° / 2749 m Dir: West Slow travel	
	15:42:00 PDT	Blow	
	22:42-GMT	141° / 2749 m Dir: West Slow travel • Fluke	
	15:45:00 PDT	Blow	
	22:45-GMT	148° / 2749 m Dir: West Slow travel	
	15:51:00 PDT	Blow	
	22:51-GMT	159° / 2749 m Dir: West Slow travel • Fluke	
		<i>multiple blows</i>	
	16:00:00 PDT	Blow	
	23:00-GMT	189° / 2260 m Dir: West Slow travel • Fluke	
	16:08:00 PDT	Blow	
	23:08-GMT	217° / 2260 m Dir: West Slow travel • Fluke	
	16:11:00 PDT	Blow	Inside /
	23:11-GMT	227° / 2260 m Dir: West Slow travel • Fluke	Outside
		<i>2 bodies and flukes at once</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number	26 Good - 1	<i>Er</i> Total 3 — 0 Calves at sighting	
	15:22:00 PDT	— / Blow	
	22:22-GMT	131° / 5027 m Dir: West Slow travel • Fluke	
	15:31:00 PDT	Blow	
	22:31-GMT	131° / 5027 m Dir: West Slow travel	
	15:37:00 PDT	Blow	
	22:37-GMT	132° / 3528 m Dir: West Slow travel • Fluke	
		<i>condor now with</i>	
	15:47:00 PDT	Blow	
	22:47-GMT	132° / 3528 m Dir: West Slow travel • Fluke	
	15:51:00 PDT	Blow	
	22:51-GMT	133° / 3528 m Dir: West Slow travel	
		<i>multiple blows</i>	
	15:57:00 PDT	Blow	
	22:57-GMT	133° / 3528 m Dir: West Slow travel	
		<i>condor still with</i>	
	16:02:00 PDT	Blow	
	23:02-GMT	134° / 3088 m Dir: West Slow travel	
		<i>multiple blows confirmed 3</i>	
	16:10:00 PDT	Blow	
	23:10-GMT	136° / 3088 m Dir: West Slow travel • Fluke	
	16:15:00 PDT	Blow	
	23:15-GMT	140° / 2749 m Dir: West Slow travel • Fluke	
		<i>condor leaving animals</i>	
	16:21:00 PDT	Blow	
	23:21-GMT	149° / 2260 m Dir: West Slow travel • Fluke	
	16:27:00 PDT	Body	
	23:27-GMT	163° / 1483 m Dir: West Slow travel • Fluke	
		<i>body first, then blows and flukes</i>	
	16:32:00 PDT	Blow	
	23:32-GMT	183° / 1403 m Dir: West Slow travel • Fluke	
	16:37:00 PDT	Blow	
	23:37-GMT	208° / 1331 m Dir: West Slow travel • Fluke	
	16:42:00 PDT	Blow	
	23:42-GMT	231° / 1208 m Dir: West Slow travel • Fluke	
		<i>2 flukes</i>	
	16:44:00 PDT	Body	Inside /
	23:44-GMT	241° / 1403 m Dir: West Slow travel • Fluke	Outside
		<i>fluke only</i>	
Sighting Number	28 Fair - 3	<i>Er</i> Total 2 — 0 Calves at sighting	
	16:59:00 PDT	— / Blow	Inside /
	23:59-GMT	217° / 2749 m Dir: West Slow travel	Outside
		<i>first sighting almost at Holly</i>	

Mar 25 Total 2 Calves 0
Day 42 of 98

Er Gray whale (northbound)

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	01 Poor - 4	Er Total 2 — 0 Calves at sighting	
	9:21:00 PDT	— / Blow	
	16:21-GMT	124° / 2260 m Dir: West Slow travel	
	9:25:00 PDT	Blow	
	16:25-GMT	132° / 1922 m Dir: West Slow travel • Fluke	
		<i>both fluked</i>	
	9:32:00 PDT	Blow	
	16:32-GMT	158° / 1208 m Dir: West Slow travel • Fluke	
		<i>both fluked</i>	
	9:38:00 PDT	Body	
	16:38-GMT	198° / 1106 m Dir: West Slow travel • Fluke	
		<i>saw one fluke</i>	
	9:45:00 PDT	Blow	
	16:45-GMT	235° / 1403 m Dir: West Slow travel • Fluke	
		<i>one fluke</i>	
		Inside / Outside	
Mar 26	Total 15 Calves 0	Er Gray whale (northbound)	
Day 43 of 98			
Sighting Number	04 Fair - 2	Er Total 4 — 0 Calves at sighting	
	9:59:00 PDT	— / ni	
	16:59-GMT	148° / 5027 m Dir: No direction	
	10:08:00 PDT	Blow	
	17:08-GMT	152° / 5027 m Dir: West Slow travel • Fluke	
	10:19:00 PDT	Blow	
	17:19-GMT	159° / 5027 m Dir: West Slow travel • Fluke	
	10:31:00 PDT	Blow	
	17:31-GMT	166° / 5027 m Dir: West Slow travel • Fluke	
	11:07:00 PDT	ni	
	18:07-GMT	206° / 3528 m Dir: West Slow travel • Fluke	
	11:13:00 PDT	Blow	
	18:13-GMT	216° / 3528 m Dir: West Slow travel	
	11:17:00 PDT	Blow	
	18:17-GMT	221° / 3528 m Dir: West Slow travel • Fluke	
	11:22:00 PDT	Blow	
	18:22-GMT	226° / 3528 m Dir: West Slow travel	
		Outside / Outside	
Sighting Number	07 Good - 2	Er Total 2 — 0 Calves at sighting	
	10:23:00 PDT	— / Blow	
	17:23-GMT	136° / 3088 m Dir: West Slow travel	
	10:29:00 PDT	Blow	
	17:29-GMT	145° / 2749 m Dir: West Slow travel • Fluke	
	10:48:00 PDT	Blow	
	17:48-GMT	183° / 1922 m Dir: West Slow travel • Fluke	
		nd / nd	
Sighting Number	15 Good - 2	Er Total 1 — 0 Calves at sighting	
	14:35:00 PDT	— / Blow	
	21:35-GMT	148° / 1483 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	14:37:00 PDT	Blow	
	21:37-GMT	160° / 1331 m Dir: West Slow travel • Fluke	
	14:41:00 PDT	Blow	
	21:41-GMT	192° / 913 m Dir: West Slow travel	
	14:42:00 PDT	Blow	
	21:42-GMT	198° / 883 m Dir: West Slow travel • Fluke	
	14:47:00 PDT	Blow	
	21:47-GMT	229° / 946 m Dir: West Slow travel	
Images: 6655-61	14:48:00 PDT	Blow	
	21:48-GMT	236° / 1020 m Dir: West Slow travel • Fluke	
	14:52:00 PDT	Blow	
	21:52-GMT	251° / 1331 m Dir: West Slow travel	
	14:53:00 PDT	Blow	Inside /
	21:53-GMT	253° / 1403 m Dir: West Slow travel • Fluke	Outside
Sighting Number	19 Good - 2	Er Total 3 — 0 Calves at sighting	
	15:10:00 PDT	— / Blow	
	22:10-GMT	114° / 3528 m Dir: West Slow travel	
	15:14:00 PDT	Blow	
	22:14-GMT	115° / 3088 m Dir: West Slow travel	
	15:21:00 PDT	Blow	
	22:21-GMT	118° / 2749 m Dir: West Slow travel	
	15:29:00 PDT	Blow	
	22:29-GMT	128° / 2260 m Dir: West Slow travel	
	15:37:00 PDT	Body	
	22:37-GMT	148° / 1674 m Dir: East Slow travel • Fluke	
	15:48:00 PDT	Blow	
	22:48-GMT	196° / 1403 m Dir: East Slow travel	
	15:57:00 PDT	Blow	Inside /
	22:57-GMT	241° / 1483 m Dir: East Slow travel	Outside
Sighting Number	22 Fair - 3	Er	
	PDT		
	7:-GMT		
	15:59:00 PDT	— / Blow	
	22:59-GMT	105° / 2749 m Dir: West Slow travel	
	16:04:00 PDT	Blow	
	23:04-GMT	109° / 2749 m Dir: West Slow travel	
	16:08:00 PDT	Blow	
	23:08-GMT	111° / 2749 m Dir: West Slow travel	
	16:13:00 PDT	Blow	
	23:13-GMT	118° / 1674 m Dir: West Slow travel • Fluke	
	16:18:00 PDT	Blow	
	23:18-GMT	128° / 1483 m Dir: West Slow travel	
	16:24:00 PDT	Blow	
	23:24-GMT	159° / 735 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	16:33:00 PDT	Blow	Inside /
	23:33-GMT	237° / 883 m Dir: West Slow travel	Outside
Sighting Number	23 Fair - 3	<i>Er</i> Total 2 — 0 Calves at sighting	
	16:20:00 PDT	— / Blow	
	23:20-GMT	168° / 3528 m Dir: West Slow travel • Fluke	
	16:25:00 PDT	Blow	
	23:25-GMT	171° / 3528 m Dir: West Slow travel • Fluke	
	16:34:00 PDT	Blow	
	23:34-GMT	183° / 2749 m Dir: West Slow travel • Fluke	
	16:42:00 PDT	Blow	
	23:42-GMT	198° / 2749 m Dir: West Slow travel • Fluke	
	16:48:00 PDT	Blow	
	23:48-GMT	213° / 2749 m Dir: West Slow travel • Fluke	
	16:57:00 PDT	ni	Inside /
	23:57-GMT	224° / 2260 m Dir: West Slow travel	Outside
Sighting Number	24 Fair - 3	<i>Er</i> Total 1 — 0 Calves at sighting	
	16:51:00 PDT	— / Blow	
	23:51-GMT	136° / 827 m Dir: West Slow travel	
	16:54:00 PDT	Body	
	23:54-GMT	160° / 735 m Dir: West Slow travel	
	16:55:00 PDT	Blow	
	23:55-GMT	176° / 696 m Dir: West Slow travel	
	16:56:00 PDT	Blow	Inside / nd
	23:56-GMT	186° / 661 m Dir: West Slow travel	
Mar 27	Total 18 Calves 0	Er Gray whale (northbound)	
Day 44 of 98			
Sighting Number	04 Poor - 1	<i>Er</i> Total 1 — 0 Calves at sighting	
	9:33:00 PDT	— / Body	
	16:33-GMT	116° / 1106 m Dir: West Slow travel • Fluke	
	9:37:00 PDT	Blow	
	16:37-GMT	125° / 661 m Dir: West Slow travel • Fluke • Breach	
	9:40:00 PDT	Blow	
	16:40-GMT	143° / 426 m Dir: West Slow travel	
	9:42:00 PDT	Blow	
	16:42-GMT	138° / 508 m Dir: East • Milling	
	9:44:00 PDT	Blow	
	16:44-GMT	156° / 600 m Dir: East	
		<i>circled around kelp</i>	
	9:46:00 PDT	Blow	
	16:46-GMT	175° / 508 m Dir: East Slow travel	
	9:54:00 PDT	Body	nd / nd
	16:54-GMT	265° / 778 m Dir: East Slow travel	
		<i>lost him- may have gone thru or inside?</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number	12 Fair - 2	Er Total 3 — 0 Calves at sighting	
	11:25:00 PDT	— / Blow	
	18:25-GMT	157° / 5027 m Dir: West Slow travel	
	11:28:00 PDT	Blow	
	18:28-GMT	158° / 5027 m Dir: West Slow travel • Fluke	
		<i>fluke</i>	
	11:34:00 PDT	Blow	
	18:34-GMT	160° / 5027 m Dir: West Slow travel • Fluke	
	11:40:00 PDT	Blow	
	18:40-GMT	165° / 5027 m Dir: West Slow travel	
	11:44:00 PDT	Blow	
	18:44-GMT	167° / 5027 m Dir: West Slow travel • Fluke	
	11:49:00 PDT	ni	
	18:49-GMT	168° / 5027 m Dir: West Slow travel	
	11:56:00 PDT	Blow	
	18:56-GMT	171° / ni Dir: West Slow travel	
	12:00:00 PDT	Blow	
	19:00-GMT	177° / 5027 m Dir: West Slow travel	
	12:08:00 PDT	Blow	Outside /
	19:08-GMT	185° / 5027 m Dir: West Slow travel • Fluke	Outside
		<i>joined with sightings 13 and 14 at 12:26</i>	
Sighting Number	13 Fair - 2	Er Total 3 — 0 Calves at sighting	
	11:34:00 PDT	— / Blow	
	18:34-GMT	157° / 5027 m Dir: West Slow travel • Fluke	
	11:38:00 PDT	Blow	
	18:38-GMT	160° / 5027 m Dir: West Slow travel • Fluke	
	11:41:00 PDT	Blow	
	18:41-GMT	162° / 5027 m Dir: West Slow travel	
	11:44:00 PDT	Blow	
	18:44-GMT	163° / 5027 m Dir: West Slow travel • Fluke	
	11:49:00 PDT	ni	
	18:49-GMT	146° / 3528 m Dir: West Slow travel	
	12:00:00 PDT	Blow	
	19:00-GMT	175° / 5027 m Dir: West Slow travel	
	12:00:00 PDT	Blow	Outside /
	19:00-GMT	182° / 5027 m Dir: West Slow travel	Outside
		<i>joined sightings 12 and 14 at 12:26</i>	
Sighting Number	14 Fair - 2	Er Total 3 — 0 Calves at sighting	
	11:50:00 PDT	— / Blow	
	18:50-GMT	171° / 5027 m Dir: West Slow travel	
	11:54:00 PDT	ni	
	18:54-GMT	174° / 5027 m Dir: West Slow travel	
	11:56:00 PDT	Blow	
	18:56-GMT	175° / ni Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:00:00 PDT	Blow	
	19:00-GMT	179° / 5027 m Dir: West Slow travel	
	12:08:00 PDT	Blow	
	19:08-GMT	187° / 5027 m Dir: West Slow travel • Fluke	
	12:26:00 PDT	Blow	
	19:26-GMT	207° / 3528 m Dir: West Slow travel • Fluke	
	12:35:00 PDT	Blow	
	19:35-GMT	230° / 3528 m Dir: West Slow travel	
	12:56:00 PDT	Blow	Outside /
	19:56-GMT	235° / 5027 m Dir: West Slow travel	Outside
Sighting Number	15 Fair - 2	Er Total 1 — 0 Calves at sighting	
Images: 6657-6661	11:52:00 PDT	— / Body	
	18:52-GMT	182° / 1106 m Dir: West Slow travel	
		young whale	
	11:57:00 PDT	Body	
	18:57-GMT	212° / 1208 m Dir: West Slow travel	
	12:02:00 PDT	Body	Inside /
	19:02-GMT	237° / 1331 m Dir: West Slow travel	Outside
		inside Holly, outside buoys	
Sighting Number	17 Good - 2	Er Total 4 — 0 Calves at sighting	
	13:32:00 PDT	— / Blow	
	20:32-GMT	146° / 3088 m Dir: West Slow travel • Fluke	
	13:37:00 PDT	Blow	
	20:37-GMT	149° / 2749 m Dir: West Slow travel • Fluke	
	13:45:00 PDT	Blow	
	20:45-GMT	158° / 2749 m Dir: West Slow travel • Fluke	
	13:53:00 PDT	Blow	
	20:53-GMT	173° / 2749 m Dir: West Slow travel	
		condor express tracking- no fluke	
	13:58:00 PDT	Blow	
	20:58-GMT	182° / 2260 m Dir: West Slow travel	
		right next to condor express	
	14:00:00 PDT	Blow	
	21:00-GMT	188° / 2260 m Dir: West Slow travel • Fluke	
		back to normal	
	14:09:00 PDT	Blow	
	21:09-GMT	208° / 2260 m Dir: West Slow travel • Fluke	
	14:26:00 PDT	Blow	Inside /
	21:26-GMT	230° / 2749 m Dir: West Slow travel • Fluke	Outside
Sighting Number	21 Good - 3	Er Total 1 — 0 Calves at sighting	
	14:40:00 PDT	— / Blow	
	21:40-GMT	184° / 2260 m Dir: West Slow travel	
	14:44:00 PDT	Blow	
	21:44-GMT	197° / 2260 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	14:51:00 PDT	Blow	
	21:51-GMT	211° / 2260 m Dir: West Slow travel	
	14:58:00 PDT	Blow	Inside /
	21:58-GMT	239° / 1922 m Dir: West Slow travel	Outside
Sighting Number	25 Good - 3	Er Total 2 — 0 Calves at sighting	
	15:25:00 PDT	— / Blow	
	22:25-GMT	117° / 3528 m Dir: West Slow travel	
	15:46:00 PDT	Blow	
	22:46-GMT	119° / 3088 m Dir: West Slow travel	
	15:53:00 PDT	Blow	
	22:53-GMT	121° / 3088 m Dir: West Slow travel	
	15:57:00 PDT	Blow	
	22:57-GMT	123° / 2749 m Dir: West Slow travel • Fluke	
	16:05:00 PDT	Blow	
	23:05-GMT	130° / 2260 m Dir: West Slow travel	
	16:12:00 PDT	ni	
	23:12-GMT	146° / 946 m Dir: West Slow travel • Breach	
	16:19:00 PDT	Blow	
	23:19-GMT	185° / 696 m Dir: West Slow travel • Fluke	
	16:24:00 PDT	Blow	Inside /
	23:24-GMT	226° / 574 m Dir: West Slow travel • Fluke	Outside

Mar 28 Total **9** Calves **0** Er Gray whale (northbound)

Day 45 of 98

Sighting Number	05 Poor - 3	Er Total 3 — 0 Calves at sighting	
	10:24:00 PDT	— / Blow	
	17:24-GMT	141° / 5027 m Dir: West Slow travel	
	10:30:00 PDT	Blow	
	17:30-GMT	143° / 5027 m Dir: West Slow travel	
	10:37:00 PDT	Blow	
	17:37-GMT	143° / 5027 m Dir: West Slow travel	
	10:47:00 PDT	Blow	
	17:47-GMT	145° / 5027 m Dir: West Slow travel	
	10:53:00 PDT	Blow	
	17:53-GMT	145° / 5027 m Dir: West Slow travel	
	11:04:00 PDT	Blow	
	18:04-GMT	147° / 5027 m Dir: West Slow travel	
	11:20:00 PDT	Blow	
	18:20-GMT	150° / 5027 m Dir: West Slow travel	
	11:27:00 PDT	Blow	
	18:27-GMT	152° / 5027 m Dir: West Slow travel	
	11:31:00 PDT	Blow	
	18:31-GMT	155° / 3528 m Dir: West Slow travel	
	11:44:00 PDT	Blow	
	18:44-GMT	160° / 3088 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	11:57:00 PDT	Blow	
	18:57-GMT	163° / 3088 m Dir: West Slow travel	
	12:19:00 PDT	Blow	
	19:19-GMT	190° / 1674 m Dir: West Slow travel	
	12:24:00 PDT	Blow	
	19:24-GMT	201° / 1674 m Dir: West Slow travel	
	12:26:00 PDT	Blow	
	19:26-GMT	205° / 1483 m Dir: West Slow travel	
	12:31:00 PDT	Blow	
	19:31-GMT	218° / 1331 m Dir: West Slow travel	
	12:37:00 PDT	Blow	
	19:37-GMT	231° / 1331 m Dir: West Slow travel	
	12:43:00 PDT	Blow	
	19:43-GMT	241° / 1674 m Dir: West Slow travel	
	12:50:00 PDT	Blow	Inside /
	19:50-GMT	250° / 1483 m Dir: West Slow travel	Outside
Sighting Number	06 Poor - 3	<i>Er</i> Total 2 — 0 Calves at sighting	
	11:59:00 PDT	— / Body	
	18:59-GMT	163° / 539 m Dir: West Slow travel	
	12:03:00 PDT	Blow	
	19:03-GMT	190° / 508 m Dir: West Slow travel	
	12:07:00 PDT	Blow	
	19:07-GMT	237° / 528 m Dir: West Slow travel	
	12:15:00 PDT	Blow	Inside /
	19:15-GMT	255° / 735 m Dir: West Slow travel	Outside
Sighting Number	09 Poor - 3	<i>Er</i> Total 1 — 0 Calves at sighting	
	13:19:00 PDT	— / Blow	
	20:19-GMT	109° / 2260 m Dir: West Slow travel	
	13:24:00 PDT	Blow	
	20:24-GMT	113° / 1922 m Dir: West Slow travel	
	13:31:00 PDT	Blow	
	20:31-GMT	125° / 1483 m Dir: West Slow travel	
	13:37:00 PDT	Blow	
	20:37-GMT	144° / 827 m Dir: West Slow travel	
	13:41:00 PDT	Blow	
	20:41-GMT	179° / 600 m Dir: West Slow travel	
	13:48:00 PDT	Blow	Inside /
	20:48-GMT	241° / 778 m Dir: West Slow travel	Outside
Sighting Number	10 Poor - 3	<i>Er</i> Total 3 — 0 Calves at sighting	
	13:34:00 PDT	Boat / Blow	
	20:34-GMT	192° / 3088 m Dir: West Slow travel • Fluke	
	13:41:00 PDT	Blow	
	20:41-GMT	203° / 3088 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:47:00 PDT	Blow	
	20:47-GMT	208° / 3528 m Dir: West Slow travel • Fluke	
	<i>whales moved farther out</i>		
	13:58:00 PDT	Blow	
	20:58-GMT	210° / 3528 m Dir: West Slow travel • Fluke	
	14:05:00 PDT	Blow	Outside /
	21:05-GMT	220° / 5027 m Dir: West Slow travel	Outside
Mar 29	Total 7 Calves 0	Er Gray whale (northbound)	
Day 46 of 98			
Sighting Number	07	Poor - 4	<i>Er</i> Total 2 — 0 Calves at sighting
	11:53:00 PDT	— / Blow	
	18:53-GMT	146° / 3528 m Dir: West Slow travel	
	12:04:00 PDT	Blow	
	19:04-GMT	165° / 3088 m Dir: West Slow travel • Fluke	
	12:13:00 PDT	Blow	
	19:13-GMT	187° / 3088 m Dir: West Slow travel • Fluke	
	12:17:00 PDT	Blow	
	19:17-GMT	200° / 2749 m Dir: West Slow travel	
	12:21:00 PDT	Blow	
	19:21-GMT	206° / 2749 m Dir: West Slow travel • Fluke	
	12:25:00 PDT	Blow	
	19:25-GMT	218° / 3088 m Dir: West Slow travel	
	12:29:00 PDT	Blow	
	19:29-GMT	226° / 3088 m Dir: West Slow travel	
	12:32:00 PDT	Blow	nd /
	19:32-GMT	232° / 3088 m Dir: West Slow travel	Outside
Sighting Number	09	Poor - 4	<i>Er</i> Total 2 — 0 Calves at sighting
	12:51:00 PDT	— / Blow	
	19:51-GMT	132° / 1922 m Dir: West Slow travel	
	12:56:00 PDT	Blow	
	19:56-GMT	154° / 1106 m Dir: West Slow travel • Fluke	
	13:01:00 PDT	Blow	
	20:01-GMT	188° / 1331 m Dir: West Slow travel • Rolling	
	<i>with dolphins</i>		
	13:09:00 PDT	Blow	
	20:09-GMT	224° / 778 m Dir: West Slow travel	
	13:14:00 PDT	Body	
	20:14-GMT	244° / 1331 m Dir: West Slow travel • Rolling	
	13:15:00 PDT	Blow	
	20:15-GMT	247° / 1403 m Dir: West Slow travel • Rolling	
	13:18:00 PDT	Blow	Inside /
	20:18-GMT	254° / 1483 m Dir: West Slow travel	Outside
Sighting Number	12	Fair - 3	<i>Er</i> Total 1 — 0 Calves at sighting
	14:33:00 PDT	— / Blow	
	21:33-GMT	147° / 2749 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	14:39:00 PDT	Blow	
	21:39-GMT	160° / 2749 m Dir: West Slow travel	
	14:43:00 PDT	Blow	
	21:43-GMT	171° / 2749 m Dir: West Slow travel	
	14:52:00 PDT	Blow	
	21:52-GMT	205° / 2749 m Dir: West Slow travel	
	14:57:00 PDT	Blow	nd /
	21:57-GMT	224° / 2749 m Dir: West Slow travel • Fluke	Outside
Sighting Number	14 Fair - 2	Er Total 2 — 0 Calves at sighting	
	14:48:00 PDT	— / Blow	
	21:48-GMT	98° / 3528 m Dir: West Slow travel • Fluke	
	15:19:00 PDT	Blow	
	22:19-GMT	133° / 1208 m Dir: West Slow travel	
	15:22:00 PDT	Blow	
	22:22-GMT	146° / 913 m Dir: West Slow travel	
	15:24:00 PDT	Blow	
	22:24-GMT	165° / 696 m Dir: West Slow travel	
	15:30:00 PDT	Body	
	22:30-GMT	206° / 883 m Dir: West Slow travel • Fluke	
	15:37:00 PDT	Blow	Inside /
	22:37-GMT	247° / 1331 m Dir: West Slow travel • Fluke	Outside

Mar 30 Total **10** Calves **0** Er Gray whale (northbound)

Day 47 of 98

Sighting Number	01 Poor - 2	Er Total 2 — 0 Calves at sighting	
	11:29:00 PDT	— / Blow	
	18:29-GMT	144° / 2749 m Dir: West Slow travel	
	11:31:00 PDT	Blow	
	18:31-GMT	152° / 2749 m Dir: West Slow travel	
	11:39:00 PDT	Blow	
	18:39-GMT	164° / 2260 m Dir: West Slow travel	
	11:47:00 PDT	Blow	
	18:47-GMT	185° / 1922 m Dir: West Slow travel	
	11:50:00 PDT	Blow	
	18:50-GMT	200° / 1922 m Dir: West Slow travel • Fluke	
	12:02:00 PDT	Body	Inside /
	19:02-GMT	241° / 1922 m Dir: West Slow travel	Outside
Sighting Number	03 Poor - 2	Er Total 4 — 0 Calves at sighting	
Images: 6723-6752	12:23:00 PDT	— / Blow	
	19:23-GMT	125° / 1922 m Dir: West Slow travel	
	12:28:00 PDT	Blow	
	19:28-GMT	128° / 1922 m Dir: West Slow travel	
	12:33:00 PDT	Blow	
	19:33-GMT	131° / 1922 m Dir: West Slow travel • Fluke • Rolling	
	12:37:00 PDT	Blow	
	19:37-GMT	138° / 1483 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:41:00 PDT	Blow	
	19:41-GMT	147° / 1331 m Dir: West Slow travel • Fluke	
	12:46:00 PDT	Blow	
	19:46-GMT	171° / 913 m Dir: West Slow travel	
	12:49:00 PDT	Blow	
	19:49-GMT	197° / 778 m Dir: West Slow travel	
	12:53:00 PDT	Blow	
	19:53-GMT	222° / 778 m Dir: West Slow travel	
	12:57:00 PDT	Body	
	19:57-GMT	245° / 883 m Dir: West Slow travel	
	13:03:00 PDT	Blow	Inside /
	20:03-GMT	263° / 1331 m Dir: West Slow travel	Outside
Sighting Number	07 Poor - 2	<i>Er</i> Total 2 — 0 Calves at sighting	
	13:13:00 PDT	— / Blow	
	20:13-GMT	144° / 2749 m Dir: West Slow travel • Fluke	
	13:45:00 PDT	Blow	
	20:45-GMT	199° / 2749 m Dir: West Slow travel • Fluke	
	13:54:00 PDT	Blow	
	20:54-GMT	218° / 2749 m Dir: West Slow travel • Fluke	
	14:00:00 PDT	Blow	Outside /
	21:00-GMT	226° / 3088 m Dir: West Slow travel	Outside
Sighting Number	08 Poor - 2	<i>Er</i> Total 2 — 0 Calves at sighting	
	13:27:00 PDT	— / Blow	
	20:27-GMT	121° / 1106 m Dir: West Slow travel	
	13:32:00 PDT	Blow	
	20:32-GMT	138° / 827 m Dir: West Slow travel	
	13:34:00 PDT	Blow	
	20:34-GMT	162° / 696 m Dir: West Slow travel	
	13:38:00 PDT	Blow	
	20:38-GMT	211° / 489 m Dir: West Slow travel	
	13:43:00 PDT	Body	
	20:43-GMT	244° / 778 m Dir: West Slow travel	

Mar 31 Total 4 Calves 0 Er Gray whale (northbound)

Day 48 of 98

Sighting Number	01 Poor - 2	<i>Er</i> Total 3 — 0 Calves at sighting	
	9:18:00 PDT	— / Body	
	16:18-GMT	154° / 2749 m Dir: West Slow travel	
	9:20:00 PDT	Blow	
	16:20-GMT	160° / 2260 m Dir: West Slow travel	
	9:22:00 PDT	Blow	
	16:22-GMT	164° / 1922 m Dir: West Slow travel	
	9:30:00 PDT	Blow	
	16:30-GMT	198° / 1674 m Dir: West Slow travel	
	9:36:00 PDT	Blow	
	16:36-GMT	222° / 1922 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	Time	CueTip / Saw	Holly / Buoys
		9:38:00 PDT	Blow	
		16:38-GMT	231° / 1922 m Dir: West Slow travel	
		9:40:00 PDT	Blow	Inside /
		16:40-GMT	236° / 2260 m Dir: West Slow travel	Outside
Sighting Number	15	Poor - 2	Er Total 1 — 0 Calves at sighting	
		15:15:00 PDT	— / Blow	
		22:15-GMT	115° / 1483 m Dir: West Slow travel • Fluke	
		15:20:00 PDT	Blow	
		22:20-GMT	127° / 883 m Dir: West Slow travel • Fluke	
		15:24:00 PDT	Blow	
		22:24-GMT	155° / 678 m Dir: West Slow travel • Fluke	
		15:28:00 PDT	Blow	
		22:28-GMT	197° / 471 m Dir: West Slow travel • Fluke	
		15:35:00 PDT	Blow	Inside /
		22:35-GMT	271° / 661 m Dir: West Slow travel • Fluke	Through
Apr 02	Total 8	Calves 0	Er Gray whale (northbound)	
Day 50 of 98				
Sighting Number	05	Good - 0	Er Total 1 — 0 Calves at sighting	
		9:49:00 PDT	— / Body	
		16:49-GMT	149° / 366 m Dir: West Slow travel	
			<i>very small whale, snorkeling (may have been where Tt, SD1 were first sighted?)</i>	
		9:51:00 PDT	Body	
		16:51-GMT	172° / 275 m Dir: West Slow travel	
		10:01:00 PDT	Body	Inside /
		17:01-GMT	292° / 735 m Dir: West Slow travel	Outside
Sighting Number	06	Good - 0	Er Total 2 — 0 Calves at sighting	
		10:09:00 PDT	— / Body	
		17:09-GMT	114° / 2749 m Dir: West Slow travel	
		10:12:00 PDT	Blow	
		17:12-GMT	121° / 1674 m Dir: West Slow travel	
		10:18:00 PDT	Blow	
		17:18-GMT	134° / 1922 m Dir: West Slow travel	
		10:28:00 PDT	Blow	
		17:28-GMT	168° / 2749 m Dir: West Slow travel	
		10:30:00 PDT	Blow	nd /
		17:30-GMT	178° / 2749 m Dir: West Slow travel	Outside
Sighting Number	07	Fair - 0	Er Total 4 — 0 Calves at sighting	
		11:43:00 PDT	— / Blow	
		18:43-GMT	145° / 3528 m Dir: West Slow travel	
		11:53:00 PDT	Blow	
		18:53-GMT	148° / 3528 m Dir: West Slow travel • Fluke	
		12:05:00 PDT	Blow	
		19:05-GMT	149° / 5027 m Dir: West Slow travel	
		12:14:00 PDT	Blow	
		19:14-GMT	152° / 5027 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	12:24:00 PDT	Blow	
	19:24-GMT	156° / 5027 m Dir: West Slow travel • Fluke • Breach	
	<i>3 breaches</i>		
	12:30:00 PDT	Blow	
	19:30-GMT	161° / 5027 m Dir: West Slow travel	
	12:30:00 PDT	Blow	
	19:30-GMT	164° / 5027 m Dir: West Slow travel	
	12:42:00 PDT	Blow	
	19:42-GMT	168° / 5027 m Dir: West Slow travel	
	<i>condor express with whales at 12:48</i>		
	12:50:00 PDT	Blow	
	19:50-GMT	173° / 5027 m Dir: West Slow travel • Fluke	
	12:55:00 PDT	Blow	
	19:55-GMT	175° / 5027 m Dir: West Slow travel	
	13:00:00 PDT	Blow	
	20:00-GMT	180° / 3528 m Dir: West Slow travel	
	13:04:00 PDT	Blow	
	20:04-GMT	184° / 3528 m Dir: West Slow travel	
	13:11:00 PDT	Blow	
	20:11-GMT	190° / 3528 m Dir: West Slow travel	
	13:15:00 PDT	Blow	
	20:15-GMT	193° / 3528 m Dir: West Slow travel	
	13:23:00 PDT	Blow	
	20:23-GMT	201° / 3528 m Dir: West Slow travel	
	13:29:00 PDT	Blow	
	20:29-GMT	210° / 3528 m Dir: West Slow travel	
	13:48:00 PDT	ni	Outside /
	20:48-GMT	220° / 3528 m Dir: West Slow travel	Outside
Sighting Number	12	Good - 0	Er Total 1 — 0 Calves at sighting
	15:46:00 PDT	— / Blow	
	22:46-GMT	184° / 1922 m Dir: West Slow travel • Fluke	
	15:55:00 PDT	Blow	
	22:55-GMT	211° / 1674 m Dir: West Slow travel	
	16:02:00 PDT	Blow	Inside /
	23:02-GMT	228° / 2260 m Dir: West Slow travel • Fluke	Outside
Apr 03	Total 4 Calves 1	Er Gray whale (northbound)	
Day 51 of 98			
Sighting Number	02	Fair - 1	Er Total 2 — 0 Calves at sighting
	9:16:00 PDT	— / Blow	
	16:16-GMT	118° / 5027 m Dir: West Slow travel	
	9:28:00 PDT	Blow	
	16:28-GMT	122° / 5027 m Dir: West Slow travel	
	9:37:00 PDT	Blow	
	16:37-GMT	125° / 3528 m Dir: West Slow travel	
	<i>separation of whales</i>		

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	Time	CueTip / Saw	Holly / Buoys
		9:46:00 PDT	Blow	
		16:46-GMT	135° / 3088 m Dir: West Slow travel • Fluke <i>body</i>	
		9:57:00 PDT	Blow	
		16:57-GMT	149° / 3088 m Dir: West Slow travel	
		10:02:00 PDT	Blow	
		17:02-GMT	155° / 3088 m Dir: West Slow travel • Fluke	
		10:10:00 PDT	Blow	
		17:10-GMT	172° / 2260 m Dir: West Slow travel	
		10:27:00 PDT	Blow	ni / ni
		17:27-GMT	219° / 2749 m Dir: West Slow travel • Fluke	
Sighting Number	13	Fair - 1	Er Total 2 — 1 Calf at sighting	
		<i>Images: 6873-80</i>	15:13:00 PDT — / Body	
			22:13-GMT 215° / 412 m Dir: West Slow travel <i>spotted initially at 150/3, First spotted at 155 just the other side of the surf. Second surfacing calf was up at the same time. Pair traveled west. Mother turned offshore and completed a full circle before the pair progressed inside buoys</i>	
			15:15:00 PDT Blow	
			22:15-GMT 253° / 508 m Dir: West Slow travel	
			15:25:00 PDT Body	Inside /
			22:25-GMT 293° / 1020 m Dir: West Slow travel	Inside
Apr 04	Total 3 Calves 0	Er Gray whale (northbound)		
Day 52 of 98				
Sighting Number	03	Fair - 1	Er Total 1 — 0 Calves at sighting	
		<i>Images: 6941-6951</i>	9:32:00 PDT — / Body	
			16:32-GMT 175° / 574 m Dir: West Slow travel <i>No ID, popped up in front of us, very slow, spyhop, not much blowing, hard to track, condor on whales at buoys</i>	
			9:37:00 PDT Body	
			16:37-GMT 184° / 574 m Dir: West Slow travel • Spyhop	
			9:40:00 PDT Body	
			16:40-GMT 186° / 550 m Dir: West Slow travel	
			9:44:00 PDT Body	
			16:44-GMT 213° / 600 m Dir: West Slow travel	
			9:54:00 PDT Body	Inside /
			16:54-GMT 255° / 1106 m Dir: West Slow travel	Outside
Sighting Number	13	Fair - 1	Er Total 1 — 0 Calves at sighting	
			12:50:00 PDT — / Blow	
			19:50-GMT 231° / 3528 m Dir: West Slow travel	
			12:56:00 PDT Blow	Outside /
			19:56-GMT 237° / 3528 m Dir: West Slow travel	Outside
Sighting Number	17	Fair - 4	Er Total 1 — 0 Calves at sighting Disappeared	
			15:16:00 PDT — / Blow	nd / nd
			22:16-GMT 152° / 827 m Dir: West Slow travel	
Apr 05	Total 10 Calves 2	Er Gray whale (northbound)		
Day 53 of 98				

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	01 Fair - 3	Er Total 2 — 0 Calves at sighting	
Images: none	8:53:00 PDT	— / Blow	
	15:53-GMT	262° / 1483 m Dir: West Slow travel	
	<i>saw back of large whale, saw whales while setting up, already past point moving buoys, blows similar size, only saw one animal</i>		
	8:56:00 PDT	Blow	
	15:56-GMT	267° / 1922 m Dir: West Slow travel	
	9:00:00 PDT	Blow	
	16:00-GMT	271° / 2260 m Dir: West Slow travel	
			Inside / Outside
Sighting Number	03 Fair - 3	Er Total 2 — 0 Calves at sighting	
Images: none	9:29:00 PDT	— / Blow	
	16:29-GMT	116° / 2260 m Dir: West Slow travel	
	9:36:00 PDT	Body	
	16:36-GMT	118° / 1674 m Dir: West Slow travel	
	9:41:00 PDT	Blow	
	16:41-GMT	127° / 1106 m Dir: West Slow travel	
	9:53:00 PDT	Blow	
	16:53-GMT	129° / 778 m Dir: West Slow travel	
	9:57:00 PDT	Blow	
	16:57-GMT	144° / 600 m Dir: West Slow travel	
	10:04:00 PDT	Blow	
	17:04-GMT	150° / 600 m Dir: West Slow travel	
			nd / nd
Sighting Number	04 Fair - 3	Er Total 2 — 0 Calves at sighting	
Images: none	9:35:00 PDT	— / Blow	
	16:35-GMT	134° / 3528 m Dir: West Slow travel	
	9:44:00 PDT	Blow	
	16:44-GMT	141° / 3088 m Dir: West Slow travel	
	9:46:00 PDT	Blow	
	16:46-GMT	143° / 2749 m Dir: West Slow travel	
	9:54:00 PDT	Blow	
	16:54-GMT	151° / 2260 m Dir: West Slow travel	
	9:58:00 PDT	Blow	
	16:58-GMT	159° / 2749 m Dir: West Slow travel	
			nd / nd
Sighting Number	05 Fair - 3	Er Total 4 — 2 Calves at sighting	
Images: no images	9:45:00 PDT	— / Blow	
	16:45-GMT	154° / 629 m Dir: West Slow travel	
	<i>two pairs, "playing" together, mom pushed calf, head up several times, very choppy, lost whales after buoys, followed closely by another pair (#3) were not able to determine if there was a calf, when they joined, all whales moved ahead.</i>		
	9:47:00 PDT	Blow	
	16:47-GMT	158° / 629 m Dir: No direction	
	9:49:00 PDT	Blow	
	16:49-GMT	155° / 600 m Dir: West No direction	
	9:51:00 PDT	Blow	
	16:51-GMT	157° / 550 m Dir: West No direction	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	9:56:00 PDT	Blow	
	16:56-GMT	159° / 600 m Dir: West No direction • Rolling	
	<i>mom facing east</i>		
	9:59:00 PDT	Blow	
	16:59-GMT	158° / 600 m Dir: West No direction • Bubbles seen	
	10:03:00 PDT	Blow	
	17:03-GMT	156° / 600 m Dir: West No direction	
	10:06:00 PDT	Blow	
	17:06-GMT	175° / 508 m Dir: West Slow travel	
	10:09:00 PDT	Blow	
	17:09-GMT	210° / 489 m Dir: West Slow travel	
	10:10:00 PDT	Blow	
	17:10-GMT	224° / 550 m Dir: West Slow travel	
	10:12:00 PDT	Blow	
	17:12-GMT	238° / 827 m Dir: West Slow travel	
	10:13:00 PDT	Blow	
	17:13-GMT	145° / 735 m Dir: West Slow travel • Fluke	
	10:17:00 PDT	Blow	Inside /
	17:17-GMT	283° / 735 m Dir: West Slow travel	Inside

Apr 06 Total 6 Calves 2
Day 54 of 98

Er Gray whale (northbound)

Sighting Number	Fair - 0	Er Total 2 — 0 Calves at sighting
	9:06:00 PDT	— / Blow
	16:06-GMT	129° / 1922 m Dir: West Slow travel
	9:09:00 PDT	Blow
	16:09-GMT	136° / 2260 m Dir: West Slow travel
	9:21:00 PDT	Blow
	16:21-GMT	183° / 1483 m Dir: West Slow travel
	9:28:00 PDT	Blow
	16:28-GMT	213° / 1483 m Dir: West Slow travel
	9:45:00 PDT	Body
	16:45-GMT	252° / 2260 m Dir: West Slow travel
		Inside / Outside
Sighting Number	Fair - 0	Er Total 2 — 1 Calf at sighting
	9:13:00 PDT	— / Blow
	16:13-GMT	132° / 778 m Dir: West Slow travel
	<i>did not see much, lost past point, saw together and calf surfacing alone</i>	
	9:15:00 PDT	Blow
	16:15-GMT	159° / 550 m Dir: West Slow travel
	9:18:00 PDT	Blow
	16:18-GMT	171° / 574 m Dir: West Slow travel
		nd / nd

Images: none

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number	08 Good - 0	Er Total 2 — 1 Calf at sighting	
<i>Images: 6985-6988</i>	13:13:00 PDT	— / Blow	
	20:13-GMT	103° / 3528 m Dir: West Slow travel	
	<i>Michael saw one large blow to the east. Did not see whales again until they were right in front of us. I saw what looked like a small head of a calf and a large back of a mom. They surfaced a couple more times. Then we lost them before they got to the buoys.</i>		
	14:02:00 PDT	Blow	
	21:02-GMT	174° / 314 m Dir: West Slow travel	
	14:02:00 PDT	Body	
	21:02-GMT	192° / 314 m Dir: West Slow travel	
	14:05:00 PDT	Body	
	21:05-GMT	245° / 388 m Dir: West Slow travel	
			Inside / nd
Apr 07	Total 3 Calves 0	Er Gray whale (northbound)	
Day 55 of 98			
Sighting Number	05 Good - 0	Er Total 1 — 0 Calves at sighting	
	10:01:00 PDT	Boat / Blow	
	17:01-GMT	103° / 2749 m Dir: West Slow travel	
	<i>cue from Condor</i>		
	10:05:00 PDT	Blow	
	17:05-GMT	107° / 2260 m Dir: West Slow travel	
	10:05:00 PDT	Blow	
	17:05-GMT	107° / 2260 m Dir: West Slow travel	
	10:13:00 PDT	Blow	
	17:13-GMT	121° / 550 m Dir: West Slow travel	
	10:16:00 PDT	Blow	
	17:16-GMT	145° / 471 m Dir: West Slow travel • Spyhop	
	10:18:00 PDT	Blow	
	17:18-GMT	146° / 661 m Dir: West Slow travel	
	10:20:00 PDT	Blow	
	17:20-GMT	158° / 528 m Dir: West Slow travel	
			Inside / nd
Sighting Number	13 Good - 2	Er Total 1 — 0 Calves at sighting	
	12:55:00 PDT	— / Body	
	19:55-GMT	139° / 455 m Dir: West Slow travel	
	12:56:00 PDT	Blow	
	19:56-GMT	172° / 338 m Dir: West Slow travel	
	12:57:00 PDT	Blow	
	19:57-GMT	174° / 356 m Dir: West Slow travel	
	13:01:00 PDT	Body	
	20:01-GMT	252° / 489 m Dir: West Slow travel	
	<i>condor found it at sands</i>		
Sighting Number	26 Good - 3	Er Total 1 — 0 Calves at sighting	
	15:21:00 PDT	— / Blow	
	22:21-GMT	112° / 3088 m Dir: West Slow travel	
	15:29:00 PDT	Blow	
	22:29-GMT	125° / 1483 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:35:00 PDT	Blow	
	22:35-GMT	141° / 1403 m Dir: West	Slow travel
	15:52:00 PDT	Blow	Inside /
	22:52-GMT	236° / 1483 m Dir: West	Outside

Apr 08 Total 2 Calves 1 Er Gray whale (northbound)
Day 56 of 98

Sighting Number **07** Fair - 0 Er Total 2 — 1 Calf at sighting

Images: 7006-11

10:14:00 PDT	Boat / Blow	
17:14-GMT	114° / 3088 m Dir: West	Slow travel
<i>no good images, no ID, Condor saw first- as boat moved into our area we saw big blow and calf-long down time- then we saw whales and directed condor (nice cooperation) cow directing calf in lead-calf on inside then later on outside- both times slightly behind- at 167 cow save bubble blast, saw once more then disappeared</i>		
10:28:00 PDT	Body	
17:28-GMT	139° / 2260 m Dir: West	Slow travel
10:34:00 PDT	Body	
17:34-GMT	155° / 1922 m Dir: West	Slow travel
10:43:00 PDT	Body	
17:43-GMT	181° / 1922 m Dir: West	Slow travel • Bubbles seen
10:49:00 PDT	Body	nd / nd
17:49-GMT	205° / 1922 m Dir: West	Slow travel

Apr 09 Total 5 Calves 0 Er Gray whale (northbound)
Day 57 of 98

Sighting Number **11** Poor - 2 Er Total 2 — 0 Calves at sighting

13:22:00 PDT	— / Blow	
20:22-GMT	167° / 3088 m Dir: West	Slow travel
13:27:00 PDT	Blow	
20:27-GMT	174° / 2749 m Dir: West	Slow travel • Fluke
13:33:00 PDT	Blow	
20:33-GMT	183° / 3088 m Dir: West	Slow travel
13:41:00 PDT	Blow	
20:41-GMT	194° / 3088 m Dir: West	Slow travel
13:49:00 PDT	Blow	
20:49-GMT	201° / 3088 m Dir: West	Slow travel
14:03:00 PDT	Blow	Outside /
21:03-GMT	223° / 3528 m Dir: West	Outside

Sighting Number **13** Poor - 2 Er Total 1 — 0 Calves at sighting

14:01:00 PDT	— / Blow	
21:01-GMT	107° / 2260 m Dir: West	Slow travel
14:05:00 PDT	Blow	
21:05-GMT	109° / 1922 m Dir: West	Slow travel
14:08:00 PDT	Blow	
21:08-GMT	111° / 1403 m Dir: West	Slow travel
14:21:00 PDT	Blow	
21:21-GMT	178° / 412 m Dir: West	Slow travel

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	14:23:00 PDT	Blow	
	21:23-GMT	247° / 426 m Dir: West Slow travel	
	14:27:00 PDT	Body	
	21:27-GMT	272° / 550 m Dir: West Slow travel • Fluke	
	14:37:00 PDT	Blow	Inside /
	21:37-GMT	244° / 1922 m Dir: West Slow travel	Inside
Sighting Number	18 Poor - 3	Er Total 2 — 0 Calves at sighting	
Images: 7093-7166	14:58:00 PDT	— / Blow	
	21:58-GMT	99° / 3088 m Dir: West Slow travel	
	15:00:00 PDT	Blow	
	22:00-GMT	103° / 2749 m Dir: West Slow travel	
	15:04:00 PDT	Blow	
	22:04-GMT	106° / 3088 m Dir: West Slow travel	
	15:07:00 PDT	Blow	
	22:07-GMT	111° / 3088 m Dir: West Slow travel	
	15:12:00 PDT	Blow	
	22:12-GMT	115° / 2260 m Dir: West Slow travel	
	15:16:00 PDT	Blow	
	22:16-GMT	117° / 1331 m Dir: West Slow travel	
	15:19:00 PDT	Blow	
	22:19-GMT	132° / 1020 m Dir: West Slow travel	
	15:23:00 PDT	Blow	
	22:23-GMT	168° / 661 m Dir: West Slow travel	
	15:27:00 PDT	Blow	
	22:27-GMT	223° / 678 m Dir: West Slow travel	
	15:33:00 PDT	Blow	Inside /
	22:33-GMT	257° / 1483 m Dir: West Slow travel	Outside

Apr 10 Total 2 Calves 1 Er Gray whale (northbound)

Day 58 of 98

Sighting Number	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	17 Good - 0	Er Total 2 — 1 Calf at sighting	
Images: 7141-7176	13:37:00 PDT	— / Blow	
	20:37-GMT	139° / 778 m Dir: West Slow travel	
	<i>images include vessel Martha Jane (V16) from west traveled over submerged cow/calf- afterward calf surfaced twice, pretty long downtimes, calf surfaced at least twice for each cow surface, surfaced together outside buoy in front of seep, with another urchin vessel coming towards them</i>		
	<i>No photo ID</i>		
	13:39:00 PDT	Body	
	20:39-GMT	160° / 778 m Dir: West Slow travel	
	13:41:00 PDT	Blow	
	20:41-GMT	172° / 696 m Dir: West Slow travel	
	13:45:00 PDT	Blow	
	20:45-GMT	218° / 600 m Dir: West Slow travel	
	13:54:00 PDT	Blow	Inside /
	20:54-GMT	264° / 1483 m Dir: West Slow travel	Outside

Apr 11 Total 11 Calves 0 Er Gray whale (northbound)

Day 59 of 98

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	04 Fair - 3	Er Total 1 — 0 Calves at sighting	Disappeared
	9:24:00 PDT	— / Blow	nd / nd
	16:24-GMT	138° / 2260 m Dir: West Slow travel	
Sighting Number	05 Fair - 3	Er Total 3 — 0 Calves at sighting	
	9:25:00 PDT	— / Blow	
	16:25-GMT	141° / 3528 m Dir: West Slow travel	
	9:27:00 PDT	Blow	
	16:27-GMT	143° / 3528 m Dir: West Slow travel	
	9:33:00 PDT	Blow	
	16:33-GMT	148° / 3528 m Dir: West Slow travel	
	9:40:00 PDT	Blow	
	16:40-GMT	155° / 3528 m Dir: West Slow travel	
	9:49:00 PDT	Blow	nd /
	16:49-GMT	166° / 3528 m Dir: West Slow travel	Outside
Sighting Number	21 Fair - 3	Er Total 7 — 0 Calves at sighting	
	16:26:00 PDT	— / Blow	
	23:26-GMT	119° / 3528 m Dir: West Slow travel	
		<i>multiple blows each time</i>	
	16:30:00 PDT	Blow	
	23:30-GMT	122° / 3528 m Dir: West Slow travel	
	16:35:00 PDT	Blow	
	23:35-GMT	122° / 3528 m Dir: West Slow travel	
	16:37:00 PDT	Blow	
	23:37-GMT	123° / 3528 m Dir: West Slow travel	
	16:42:00 PDT	Blow	
	23:42-GMT	124° / 3528 m Dir: West Slow travel	
	16:43:00 PDT	Blow	
	23:43-GMT	125° / 3528 m Dir: West Slow travel	
	16:48:00 PDT	Blow	
	23:48-GMT	127° / 3528 m Dir: West Slow travel • Breach • Fluke	
		<i>breach and fluke</i>	
	16:52:00 PDT	Blow	
	23:52-GMT	130° / 3528 m Dir: West Slow travel	
	16:55:00 PDT	Blow	
	23:55-GMT	132° / 3528 m Dir: West Slow travel	
	16:58:00 PDT	Blow	
	23:58-GMT	134° / 3528 m Dir: West Slow travel • Fluke	
	17:02:00 PDT	Blow	
	0:02; 4/12/2012-GMT	138° / 3528 m Dir: West Slow travel	
	17:04:00 PDT	ni	nd / nd
	0:04; 4/12/2012-GMT	140° / 3088 m Dir: West Slow travel • Fluke	

Apr 15 Total 36 Calves 16
Day 63 of 98

Er Gray whale (northbound)

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	01 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 7319-7371	9:01:00 PDT	— / Blow	
	16:01-GMT	114° / 827 m Dir: West Slow travel	
	<i>calves from #1 (two whales / one calf) and #2 (two whales / one calf) combined into one calf sheet. Very difficult to distinguish between two pairs.</i>		
	<i>Saw first along Isla Vista kelp, separated at first by 100m then 200m, followed inside buoys and Sands Beach</i>		
	9:02:00 PDT	Blow	
	16:02-GMT	117° / 629 m Dir: West Slow travel	
	9:04:00 PDT	Blow	
	16:04-GMT	114° / 661 m Dir: East Slow travel	
	9:07:00 PDT	Blow	
	16:07-GMT	170° / 471 m Dir: West Slow travel	
	9:10:00 PDT	Blow	
	16:10-GMT	169° / 366 m Dir: West Slow travel	
	9:13:00 PDT	Blow	
	16:13-GMT	213° / 366 m Dir: West Slow travel	
	9:18:00 PDT	Blow	
	16:18-GMT	254° / 539 m Dir: West Slow travel	
	9:29:00 PDT	Blow	
	16:29-GMT	299° / 913 m Dir: West Slow travel	
			Inside / Inside
Sighting Number	02 Fair - 1	Er Total 2 — 1 Calf at sighting	
	9:09:00 PDT	— / Blow	
	16:09-GMT	135° / 550 m Dir: West Slow travel	
	<i>calves from #1 and #2 combined on same calve sheet under #1 sighting.</i>		
	9:13:00 PDT	Blow	
	16:13-GMT	155° / 440 m Dir: West Slow travel	
	9:22:00 PDT	Blow	
	16:22-GMT	243° / 550 m Dir: West Slow travel	
			Inside / Inside
Sighting Number	04 Fair - 1	Er Total 4 — 2 Calves at sighting	
Images: 7372-7534	9:33:00 PDT	— / Blow	
	16:33-GMT	134° / 440 m Dir: West Slow travel	
	<i>Difficult to distinguish because two pairs, traveling together, very close. Appeared on kelp east of Counter Point, a lot of surface time, in line between buoys and shore. Rolling, bubble blasts, then whales headed towards buoys, inside along shore, blows along Sands toward Ellwood.</i>		
	9:34:00 PDT	Blow	
	16:34-GMT	145° / 471 m Dir: West Slow travel	
	9:35:00 PDT	Blow	
	16:35-GMT	162° / 366 m Dir: West Slow travel	
	9:38:00 PDT	Blow	
	16:38-GMT	200° / 377 m Dir: West Slow travel	
	9:40:00 PDT	Blow	
	16:40-GMT	216° / 275 m Dir: West Slow travel	
	9:41:00 PDT	Blow	
	16:41-GMT	239° / 330 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	9:43:00 PDT	Blow	
	16:43-GMT	245° / 440 m Dir: West Slow travel • Bubbles seen	
	9:45:00 PDT	Blow	
	16:45-GMT	251° / 426 m Dir: West Slow travel	
	9:48:00 PDT	Blow	
	16:48-GMT	278° / 696 m Dir: West Slow travel	
	9:51:00 PDT	Blow	
	16:51-GMT	293° / ni Dir: West Slow travel	
	9:53:00 PDT	Blow	Inside /
	16:53-GMT	300° / ni Dir: West Slow travel	Inside
Sighting Number	06 Fair - 1	Er	
	9:34:00 PDT	Blow	
	16:34-GMT	141° / 2749 m Dir: West Slow travel	
	10:28:00 PDT	— / Blow	
	17:28-GMT	132° / 2749 m Dir: West Slow travel	
	10:33:00 PDT	Blow	
	17:33-GMT	139° / 2749 m Dir: West Slow travel	
	10:37:00 PDT	Blow	
	17:37-GMT	147° / 1922 m Dir: West Slow travel	
	11:06:00 PDT	ni	Inside /
	18:06-GMT	250° / 1922 m Dir: West Slow travel	Outside
Sighting Number	08 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 7547-7588	11:07:00 PDT	— / Blow	
	18:07-GMT	98° / 2260 m Dir: West Slow travel	
	<i>Calf sheets for #8, #11, and #12 all combined onto #8's calf sheet, each sighting had one calf and one cow. for a total of 6 whales and 3 calves for this calf sheet.</i>		
	<i>Saw blows at Campus Point, thought it was two pairs, followed first pair ahead of stand up paddler, after first pair went inside buoys saw whale in Isla Vista kelp, and another pair outside kelp heading toward point. 3 pairs. Very difficult to distinguish, saw calves on both sides, all around.</i>		
	11:10:00 PDT	Blow	
	18:10-GMT	98° / 2749 m Dir: West Slow travel	
	11:12:00 PDT	Blow	
	18:12-GMT	99° / 2749 m Dir: West Slow travel	
	11:15:00 PDT	Blow	
	18:15-GMT	99° / 2260 m Dir: West Slow travel	
	11:19:00 PDT	Blow	
	18:19-GMT	102° / 2260 m Dir: West Slow travel	
	11:20:00 PDT	Blow	
	18:20-GMT	103° / 2260 m Dir: West Slow travel	
	11:22:00 PDT	Blow	
	18:22-GMT	104° / 2260 m Dir: West Slow travel	
	11:28:00 PDT	Blow	
	18:28-GMT	108° / 1674 m Dir: West Slow travel	
	11:29:00 PDT	Blow	
	18:29-GMT	108° / 1483 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	Time		
	11:33:00 PDT	Blow	
	18:33-GMT	109° / 1106 m Dir: West Slow travel	
	11:35:00 PDT	Blow	
	18:35-GMT	112° / 913 m Dir: West Slow travel	
	11:40:00 PDT	Blow	
	18:40-GMT	137° / 550 m Dir: West Slow travel	
	11:41:00 PDT	Blow	
	18:41-GMT	147° / 388 m Dir: West Slow travel	
	11:42:00 PDT	Blow	
	18:42-GMT	164° / 330 m Dir: West Slow travel	
	11:43:00 PDT	Body	
	18:43-GMT	194° / 347 m Dir: West Slow travel	
	11:48:00 PDT	Body	Inside /
	18:48-GMT	275° / 629 m Dir: West Slow travel	Inside
Sighting Number	11 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 7590-7723	11:51:00 PDT	— / Body	
	18:51-GMT	99° / 946 m Dir: West Slow travel	
	<i>Calf sheets for #8, #11, and #12 all combined onto #8's calf sheet, each sighting had one calf and one cow. for a total of 6 whales and 3 calves for this calf sheet.</i>		
	11:53:00 PDT	Body	
	18:53-GMT	104° / 883 m Dir: West Slow travel	
	11:54:00 PDT	Body	
	18:54-GMT	107° / 883 m Dir: West Slow travel	
	11:57:00 PDT	Body	
	18:57-GMT	113° / 661 m Dir: No direction Slow travel	
	12:00:00 PDT	Body	
	19:00-GMT	114° / 574 m Dir: No direction Slow travel	
	12:06:00 PDT	Body	
	19:06-GMT	136° / 347 m Dir: No direction Slow travel	
	12:08:00 PDT	Body	
	19:08-GMT	174° / 307 m Dir: West Slow travel	
	12:12:00 PDT	Body	
	19:12-GMT	255° / 330 m Dir: West Slow travel	
	12:14:00 PDT	Body	
	19:14-GMT	257° / 508 m Dir: West Slow travel	
	12:17:00 PDT	Blow	Inside /
	19:17-GMT	279° / 600 m Dir: West Slow travel	Inside
Sighting Number	12 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 7590-7723	11:59:00 PDT	— / Body	
	18:59-GMT	119° / 661 m Dir: West Slow travel	
	<i>Calf sheets for #8, #11, and #12 all combined onto #8's calf sheet, each sighting had one calf and one cow. for a total of 6 whales and 3 calves for this calf sheet.</i>		
	12:04:00 PDT	Body	
	19:04-GMT	164° / 347 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:05:00 PDT	Blow	
	19:05-GMT	176° / 330 m Dir: West Slow travel	
	12:08:00 PDT	Body	
	19:08-GMT	218° / 322 m Dir: West Slow travel	
	12:11:00 PDT	Body	
	19:11-GMT	258° / 366 m Dir: West Slow travel	
	12:17:00 PDT	Blow	Inside /
	19:17-GMT	295° / 696 m Dir: West Slow travel	Inside
Sighting Number	15 Fair - 0	Er Total 2 — 1 Calf at sighting	
	12:35:00 PDT	— / Body	
	19:35-GMT	130° / 1403 m Dir: West Slow travel	
		<i>no calf sheet</i>	
	12:40:00 PDT	Blow	
	19:40-GMT	148° / 1331 m Dir: West Slow travel	
	12:47:00 PDT	Body	ni / ni
	19:47-GMT	188° / 1331 m Dir: West Slow travel	
Sighting Number	16 Fair - 0	Er Total 2 — 1 Calf at sighting	
Images: 7727-7743, 7744-7800, 7802-7822	12:43:00 PDT	— / Body	
	19:43-GMT	174° / 388 m Dir: East Slow travel	
		<i>no calf sheet</i>	
	12:44:00 PDT	Body	
	19:44-GMT	166° / 377 m Dir: East Slow travel	
	12:48:00 PDT	Body	
	19:48-GMT	190° / 382 m Dir: West Slow travel	
	13:12:00 PDT	Body	
	20:12-GMT	154° / 455 m Dir: West Slow travel	
	13:15:00 PDT	Body	
	20:15-GMT	177° / 539 m Dir: West Slow travel	
	13:32:00 PDT	Body	
	20:32-GMT	207° / 400 m Dir: West Slow travel	
	13:35:00 PDT	Body	
	20:35-GMT	190° / 377 m Dir: East Slow travel	
	13:40:00 PDT	Body	
	20:40-GMT	198° / 338 m Dir: East Slow travel • Milling	
	13:43:00 PDT	Body	
	20:43-GMT	197° / 489 m Dir: East Slow travel • Milling	
	13:45:00 PDT	Body	
	20:45-GMT	197° / 400 m Dir: North Slow travel • Milling	
	13:47:00 PDT	Body	
	20:47-GMT	176° / 366 m Dir: East Slow travel • Milling	
	13:50:00 PDT	Body	
	20:50-GMT	157° / 366 m Dir: South Slow travel • Milling	
	13:53:00 PDT	Body	
	20:53-GMT	174° / 400 m Dir: West Slow travel • Milling	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	13:55:00 PDT	Body	
	20:55-GMT	170° / 347 m Dir: West Slow travel • Milling	
	14:41:00 PDT	Body	Inside / nd
	21:41-GMT	220° / 300 m Dir: West Slow travel	
Sighting Number	19 Fair - 1	Er Total 1 — 0 Calves at sighting	
	14:09:00 PDT	Boat / Body	
	21:09-GMT	124° / 946 m Dir: West Slow travel	
	<i>Cue tip was Condor at Campus Point</i>		
	14:13:00 PDT	ni	
	21:13-GMT	129° / 1208 m Dir: West Slow travel	
	14:22:00 PDT	Body	
	21:22-GMT	174° / 696 m Dir: West Slow travel	
	14:28:00 PDT	Blow	
	21:28-GMT	208° / 678 m Dir: West Slow travel	
	14:33:00 PDT	Blow	Inside /
	21:33-GMT	237° / 946 m Dir: West Slow travel	Outside
Sighting Number	20 Fair - 2	Er Total 4 — 2 Calves at sighting	
	14:39:00 PDT	— / Body	
	21:39-GMT	104° / 1331 m Dir: West Slow travel	
	<i>Came along Isla Vista kelp (had begun watched by Condor Express) pairs together calves switching sides, lots of surface time</i>		
	14:43:00 PDT	Blow	
	21:43-GMT	108° / 778 m Dir: West Slow travel	
	14:44:00 PDT	Body	
	21:44-GMT	114° / 735 m Dir: West Slow travel	
	14:47:00 PDT	Body	
	21:47-GMT	126° / 574 m Dir: West Slow travel	
	14:50:00 PDT	Body	
	21:50-GMT	143° / 366 m Dir: West Slow travel	
	14:52:00 PDT	Blow	
	21:52-GMT	164° / 314 m Dir: West Slow travel	
	14:53:00 PDT	Body	
	21:53-GMT	188° / 314 m Dir: West Slow travel	
	14:54:00 PDT	Body	
	21:54-GMT	195° / 307 m Dir: West Slow travel	
	14:56:00 PDT	Body	
	21:56-GMT	216° / 300 m Dir: West Slow travel	
	14:57:00 PDT	Body	
	21:57-GMT	240° / 338 m Dir: West Slow travel	
	15:03:00 PDT	Blow	
	22:03-GMT	261° / 489 m Dir: West Slow travel	
	15:06:00 PDT	Blow	Inside /
	22:06-GMT	293° / 883 m Dir: West Slow travel	Inside

Images: 7824-7988

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	24 Fair - 2	Er Total 2 — 1 Calf at sighting	
	15:30:00 PDT	— / Body	
	22:30-GMT	107° / 1922 m Dir: West Slow travel	
		<i>no calf sheet</i>	
	15:32:00 PDT	Body	
	22:32-GMT	112° / 946 m Dir: West Slow travel	
	15:36:00 PDT	Body	
	22:36-GMT	123° / 629 m Dir: West Slow travel	
	15:41:00 PDT	Body	
	22:41-GMT	163° / 574 m Dir: West Slow travel	
	15:43:00 PDT	Body	
	22:43-GMT	196° / 455 m Dir: West Slow travel	
	15:44:00 PDT	Body	
	22:44-GMT	205° / 489 m Dir: West Slow travel	
	15:47:00 PDT	Body	
	22:47-GMT	237° / 508 m Dir: West Slow travel	
	15:52:00 PDT	Body	Inside /
	22:52-GMT	270° / 827 m Dir: West Slow travel	Through
Sighting Number	25 Fair - 2	Er Total 4 — 2 Calves at sighting	
	15:35:00 PDT	— / Body	
	22:35-GMT	110° / 1674 m Dir: West Slow travel	
	15:37:00 PDT	Body	
	22:37-GMT	111° / 1483 m Dir: West Slow travel	
	15:39:00 PDT	Body	
	22:39-GMT	112° / 1208 m Dir: West Slow travel	
	15:41:00 PDT	Body	
	22:41-GMT	113° / 1020 m Dir: West Slow travel	
	15:43:00 PDT	Body	
	22:43-GMT	120° / 913 m Dir: West Slow travel	
	15:45:00 PDT	Body	
	22:45-GMT	127° / 696 m Dir: West Slow travel	
	15:46:00 PDT	Body	
	22:46-GMT	133° / 600 m Dir: West Slow travel	
	15:50:00 PDT	Body	
	22:50-GMT	156° / 550 m Dir: West Slow travel	
	15:51:00 PDT	Body	
	22:51-GMT	161° / 455 m Dir: West Slow travel	
	15:52:00 PDT	Body	
	22:52-GMT	174° / 455 m Dir: West Slow travel	
	15:53:00 PDT	ni	
	22:53-GMT	189° / 440 m Dir: West Slow travel	
	15:56:00 PDT	Body	
	22:56-GMT	218° / 400 m Dir: West Slow travel	
	15:57:00 PDT	Body	
	22:57-GMT	235° / 455 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:58:00 PDT	Blow	
	22:58-GMT	237° / 489 m Dir: West Slow travel	
	16:01:00 PDT	Blow	
	23:01-GMT	268° / 574 m Dir: West Slow travel	
	16:03:00 PDT	Blow	Inside /
	23:03-GMT	278° / 696 m Dir: West Slow travel	Inside
Sighting Number	27	Fair - 2	Er Total 5 — 2 Calves at sighting
	15:54:00 PDT	— / Body	
	22:54-GMT	114° / 696 m Dir: West Slow travel	
	<i>no calf sheet</i>		
	<i>3 adults and maybe have been third calf, many times saw calf blow ocean side.</i>		
	15:56:00 PDT	Body	
	22:56-GMT	124° / 600 m Dir: West Slow travel	
	15:59:00 PDT	Body	
	22:59-GMT	136° / 412 m Dir: West Slow travel	
	16:00:00 PDT	Body	
	23:00-GMT	146° / 388 m Dir: West Slow travel	
	16:01:00 PDT	Body	
	23:01-GMT	158° / 330 m Dir: West Slow travel	
	16:02:00 PDT	Body	
	23:02-GMT	183° / 300 m Dir: West Slow travel	
	16:05:00 PDT	Body	
	23:05-GMT	240° / 287 m Dir: West Slow travel	
	16:07:00 PDT	Blow	
	23:07-GMT	249° / 307 m Dir: West Slow travel	
	16:09:00 PDT	Blow	
	23:09-GMT	268° / 388 m Dir: West Slow travel	
	16:12:00 PDT	Blow	Inside /
	23:12-GMT	283° / 528 m Dir: West Slow travel	Inside
Sighting Number	28	Fair - 1	Er Total 1 — 0 Calves at sighting
	16:27:00 PDT	— / Blow	
	23:27-GMT	192° / 1922 m Dir: West Slow travel	
	16:29:00 PDT	Blow	
	23:29-GMT	199° / 1922 m Dir: West Slow travel	
	16:33:00 PDT	Blow	
	23:33-GMT	213° / 1674 m Dir: West Slow travel	
	16:35:00 PDT	Blow	
	23:35-GMT	220° / 1922 m Dir: West Slow travel	
	16:37:00 PDT	Blow	
	23:37-GMT	225° / 1922 m Dir: West Slow travel	
	16:39:00 PDT	Blow	
	23:39-GMT	232° / 1922 m Dir: West Slow travel	
	16:43:00 PDT	Blow	Inside /
	23:43-GMT	237° / 2260 m Dir: West Slow travel	Outside

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Apr 16	Total 20 Calves 10	Er Gray whale (northbound)	
Day 64 of 98			
Sighting Number	05 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 8183-8317	9:10:00 PDT	— / Blow	
	16:10-GMT	104° / 2749 m Dir: West Slow travel	
	<i>Slowly came around Campus Point. Stayed for a long time in inlet in IV kelp, calf body and head at surface for extended period of time, pair moved, very slowly along and through kelp, stayed at Counter Point for a long time. ID images- maybe some LEFT slides in surf along Sands.</i>		
	9:12:00 PDT	Blow	
	16:12-GMT	108° / 2260 m Dir: West Slow travel	
	9:17:00 PDT	Blow	
	16:17-GMT	107° / 1922 m Dir: West Slow travel	
	9:30:00 PDT	Blow	
	16:30-GMT	106° / 1483 m Dir: West Slow travel	
	9:35:00 PDT	Blow	
	16:35-GMT	114° / 946 m Dir: West Slow travel	
	9:38:00 PDT	Blow	
	16:38-GMT	124° / 661 m Dir: West Slow travel	
	9:40:00 PDT	Blow	
	16:40-GMT	139° / 550 m Dir: West Slow travel	
	9:43:00 PDT	Blow	
	16:43-GMT	179° / 356 m Dir: West Slow travel	
	9:51:00 PDT	Blow	
	16:51-GMT	189° / 253 m Dir: West Slow travel	
	9:55:00 PDT	Blow	
	16:55-GMT	244° / 412 m Dir: West Slow travel	
	10:00:00 PDT	Blow	Inside /
	17:00-GMT	281° / 678 m Dir: West Slow travel	Inside
Sighting Number	14 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 8328-8399	12:21:00 PDT	— / Body	
	19:21-GMT	99° / 2749 m Dir: West Slow travel	
	<i>These whales- both calf and mom liked kelp- follow pair (14) but 15 stayed outside kelp along Isla Vista. This group moved into kelp at every opportunity. Entered buoys and turned right and excited toward Ellwood. Images of 14 and 15 mixed, sort out.</i>		
	12:29:00 PDT	Blow	
	19:29-GMT	106° / 1922 m Dir: West Slow travel	
	12:33:00 PDT	Blow	
	19:33-GMT	109° / 1483 m Dir: West Slow travel	
	12:39:00 PDT	Blow	
	19:39-GMT	134° / 1106 m Dir: West Slow travel	
	12:44:00 PDT	Body	
	19:44-GMT	146° / 778 m Dir: West Slow travel	
	12:46:00 PDT	Blow	
	19:46-GMT	136° / 600 m Dir: West Slow travel	
	12:49:00 PDT	Blow	
	19:49-GMT	148° / 600 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	Time		
	12:53:00 PDT	Blow	
	19:53-GMT	164° / 412 m Dir: West Slow travel	
	12:57:00 PDT	Body	
	19:57-GMT	208° / 412 m Dir: West Slow travel	
	13:00:00 PDT	Blow	
	20:00-GMT	240° / 412 m Dir: West Slow travel	
	13:03:00 PDT	Blow	
	20:03-GMT	259° / 489 m Dir: West Slow travel	
	13:06:00 PDT	Blow	
	20:06-GMT	272° / 661 m Dir: West Slow travel	
	13:10:00 PDT	Blow	
	20:10-GMT	277° / 946 m Dir: West Slow travel	
	13:17:00 PDT	Blow	Inside /
	20:17-GMT	277° / 1106 m Dir: West Slow travel	Through
Sighting Number	15 Fair - 1	Er Total 2 — 1 Calf at sighting	
	12:47:00 PDT	— / Body	
	19:47-GMT	189° / 600 m Dir: West Slow travel	
	<i>Lead pair (14) around Campus Point- not as much surfacing, good look with binos at 223. Images of 14 and 15 mixed- sort out.</i>		
	12:52:00 PDT	Blow	Inside /
	19:52-GMT	239° / 778 m Dir: West Slow travel	Outside
Sighting Number	17 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 8401-8461	13:48:00 PDT	— / Blow	
	20:48-GMT	107° / 778 m Dir: West Slow travel	
	<i>could not see calf's blows</i>		
	13:51:00 PDT	Body	
	20:51-GMT	112° / 778 m Dir: West Slow travel	
	13:52:00 PDT	Blow	
	20:52-GMT	116° / 678 m Dir: West Slow travel	
	13:55:00 PDT	Body	
	20:55-GMT	134° / 412 m Dir: West Slow travel	
	13:56:00 PDT	Body	
	20:56-GMT	154° / 356 m Dir: West Slow travel	
	13:57:00 PDT	Body	
	20:57-GMT	176° / 314 m Dir: West Slow travel	
	14:00:00 PDT	Body	
	21:00-GMT	229° / 266 m Dir: West Slow travel	
	14:02:00 PDT	Body	
	21:02-GMT	260° / 388 m Dir: West Slow travel	
	14:05:00 PDT	Blow	Inside / nd
	21:05-GMT	264° / 528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	19 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 8467-8494	14:23:00 PDT	Boat / Body	
	21:23-GMT	106° / 2749 m Dir: West Slow travel	
	<i>Guilty (V18) turned around and stopped at whales. Boat Guilty at Campus Point tracked whales west-boat inside and at one point may have cut them off- whales very quiet and shy- calf did not show much- many more frequent surfaceings- turned around west of Counter Point.</i>		
	14:28:00 PDT	Body	
	21:28-GMT	108° / 2260 m Dir: West Slow travel	
	<i>Boat in between shore and whales</i>		
	14:30:00 PDT	Body	
	21:30-GMT	112° / 2260 m Dir: West Slow travel	
	14:33:00 PDT	Body	
	21:33-GMT	122° / 1674 m Dir: West Slow travel	
	14:37:00 PDT	Body	
	21:37-GMT	127° / 1208 m Dir: West Slow travel	
	14:40:00 PDT	Body	
	21:40-GMT	135° / 883 m Dir: West Slow travel	
	14:44:00 PDT	Body	
	21:44-GMT	161° / 600 m Dir: West Slow travel	
	14:48:00 PDT	Body	
	21:48-GMT	194° / 356 m Dir: West Slow travel	
	14:58:00 PDT	Blow	Inside /
	21:58-GMT	291° / 883 m Dir: West Slow travel	Inside
Sighting Number	23 Fair - 2	Er Total 2 — 1 Calf at sighting	
Images: 8498-8545	15:46:00 PDT	— / Body	
	22:46-GMT	111° / 1922 m Dir: West Slow travel	
	<i>Jetski with 2 people proceed over or near path- going extremely fast. At the same time SBOP helicopter flew over path of whales</i>		
	15:51:00 PDT	Body	
	22:51-GMT	114° / 1403 m Dir: West Slow travel	
	15:56:00 PDT	Body	
	22:56-GMT	123° / 946 m Dir: West Slow travel	
	16:04:00 PDT	Body	
	23:04-GMT	183° / 600 m Dir: West Slow travel	
	16:09:00 PDT	Body	Inside / nd
	23:09-GMT	225° / 735 m Dir: West Slow travel	
Sighting Number	27 Fair - 2	Er Total 2 — 1 Calf at sighting	
Images: 8552-8599	16:32:00 PDT	— / Blow	
	23:32-GMT	98° / 3088 m Dir: West Slow travel	
	<i>no calf sheet</i>		
	16:37:00 PDT	Blow	
	23:37-GMT	100° / 2749 m Dir: West Slow travel	
	16:40:00 PDT	Blow	
	23:40-GMT	100° / 2260 m Dir: West Slow travel	
	16:43:00 PDT	Blow	
	23:43-GMT	103° / 2749 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	16:47:00 PDT	Blow	
	23:47-GMT	105° / 2260 m Dir: West Slow travel	
	16:52:00 PDT	Blow	
	23:52-GMT	108° / 1922 m Dir: West Slow travel	
	16:58:00 PDT	Blow	
	23:58-GMT	110° / 1674 m Dir: West Slow travel	
	17:04:00 PDT	Blow	
	0:04; 4/17/2012-GMT	121° / 913 m Dir: West Slow travel	
	17:07:00 PDT	Blow	
	0:07; 4/17/2012-GMT	159° / 600 m Dir: West Slow travel	
	17:11:00 PDT	Blow	
	0:11; 4/17/2012-GMT	209° / 489 m Dir: West Slow travel	
	17:24:00 PDT	Blow	Inside /
	0:24; 4/17/2012-GMT	276° / 471 m Dir: West Slow travel	Through
Sighting Number	28 Fair - 2	<i>Er</i> Total 2 — 1 Calf at sighting	
	16:53:00 PDT	— / Blow	
	23:53-GMT	107° / 1922 m Dir: West Slow travel	
		<i>no calf sheet</i>	
	16:59:00 PDT	Blow	
	23:59-GMT	109° / 1674 m Dir: West Slow travel	
	17:14:00 PDT	Blow	
	0:14; 4/17/2012-GMT	212° / 412 m Dir: West Slow travel	
	17:20:00 PDT	Blow	Inside / nd
	0:20; 4/17/2012-GMT	244° / 388 m Dir: West Slow travel	
Sighting Number	30 Fair - 2	<i>Er</i> Total 4 — 2 Calves at sighting	
	17:37:00 PDT	— / Blow	
	0:37; 4/17/2012-GMT	146° / 388 m Dir: West Slow travel	
	17:52:00 PDT	Blow	
	0:52; 4/17/2012-GMT	284° / 913 m Dir: West Slow travel	
Apr 17	Total 10 Calves 5	Er Gray whale (northbound)	
Day 65 of 98			
Sighting Number	01 Fair - 0	<i>Er</i> Total 2 — 1 Calf at sighting	
	9:01:00 PDT	— / Blow	
	16:01-GMT	122° / 913 m Dir: West Slow travel	
		<i>Traveled at consistent pace with simultaneous blows until they reached around 240 and meandered and changed directions/ calf may have been nursing and/or cow may have been feeding. Quickly traveled with again buoys.</i>	
	9:03:00 PDT	Blow	
	16:03-GMT	124° / 778 m Dir: West Slow travel	
	9:07:00 PDT	Blow	
	16:07-GMT	146° / 661 m Dir: West Slow travel	
	9:11:00 PDT	Blow	
	16:11-GMT	164° / 508 m Dir: West Slow travel	
	9:12:00 PDT	Blow	
	16:12-GMT	168° / 489 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	9:14:00 PDT	Blow	
	16:14-GMT	185° / 471 m Dir: West Slow travel	
	9:16:00 PDT	Blow	
	16:16-GMT	217° / 356 m Dir: West Slow travel	
	9:18:00 PDT	Body	
	16:18-GMT	235° / 347 m Dir: No direction Slow travel	
	9:20:00 PDT	Body	
	16:20-GMT	258° / 400 m Dir: West Slow travel	
	9:21:00 PDT	Blow	
	16:21-GMT	255° / 382 m Dir: West Slow travel	
	9:22:00 PDT	Blow	
	16:22-GMT	254° / 412 m Dir: No direction Slow travel	
	9:29:00 PDT	Blow	Inside /
	16:29-GMT	289° / 778 m Dir: No direction Slow travel	Outside
Sighting Number	10 Fair - 0	Er Total 2 — 1 Calf at sighting	
	13:41:00 PDT	— / Body	
	20:41-GMT	202° / 489 m Dir: West Slow travel	
	<i>Saw whales (mom) past point- calf blew along side cow at next surfacing- saw calf once more on ocean side</i>		
	13:44:00 PDT	Body	
	20:44-GMT	239° / 489 m Dir: West Slow travel	
	13:47:00 PDT	Body	Inside /
	20:47-GMT	254° / 489 m Dir: West Slow travel	Inside
Sighting Number	12 Fair - 0	Er Total 2 — 1 Calf at sighting	
	14:32:00 PDT	— / Body	
	21:32-GMT	100° / 3088 m Dir: West Slow travel	
	<i>Very slow around Campus Point- steady if slow- mom seemed to be letting calf push travel speed- cow surfaced more than most also- frequent calf surfacing</i>		
	14:47:00 PDT	Blow	
	21:47-GMT	108° / 1674 m Dir: West Slow travel	
	14:49:00 PDT	Blow	
	21:49-GMT	109° / 1674 m Dir: West Slow travel	
	14:55:00 PDT	Blow	
	21:55-GMT	110° / 1674 m Dir: West Slow travel	
	14:59:00 PDT	Blow	
	21:59-GMT	111° / 1483 m Dir: West Slow travel	
	15:02:00 PDT	Blow	
	22:02-GMT	119° / 778 m Dir: West Slow travel	
	15:06:00 PDT	Blow	
	22:06-GMT	132° / 600 m Dir: West Slow travel	
	15:09:00 PDT	Body	
	22:09-GMT	175° / 412 m Dir: West Slow travel • No direction	
	15:12:00 PDT	Body	
	22:12-GMT	214° / 356 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:16:00 PDT	Blow	
	22:16-GMT	255° / 539 m Dir: West Slow travel	
	15:18:00 PDT	Blow	Inside /
	22:18-GMT	274° / 778 m Dir: West Slow travel	Inside
Sighting Number	16 Fair - 0	Er Total 4 — 2 Calves at sighting	
Images: 8878-9054	16:31:00 PDT	— / Blow	
	23:31-GMT	105° / 1483 m Dir: West Slow travel	
	<i>2 cow/calf pairs. First pair had calf along right side while other pair had calf along ocean side. Calf showcased goofy behavior attempting to breach and acting very playful in water.</i>		
	16:35:00 PDT	Body	
	23:35-GMT	106° / 946 m Dir: West Slow travel	
	16:36:00 PDT	Body	
	23:36-GMT	110° / 1106 m Dir: West Slow travel	
	16:40:00 PDT	Blow	
	23:40-GMT	129° / 539 m Dir: West Slow travel	
	16:43:00 PDT	Body	
	23:43-GMT	171° / 412 m Dir: West Slow travel	
	16:45:00 PDT	Body	
	23:45-GMT	214° / 388 m Dir: West Slow travel • Fluke	
	16:47:00 PDT	Body	
	23:47-GMT	259° / 447 m Dir: West Slow travel	
	16:50:00 PDT	Blow	Inside /
	23:50-GMT	286° / 696 m Dir: West Slow travel	Inside

Apr 18 Total **13** Calves **6**
Day **66** of **98**

Er Gray whale (northbound)

Sighting Number	04 Fair - 1	Er Total 4 — 2 Calves at sighting	
Images: 9066-9171	10:14:00 PDT	— / Blow	
	17:14-GMT	101° / 2749 m Dir: West Slow travel	
	<i>Not complete agreement, may be 6 whales, 3 calves. Together from beginning- apparent multiple pairs- thought 3 calves but only two (check photos). Unfortunately not great ID images- bit playful past buoys- traveled very close together- frequent surfaces east of the point and less frequent surfaces west through buoys.</i>		
	10:17:00 PDT	Blow	
	17:17-GMT	102° / 2749 m Dir: West Slow travel • Fluke	
	10:19:00 PDT	Blow	
	17:19-GMT	106° / 2260 m Dir: West Slow travel • Fluke	
	10:25:00 PDT	Blow	
	17:25-GMT	112° / 2260 m Dir: West Slow travel	
	10:29:00 PDT	Blow	
	17:29-GMT	114° / 1922 m Dir: West Slow travel • Fluke	
	10:33:00 PDT	Blow	
	17:33-GMT	119° / 1208 m Dir: West Slow travel • Fluke	
	10:36:00 PDT	Blow	
	17:36-GMT	126° / 696 m Dir: West Slow travel • Fluke	
	10:40:00 PDT	Blow	
	17:40-GMT	166° / 574 m Dir: West Slow travel • Fluke	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	10:43:00 PDT	Blow	
	17:43-GMT	197° / 528 m Dir: West Slow travel	
	10:45:00 PDT	Blow	
	17:45-GMT	231° / 508 m Dir: West Slow travel	
	10:47:00 PDT	Blow	
	17:47-GMT	252° / 735 m Dir: West Slow travel	
	10:49:00 PDT	Blow	
	17:49-GMT	269° / 778 m Dir: West Slow travel	
	10:57:00 PDT	Blow	Inside /
	17:57-GMT	281° / 2749 m Dir: West Slow travel • Fluke	Inside
Sighting Number	11 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 9173-9210	12:27:00 PDT	— / Blow	
	19:27-GMT	107° / 1483 m Dir: West Slow travel	
		<i>In a hurry- perhaps heard dolphins behind them- likely did not get photo ID- but got good looks with binos</i>	
	12:31:00 PDT	Blow	
	19:31-GMT	109° / 946 m Dir: West Slow travel	
	12:36:00 PDT	Blow	
	19:36-GMT	123° / 550 m Dir: West Slow travel	
	12:39:00 PDT	Blow	
	19:39-GMT	165° / 322 m Dir: West Slow travel	
	12:41:00 PDT	Blow	
	19:41-GMT	195° / 293 m Dir: West Slow travel	
	12:45:00 PDT	Blow	
	19:45-GMT	160° / 471 m Dir: West Slow travel	
	12:46:00 PDT	Blow	
	19:46-GMT	267° / 574 m Dir: West Slow travel	
	12:50:00 PDT	Blow	Inside /
	19:50-GMT	290° / m Dir: West Slow travel	Inside
Sighting Number	13 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: no images	12:56:00 PDT	— / Blow	
	19:56-GMT	163° / 1674 m Dir: West Slow travel	
		<i>Outside- traveled inside Holly- confirmed with Condor and small boat and common dolphins, got identifications look with scope- continued outside moving buoys</i>	
	13:05:00 PDT	Body	
	20:05-GMT	203° / 1208 m Dir: West Slow travel	
	13:09:00 PDT	Body	
	20:09-GMT	216° / 1483 m Dir: West Slow travel	
	13:16:00 PDT	Blow	
	20:16-GMT	236° / 1674 m Dir: West Slow travel	
		<i>still with condor</i>	
	13:18:00 PDT	Body	Inside /
	20:18-GMT	242° / 1674 m Dir: West Slow travel	Outside
		<i>confirmed cow/calf pair</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number	16 Fair - 1	Er Total 1 — 0 Calves at sighting	
	14:42:00 PDT	— / Blow	
	21:42-GMT	129° / 2260 m Dir: West Slow travel • Fluke	
	14:49:00 PDT	Blow	
	21:49-GMT	143° / 1483 m Dir: West Slow travel	
	14:56:00 PDT	Blow	
	21:56-GMT	160° / 1106 m Dir: West Slow travel	
	15:00:00 PDT	Blow	
	22:00-GMT	179° / 883 m Dir: West Slow travel	
	15:01:00 PDT	Blow	
	22:01-GMT	184° / 827 m Dir: West Slow travel	
	15:02:00 PDT	Blow	
	22:02-GMT	190° / 827 m Dir: West Slow travel	
	15:09:00 PDT	Blow	
	22:09-GMT	224° / 778 m Dir: West Slow travel	
	15:16:00 PDT	Blow	
	22:16-GMT	246° / 1674 m Dir: West Slow travel	
	15:25:00 PDT	Blow	Inside /
	22:25-GMT	260° / 2260 m Dir: West Slow travel	Outside
Sighting Number	21 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 9265-9336	16:47:00 PDT	— / Blow	
	23:47-GMT	98° / 3528 m Dir: West Slow travel	
	16:51:00 PDT	Blow	
	23:51-GMT	101° / 3088 m Dir: West Slow travel	
	16:55:00 PDT	Blow	
	23:55-GMT	102° / 3088 m Dir: West Slow travel	
	16:56:00 PDT	Blow	
	23:56-GMT	104° / 3088 m Dir: West Slow travel	
	16:59:00 PDT	Blow	
	23:59-GMT	105° / 3088 m Dir: West Slow travel	
	17:03:00 PDT	Blow	
	0:03; 4/19/2012-GMT	108° / 2749 m Dir: West Slow travel	
	17:06:00 PDT	Blow	
	0:06; 4/19/2012-GMT	109° / 2260 m Dir: West Slow travel	
	17:10:00 PDT	Blow	
	0:10; 4/19/2012-GMT	111° / 2260 m Dir: West Slow travel	
	17:15:00 PDT	Blow	
	0:15; 4/19/2012-GMT	113° / 1483 m Dir: West Slow travel	
	17:18:00 PDT	Blow	
	0:18; 4/19/2012-GMT	118° / 1403 m Dir: West Slow travel	
	17:20:00 PDT	Blow	
	0:20; 4/19/2012-GMT	119° / 1331 m Dir: West Slow travel	
	17:21:00 PDT	Blow	
	0:21; 4/19/2012-GMT	122° / 1331 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	17:26:00 PDT	Blow	
	0:26; 4/19/2012-GMT	144° / 827 m Dir: West Slow travel	
	17:27:00 PDT	Blow	
	0:27; 4/19/2012-GMT	146° / 778 m Dir: West Slow travel	
	17:28:00 PDT	Blow	
	0:28; 4/19/2012-GMT	159° / 696 m Dir: West Slow travel	
	17:37:00 PDT	Blow	Inside /
	0:37; 4/19/2012-GMT	257° / 550 m Dir: West Slow travel	Inside
Sighting Number	22 Fair - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 9219-56</i>	17:03:00 PDT	— / Body	
	0:03; 4/19/2012-GMT	182° / 412 m Dir: West Slow travel	
	<i>no calf sheet</i>		
	17:05:00 PDT	Body	
	0:05; 4/19/2012-GMT	217° / 412 m Dir: West Slow travel	
	17:06:00 PDT	Body	
	0:06; 4/19/2012-GMT	225° / 388 m Dir: West Slow travel	
	17:08:00 PDT	Blow	
	0:08; 4/19/2012-GMT	250° / 314 m Dir: West Slow travel	
	17:13:00 PDT	Blow	
	0:13; 4/19/2012-GMT	294° / ni Dir: West Slow travel	
	17:16:00 PDT	Blow	Inside /
	0:16; 4/19/2012-GMT	306° / ni Dir: West Slow travel	Inside

Apr 19 Total 11 Calves 5
Day 67 of 98

Er Gray whale (northbound)

Sighting Number	03 Poor - 3	Er Total 1 — 0 Calves at sighting	
	10:40:00 PDT	— / Blow	
	17:40-GMT	118° / 1208 m Dir: West Slow travel	
	10:44:00 PDT	Blow	
	17:44-GMT	137° / 778 m Dir: West Slow travel	
	10:46:00 PDT	Blow	
	17:46-GMT	156° / 696 m Dir: West Slow travel	
	10:49:00 PDT	Blow	
	17:49-GMT	191° / 528 m Dir: West Slow travel	
	10:59:00 PDT	Blow	Inside /
	17:59-GMT	294° / 1106 m Dir: West Slow travel	Inside
Sighting Number	05 Poor - 2	Er Total 4 — 2 Calves at sighting	
<i>Images: 9345-9484</i>	11:15:00 PDT	— / Blow	
	18:15-GMT	111° / 1106 m Dir: West Slow travel	
	<i>At first we thought it was a single pair, then a second pair appeared trailing behind. They traveled along the kelp and didn't appear to stop. The two pairs joined up right in front of us. Although we recorded many blows and surfaces, it was difficult to distinguish the calves proximity to their mother.</i>		
	11:19:00 PDT	Blow	
	18:19-GMT	125° / 629 m Dir: West Slow travel	
	11:22:00 PDT	Blow	
	18:22-GMT	145° / 426 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	11:24:00 PDT	Blow	
	18:24-GMT	161° / 440 m Dir: West Slow travel	
	11:27:00 PDT	Blow	
	18:27-GMT	202° / 412 m Dir: West Slow travel	
	11:29:00 PDT	Blow	
	18:29-GMT	217° / 366 m Dir: West Slow travel	
	11:31:00 PDT	Blow	
	18:31-GMT	254° / 489 m Dir: West Slow travel	
	11:37:00 PDT	Blow	Inside /
	18:37-GMT	281° / 778 m Dir: West Slow travel	Inside

Sighting Number **08** Poor - 3 *Er* Total 2 — 1 Calf at sighting

Images: 9540-9554

	14:29:00 PDT	— / Body	
	21:29-GMT	134° / 574 m Dir: West Slow travel	
	<i>Saw the pair in kelp to the east of the point. Calf came up to breathe more than the mom. Saw small puffs along kelp line. Past Holly the pair went into the kelp in front of the buoys. Saw the calf do small spy hop at 1446</i>		
	14:33:00 PDT	Body	
	21:33-GMT	166° / 400 m Dir: West Slow travel	
	14:35:00 PDT	Blow	
	21:35-GMT	179° / 314 m Dir: West Moderate travel	
	14:39:00 PDT	Blow	
	21:39-GMT	245° / 338 m Dir: West Moderate travel	
	14:40:00 PDT	Blow	
	21:40-GMT	267° / 412 m Dir: West Moderate travel	
	14:43:00 PDT	Body	
	21:43-GMT	282° / 696 m Dir: West Moderate travel	
	14:44:00 PDT	Body	
	21:44-GMT	287° / 696 m Dir: West Moderate travel	
	14:46:00 PDT	Blow	Inside /
	21:46-GMT	292° / 661 m Dir: West Moderate travel	Inside

Sighting Number **09** Poor - 2 *Er* Total 4 — 2 Calves at sighting

Images: 9556-9647

	14:51:00 PDT	— / Blow	
	21:51-GMT	114° / 1674 m Dir: West Slow travel	
	<i>Two pairs of mothers and calves. Traveled slowly along kelp. Long down times Long down times and stopped around 112 for awhile. Both calves were never seen at the same time</i>		

Apr 22 Total 27 Calves 13

Day 70 of 98

Er Gray whale (northbound)

Sighting Number **01** Fair - 1 *Er* Total 2 — 1 Calf at sighting

Images: 9744-9811

	8:57:00 PDT	— / Body	
	15:57-GMT	124° / 946 m Dir: West Slow travel	
	9:01:00 PDT	Blow	
	16:01-GMT	144° / 696 m Dir: West Slow travel	
	9:12:00 PDT	Body	
	16:12-GMT	257° / 735 m Dir: West Slow travel	
	9:17:00 PDT	Body	Inside /
	16:17-GMT	286° / 883 m Dir: West Slow travel	Inside

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	04 Poor - 1	Er Total 4 — 2 Calves at sighting	
Images: 9813-9912	10:06:00 PDT	— / Blow	
	17:06-GMT	102° / 2260 m Dir: West Slow travel	
	10:11:00 PDT	ni	
	17:11-GMT	108° / m Dir: West Slow travel	
	10:15:00 PDT	Blow	
	17:15-GMT	107° / 1922 m Dir: West Slow travel	
	10:20:00 PDT	Blow	
	17:20-GMT	109° / 1483 m Dir: West Slow travel	
	10:23:00 PDT	Blow	
	17:23-GMT	113° / 827 m Dir: West Slow travel	
	10:28:00 PDT	ni	
	17:28-GMT	136° / 600 m Dir: West Slow travel	
	10:42:00 PDT	Blow	
	17:42-GMT	268° / 735 m Dir: West Slow travel	
	10:45:00 PDT	Blow	
	17:45-GMT	298° / ni Dir: West Slow travel	
			Inside / Inside
Sighting Number	08 Poor - 1	Er Total 2 — 1 Calf at sighting	
Images: 9915-9932	12:47:00 PDT	Surface	
	19:47-GMT	115° / 1020 m Dir: West Slow travel	
	12:51:00 PDT	Blow	
	19:51-GMT	130° / 600 m Dir: West Slow travel • Spyhop	
	12:52:00 PDT	Body	
	19:52-GMT	133° / 574 m Dir: West Slow travel	
	12:55:00 PDT	Body	
	19:55-GMT	146° / 600 m Dir: West Slow travel	
	13:01:00 PDT	Body	
	20:01-GMT	211° / 455 m Dir: West Slow travel	
	13:05:00 PDT	Body	
	20:05-GMT	251° / 600 m Dir: West Slow travel	
	13:11:00 PDT	Body	
	20:11-GMT	278° / 1020 m Dir: West Slow travel	
			Inside / Through
Sighting Number	12 Poor - 0	Er Total 2 — 1 Calf at sighting	
Images: 9937-9982	14:15:00 PDT	Passerby / Body	
	21:15-GMT	159° / 600 m Dir: West Slow travel	
	14:17:00 PDT	ni	
	21:17-GMT	180° / 489 m Dir: West Slow travel	
	14:20:00 PDT	Blow	
	21:20-GMT	230° / 489 m Dir: West Slow travel	
	14:24:00 PDT	Blow	
	21:24-GMT	265° / 827 m Dir: West Slow travel	
	14:25:00 PDT	Blow	
	21:25-GMT	270° / 946 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	14:27:00 PDT	Body	Inside /
	21:27-GMT	280° / 1106 m Dir: West Slow travel • Spyhop	Through
Sighting Number	16 Poor - 1	Er Total 2 — 1 Calf at sighting	
Images: 9984-0024	14:39:00 PDT	— / Body	
	21:39-GMT	109° / 1483 m Dir: West Slow travel	
	14:44:00 PDT	Body	
	21:44-GMT	119° / 827 m Dir: West Slow travel	
	14:46:00 PDT	Blow	
	21:46-GMT	135° / 661 m Dir: West Slow travel	
	14:51:00 PDT	Blow	
	21:51-GMT	205° / 455 m Dir: West Slow travel	
	14:56:00 PDT	Blow	
	21:56-GMT	265° / 661 m Dir: West Slow travel	
	14:59:00 PDT	Body	Inside /
	21:59-GMT	222° / 778 m Dir: West Slow travel	Inside
Sighting Number	17 Poor - 1	Er Total 4 — 2 Calves at sighting	
Images: 0029-0157	15:29:00 PDT	— / Blow	
	22:29-GMT	106° / 1674 m Dir: West Slow travel	
	15:34:00 PDT	Blow	
	22:34-GMT	108° / 1674 m Dir: West Slow travel	
	15:37:00 PDT	Blow	
	22:37-GMT	106° / 1331 m Dir: West Slow travel	
	15:39:00 PDT	Body	
	22:39-GMT	106° / 1208 m Dir: West Slow travel	
	15:41:00 PDT	Body	
	22:41-GMT	108° / 1020 m Dir: West Slow travel	
	15:43:00 PDT	Blow	
	22:43-GMT	109° / 883 m Dir: West Slow travel	
	15:45:00 PDT	Body	
	22:45-GMT	114° / 735 m Dir: West Slow travel	
	15:49:00 PDT	Body	
	22:49-GMT	136° / 489 m Dir: West Slow travel	
	15:51:00 PDT	Body	
	22:51-GMT	161° / 377 m Dir: West Slow travel	
	15:53:00 PDT	Body	
	22:53-GMT	189° / 366 m Dir: West Slow travel	
	15:54:00 PDT	Body	
	22:54-GMT	208° / 356 m Dir: West Slow travel	
	15:56:00 PDT	Body	
	22:56-GMT	228° / 338 m Dir: West Slow travel	
	15:57:00 PDT	Blow	
	22:57-GMT	244° / 366 m Dir: West Slow travel	
	16:00:00 PDT	Blow	
	23:00-GMT	264° / 574 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	16:02:00 PDT	Blow	Inside /
	23:02-GMT	284° / 735 m Dir: West Slow travel	Inside
Sighting Number	18 Poor - 1	Er Total 3 — 1 Calf at sighting	
<i>Images: 0159-0215</i>	15:37:00 PDT	— / Blow	
	22:37-GMT	104° / 2749 m Dir: West Slow travel	
	15:42:00 PDT	Blow	
	22:42-GMT	106° / 2260 m Dir: West Slow travel	
	15:46:00 PDT	Blow	
	22:46-GMT	110° / 1674 m Dir: West Slow travel	
	15:48:00 PDT	Blow	
	22:48-GMT	111° / 1674 m Dir: West Slow travel	
	15:57:00 PDT	Blow	
	22:57-GMT	129° / 696 m Dir: West Slow travel	
	15:58:00 PDT	Blow	
	22:58-GMT	137° / 574 m Dir: West Slow travel	
	16:01:00 PDT	Body	
	23:01-GMT	156° / 574 m Dir: West Slow travel • Rolling	
	16:02:00 PDT	Blow	
	23:02-GMT	159° / 574 m Dir: West Slow travel	
	16:04:00 PDT	Body	
	23:04-GMT	167° / 528 m Dir: North Slow travel	
	16:06:00 PDT	Blow	
	23:06-GMT	187° / 440 m Dir: West Slow travel	
	16:08:00 PDT	Blow	
	23:08-GMT	224° / 471 m Dir: West Slow travel	
	16:11:00 PDT	Blow	
	23:11-GMT	258° / 600 m Dir: West Slow travel	
	16:14:00 PDT	Blow	
	23:14-GMT	277° / 778 m Dir: West Slow travel	
	16:17:00 PDT	Blow	Inside /
	23:17-GMT	288° / 946 m Dir: West Slow travel	Inside
Sighting Number	20 Poor - 1	Er Total 4 — 2 Calves at sighting	
<i>Images: 0217-0409</i>	16:25:00 PDT	— / Blow	
	23:25-GMT	100° / 3088 m Dir: West Slow travel	
	<i>Images are mixture of S#20 and S#21</i>		
	16:28:00 PDT	Blow	
	23:28-GMT	102° / 2749 m Dir: West Slow travel	
	16:32:00 PDT	Blow	
	23:32-GMT	104° / 2749 m Dir: West Slow travel	
	16:34:00 PDT	Blow	
	23:34-GMT	106° / 2749 m Dir: West Slow travel	
	16:35:00 PDT	Blow	
	23:35-GMT	108° / 2749 m Dir: West Slow travel	
	16:40:00 PDT	Blow	
	23:40-GMT	111° / 2260 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	16:44:00 PDT	Blow	
	23:44-GMT	110° / 1674 m Dir: West Slow travel	
	16:48:00 PDT	Blow	
	23:48-GMT	112° / 1331 m Dir: West Slow travel	
	16:51:00 PDT	Blow	
	23:51-GMT	119° / 1106 m Dir: West Slow travel • Fluke	
	16:54:00 PDT	Blow	
	23:54-GMT	138° / 629 m Dir: West Slow travel	
	16:56:00 PDT	Blow	
	23:56-GMT	148° / 600 m Dir: West Slow travel	
	16:59:00 PDT	Blow	
	23:59-GMT	151° / 600 m Dir: West Slow travel	
	17:03:00 PDT	Blow	
	0:03; 4/23/2012-GMT	168° / 489 m Dir: West Slow travel	
		<i>group split into 2</i>	
	17:06:00 PDT	Blow	
	0:06; 4/23/2012-GMT	184° / 508 m Dir: West Slow travel	
	17:07:00 PDT	Blow	
	0:07; 4/23/2012-GMT	212° / 412 m Dir: West Slow travel	
	17:09:00 PDT	Blow	
	0:09; 4/23/2012-GMT	236° / 412 m Dir: West Slow travel	
	17:11:00 PDT	Blow	
	0:11; 4/23/2012-GMT	254° / 471 m Dir: West Slow travel	
		<i>0217-0409 mixed of both</i>	
	17:13:00 PDT	Blow	Inside /
	0:13; 4/23/2012-GMT	263° / 550 m Dir: West Slow travel	Inside
Sighting Number	21	Poor - 1	Er Total 4 — 2 Calves at sighting
<i>Images: 0210-0409</i>	16:28:00 PDT	— / Blow	
	23:28-GMT	98° / 3528 m Dir: West Slow travel	
		<i>Images of both S#20 + S#21</i>	
	16:36:00 PDT	Blow	
	23:36-GMT	98° / 3528 m Dir: West Slow travel	
	16:41:00 PDT	Blow	
	23:41-GMT	105° / 3088 m Dir: West Slow travel	
	16:45:00 PDT	Blow	
	23:45-GMT	105° / 2260 m Dir: West Slow travel	
	16:50:00 PDT	Blow	
	23:50-GMT	108° / 1922 m Dir: West Slow travel	
	16:55:00 PDT	Blow	
	23:55-GMT	107° / 1208 m Dir: West Slow travel	
	16:57:00 PDT	Blow	
	23:57-GMT	109° / 1020 m Dir: West Slow travel	
	16:59:00 PDT	Body	
	23:59-GMT	113° / 883 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	Time	CueTip / Saw	Holly / Buoys
		17:01:00 PDT	Blow	Inside /
		0:01; 4/23/2012-GMT	132° / 489 m Dir: West Moderate travel	Inside
		<i>joined with group S#20</i>		
Apr 23	Total 23 Calves 11	Er Gray whale (northbound)		
Day 71 of 98				
Sighting Number	01	Fair - 1	Er Total 8 — 4 Calves at sighting	
<i>Images: 0410-0563</i>		10:07:00 PDT	Surface	
		17:07-GMT	201° / 528 m Dir: West Slow travel	
		<i>cow has square flukes</i>		
		10:18:00 PDT	Blow	
		17:18-GMT	298° / 883 m Dir: West Slow travel • Fluke	
Sighting Number	02	Fair - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 0565-0631</i>		10:25:00 PDT	— / ni	
		17:25-GMT	208° / 508 m Dir: West Slow travel	
		10:35:00 PDT	Body	
		17:35-GMT	293° / 883 m Dir: West Slow travel	
Sighting Number	03	Fair - 2	Er Total 4 — 2 Calves at sighting	
<i>Images: 0634-0885</i>		10:54:00 PDT	— / Blow	
		17:54-GMT	139° / 412 m Dir: West Slow travel	
		<i>When first sighted, cow-calf pairs were in 2 groups, one trailing behind the other. They later came close together. Indicators were difficult to determine with two pairs.</i>		
		10:55:00 PDT	Body	
		17:55-GMT	164° / 382 m Dir: West Slow travel	
		10:56:00 PDT	Blow	
		17:56-GMT	171° / 356 m Dir: West Slow travel	
		10:57:00 PDT	Blow	
		17:57-GMT	184° / 356 m Dir: West Slow travel	
		10:57:00 PDT	Blow	
		17:57-GMT	194° / 356 m Dir: West Slow travel	
		10:58:00 PDT	Blow	
		17:58-GMT	206° / 356 m Dir: West Slow travel	
		10:59:00 PDT	Blow	
		17:59-GMT	219° / 356 m Dir: West Slow travel	
		11:00:00 PDT	Blow	
		18:00-GMT	244° / 412 m Dir: West Slow travel • Pec slap	
		11:01:00 PDT	Blow	
		18:01-GMT	249° / 489 m Dir: West Slow travel • Rolling	
		11:02:00 PDT	Blow	
		18:02-GMT	254° / 447 m Dir: West Slow travel • Rolling	
		11:04:00 PDT	Blow	
		18:04-GMT	257° / 489 m Dir: West Slow travel • Pec slap	
		11:05:00 PDT	Body	
		18:05-GMT	263° / 489 m Dir: West Slow travel	
		11:06:00 PDT	Body	
		18:06-GMT	269° / 600 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	11:07:00 PDT	Body	
	18:07-GMT	214° / 600 m Dir: West Slow travel • Bubbles seen	
	11:08:00 PDT	Blow	
	18:08-GMT	219° / 600 m Dir: West Slow travel • Pec slap	
	11:09:00 PDT	Blow	
	18:09-GMT	284° / 600 m Dir: West Slow travel	
	11:13:00 PDT	Blow	
	18:13-GMT	288° / 778 m Dir: West Slow travel	
	11:16:00 PDT	Blow	
	18:16-GMT	296° / 913 m Dir: West Slow travel	
	11:17:00 PDT	Body	Inside /
	18:17-GMT	301° / 913 m Dir: West Slow travel	Inside
Sighting Number	05	Fair - 2	<i>Er</i> Total 2 — 1 Calf at sighting
Images: 0890-0981	11:44:00 PDT	— / Body	
	18:44-GMT	134° / 539 m Dir: West Slow travel	
	11:46:00 PDT	Body	
	18:46-GMT	147° / 539 m Dir: West Slow travel	
		<i>through slip stream</i>	
	11:47:00 PDT	Blow	
	18:47-GMT	164° / 412 m Dir: West Slow travel	
	11:48:00 PDT	Body	
	18:48-GMT	178° / 412 m Dir: West Slow travel	
	11:49:00 PDT	Blow	
	18:49-GMT	194° / 356 m Dir: West Slow travel	
	11:50:00 PDT	Blow	
	18:50-GMT	216° / 382 m Dir: West Slow travel	
	11:51:00 PDT	Blow	
	18:51-GMT	232° / 382 m Dir: West Slow travel	
	11:52:00 PDT	Blow	
	18:52-GMT	242° / 382 m Dir: West Slow travel	
	11:52:00 PDT	Blow	
	18:52-GMT	254° / 489 m Dir: West Slow travel	
	11:55:00 PDT	Blow	
	18:55-GMT	271° / 600 m Dir: West Slow travel	
	11:57:00 PDT	Blow	
	18:57-GMT	280° / 778 m Dir: West Slow travel	
	11:58:00 PDT	Blow	nd / nd
	18:58-GMT	291° / 778 m Dir: West Slow travel	
Sighting Number	11	Fair - 1	<i>Er</i> Total 1 — 0 Calves at sighting
Images: 0994-1002	13:36:00 PDT	— / Blow	
	20:36-GMT	100° / 3528 m Dir: West Slow travel • Fluke	
	13:46:00 PDT	Blow	
	20:46-GMT	107° / 3088 m Dir: West Slow travel	
	13:55:00 PDT	Blow	
	20:55-GMT	115° / 2749 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Time			
13:58:00 PDT	Blow		
20:58-GMT	119° / 2260 m Dir: West	Slow travel	
14:02:00 PDT	Blow		
21:02-GMT	124° / 2260 m Dir: West	Slow travel • Fluke	
14:05:00 PDT	Blow		
21:05-GMT	132° / 1922 m Dir: West	Slow travel	
14:11:00 PDT	Blow		
21:11-GMT	155° / 946 m Dir: West	Slow travel	
14:15:00 PDT	Blow		
21:15-GMT	189° / 678 m Dir: West	Slow travel	
14:22:00 PDT	Blow		Inside /
21:22-GMT	252° / 778 m Dir: West	Slow travel	Outside
Sighting Number	17 Fair - 2	Er Total 6 — 3 Calves at sighting	
Images: 1004-1219	15:17:00 PDT	— / Blow	
	22:17-GMT	98° / 3088 m Dir: West	Slow travel
		<i>lots of blows</i>	
	15:20:00 PDT	Blow	
	22:20-GMT	99° / 3088 m Dir: East	Slow travel
	15:25:00 PDT	Blow	
	22:25-GMT	102° / 2749 m Dir: West	Slow travel
	15:32:00 PDT	Blow	
	22:32-GMT	105° / 2260 m Dir: West	Slow travel
	15:35:00 PDT	Blow	
	22:35-GMT	107° / 1922 m Dir: West	Slow travel
	15:40:00 PDT	Blow	
	22:40-GMT	104° / 1674 m Dir: West	Slow travel
	15:46:00 PDT	Blow	
	22:46-GMT	108° / 1403 m Dir: West	Slow travel
	15:51:00 PDT	Blow	
	22:51-GMT	121° / 735 m Dir: West	Slow travel
	15:54:00 PDT	Blow	
	22:54-GMT	144° / 447 m Dir: West	Slow travel
	15:57:00 PDT	Blow	
	22:57-GMT	192° / 314 m Dir: West	Slow travel
	16:00:00 PDT	Body	
	23:00-GMT	238° / 412 m Dir: West	Slow travel
	16:03:00 PDT	Blow	
	23:03-GMT	260° / 600 m Dir: West	Slow travel
	16:05:00 PDT	Body	
	23:05-GMT	269° / 913 m Dir: West	Slow travel
	16:07:00 PDT	Blow	Inside /
	23:07-GMT	282° / 946 m Dir: West	Inside

Apr 24 Total 25 Calves 12
Day 72 of 98

Er Gray whale (northbound)

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	01 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 1221-1298	9:07:00 PDT	— / Blow	
	16:07-GMT	132° / 600 m Dir: West Slow travel	
	<i>The calf switched sides of the cow often and was visibly on flank. The pair surfaced often.</i>		
	9:10:00 PDT	Body	
	16:10-GMT	136° / 440 m Dir: West Slow travel	
	9:12:00 PDT	Body	
	16:12-GMT	149° / 412 m Dir: West Slow travel	
	<i>calf on left</i>		
	9:14:00 PDT	Body	
	16:14-GMT	181° / 347 m Dir: West Slow travel	
	9:16:00 PDT	Blow	
	16:16-GMT	190° / 330 m Dir: West Slow travel	
	<i>calf on right flank</i>		
	9:17:00 PDT	Blow	
	16:17-GMT	214° / 330 m Dir: West Slow travel	
	<i>calf on left flank</i>		
	9:21:00 PDT	Body	
	16:21-GMT	244° / 347 m Dir: West Slow travel	
	9:24:00 PDT	Body	
	16:24-GMT	268° / 528 m Dir: West Slow travel	
			Inside / Inside
Sighting Number	02 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 1300-1316	9:28:00 PDT	— / Body	
	16:28-GMT	178° / 600 m Dir: West Slow travel	
	<i>The calf traveled behind the cow and a simultaneous surface and blow was observed. Once the pair got to the buoys, the calf was ahead of the cow.</i>		
	9:30:00 PDT	Blow	
	16:30-GMT	214° / 388 m Dir: West Slow travel	
	<i>at tail behind cow</i>		
	9:32:00 PDT	Body	
	16:32-GMT	262° / 489 m Dir: West Slow travel	
	9:34:00 PDT	Body	
	16:34-GMT	269° / 661 m Dir: West Slow travel	
	9:36:00 PDT	Body	
	16:36-GMT	277° / 778 m Dir: West Slow travel	
			Inside / Inside
	<i>calf ahead of cow</i>		
Sighting Number	03 Fair - 0	Er Total 2 — 1 Calf at sighting	
Images: 1387-1446	9:53:00 PDT	— / Body	
	16:53-GMT	99° / 3088 m Dir: West Slow travel	
	<i>Circling around 184/3.8, shallow surfacing, separation from calf ten meters closer to shore, in slip stream</i>		
	10:25:00 PDT	Body	
	17:25-GMT	107° / 1020 m Dir: West Slow travel	
	<i>along kelp</i>		
	10:30:00 PDT	Body	
	17:30-GMT	118° / 661 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	10:33:00 PDT	Body	
	17:33-GMT	131° / 489 m Dir: West Slow travel	
	10:35:00 PDT	Body	
	17:35-GMT	164° / 377 m Dir: West Slow travel	
	10:38:00 PDT	Body	
	17:38-GMT	198° / 330 m Dir: West Slow travel	
		<i>circling</i>	
	10:41:00 PDT	Body	
	17:41-GMT	237° / 347 m Dir: West Slow travel	
	10:42:00 PDT	Body	
	17:42-GMT	254° / 489 m Dir: West Slow travel	
	10:44:00 PDT	Body	Inside /
	17:44-GMT	272° / 629 m Dir: West Slow travel	Inside
Sighting Number	04	Fair - 0	Er Total 2 — 1 Calf at sighting
Images: 1321-1383	9:58:00 PDT	— / Body	
	16:58-GMT	117° / 1208 m Dir: West Slow travel	
		<i>Cow looks young, traveled outside of buoys. Calf moved ahead around 200.</i>	
	10:00:00 PDT	Body	
	17:00-GMT	120° / 1106 m Dir: West Slow travel • Fluke	
	10:04:00 PDT	Body	
	17:04-GMT	128° / 778 m Dir: West Slow travel	
		<i>calf on right</i>	
	10:06:00 PDT	Body	
	17:06-GMT	138° / 696 m Dir: West Slow travel	
		<i>slip stream</i>	
	10:08:00 PDT	Body	
	17:08-GMT	158° / 600 m Dir: West Slow travel	
	10:10:00 PDT	Body	
	17:10-GMT	174° / 471 m Dir: West Slow travel	
	10:11:00 PDT	Blow	
	17:11-GMT	191° / 471 m Dir: West Slow travel	
	10:12:00 PDT	Body	
	17:12-GMT	196° / 489 m Dir: West Slow travel	
		<i>in kelp, calf on left</i>	
	10:14:00 PDT	Body	
	17:14-GMT	221° / 508 m Dir: West Slow travel	
	10:15:00 PDT	Body	
	17:15-GMT	234° / 661 m Dir: West Slow travel	
	10:16:00 PDT	Body	
	17:16-GMT	241° / 696 m Dir: West Slow travel	
	10:18:00 PDT	Body	
	17:18-GMT	246° / 778 m Dir: West Slow travel	
	10:20:00 PDT	Body	Outside /
	17:20-GMT	251° / 1106 m Dir: West Slow travel	Outside

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	08 Fair - 0	<i>Er</i>	
	11:29:00 PDT	Body	
	18:29-GMT	115° / 1331 m Dir: West Slow travel	
<i>Images: 1457-1637</i>	11:37:00 PDT	— / Blow	
	18:37-GMT	102° / 3088 m Dir: West Slow travel	
	<i>Traveled outside slip stream, calf nursing and cow rolling. Calf on left flank of cow farther away and second calf on right flank of cow closer to shore. Separation between pairs until 220 and proceeded side by side.</i>		
	11:42:00 PDT	Body	
	18:42-GMT	104° / 2260 m Dir: West Slow travel	
	11:46:00 PDT	Blow	
	18:46-GMT	106° / 2260 m Dir: West Slow travel	
	11:50:00 PDT	Blow	
	18:50-GMT	108° / 2260 m Dir: West Slow travel	
	11:54:00 PDT	Blow	
	18:54-GMT	110° / 1674 m Dir: West Slow travel	
	12:04:00 PDT	Body	
	19:04-GMT	122° / 883 m Dir: West Slow travel • Spyhop	
	12:07:00 PDT	Body	
	19:07-GMT	134° / 661 m Dir: West Slow travel	
	<i>calf on left</i>		
	12:08:00 PDT	Body	
	19:08-GMT	137° / 574 m Dir: West Slow travel • Fluke	
	12:10:00 PDT	Body	
	19:10-GMT	150° / 574 m Dir: West Slow travel	
	<i>2 calves came up</i>		
	12:12:00 PDT	Body	
	19:12-GMT	164° / 528 m Dir: West Slow travel • Rolling	
	12:14:00 PDT	Body	
	19:14-GMT	173° / 455 m Dir: West Slow travel	
	12:17:00 PDT	Body	
	19:17-GMT	200° / 440 m Dir: West Slow travel	
	<i>one calf on left, flipper, most likely nursing</i>		
	12:21:00 PDT	Body	
	19:21-GMT	232° / 574 m Dir: West Slow travel	
	12:23:00 PDT	Body	
	19:23-GMT	247° / 528 m Dir: West Slow travel	
	<i>frequent surfacing</i>		
	12:26:00 PDT	Body	Inside /
	19:26-GMT	258° / 600 m Dir: West Slow travel	Inside
Sighting Number	09 Fair - 0	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 1639-1664</i>	12:33:00 PDT	— / Body	
	19:33-GMT	142° / 778 m Dir: West Slow travel	
	<i>Pair did not surface often.</i>		
	12:37:00 PDT	Body	
	19:37-GMT	179° / 528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:43:00 PDT	Body	
	19:43-GMT	246° / 550 m Dir: West Slow travel	
	12:44:00 PDT	Body	Inside / nd
	19:44-GMT	251° / 696 m Dir: West Slow travel • Fluke	
		<i>calf on right</i>	
Sighting Number	11 Fair - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 1666-1720</i>	12:45:00 PDT	— / Blow	
	19:45-GMT	118° / 946 m Dir: West Slow travel	
	12:49:00 PDT	Body	
	19:49-GMT	123° / 696 m Dir: West Slow travel	
	12:52:00 PDT	Body	
	19:52-GMT	137° / 600 m Dir: West Slow travel	
	12:55:00 PDT	Body	
	19:55-GMT	151° / 489 m Dir: West Slow travel	
		<i>in kelp</i>	
	12:57:00 PDT	Body	
	19:57-GMT	175° / 440 m Dir: West Slow travel	
	12:59:00 PDT	Body	
	19:59-GMT	202° / 377 m Dir: West Slow travel	
	13:02:00 PDT	Body	
	20:02-GMT	228° / 412 m Dir: West Slow travel	
	13:08:00 PDT	Body	Inside / Inside
	20:08-GMT	267° / 735 m Dir: West Slow travel	
Sighting Number	14 Good - 1	Er Total 6 — 3 Calves at sighting	
<i>Images: 1724-1871</i>	13:41:00 PDT	— / Blow	
	20:41-GMT	108° / 827 m Dir: West Slow travel	
		<i>Pairs (total accounted for with sighting #14) split into two groups. Sighting number 15 was voided.</i>	
	13:45:00 PDT	Body	
	20:45-GMT	122° / 661 m Dir: West Slow travel	
	13:46:00 PDT	Body	
	20:46-GMT	124° / 629 m Dir: West Slow travel	
	13:47:00 PDT	Body	
	20:47-GMT	134° / 600 m Dir: West Slow travel	
	13:50:00 PDT	Blow	
	20:50-GMT	151° / 489 m Dir: West Slow travel	
	13:50:00 PDT	Body	
	20:50-GMT	164° / 382 m Dir: West Slow travel • Rolling	
		<i>SBOP flew over</i>	
	13:53:00 PDT	ni	
	20:53-GMT	206° / 412 m Dir: West Slow travel • Rolling	
	13:53:00 PDT	— / Blow	
	20:53-GMT	184° / 489 m Dir: West Slow travel	
		<i>pairs split into 2 groups S#14 and S#15</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	13:53:00 PDT	Body	
	20:53-GMT	189° / 412 m Dir: West Slow travel	
	13:54:00 PDT	ni	
	20:54-GMT	224° / 412 m Dir: West Slow travel	
	13:55:00 PDT	Body	
	20:55-GMT	194° / 356 m Dir: West Slow travel	
	13:55:00 PDT	Body	
	20:55-GMT	204° / 314 m Dir: West Slow travel	
	13:57:00 PDT	ni	Inside /
	20:57-GMT	249° / 412 m Dir: West Slow travel	Inside
	13:57:00 PDT	Body	
	20:57-GMT	229° / 314 m Dir: West Slow travel	
	13:57:00 PDT	Body	
	20:57-GMT	236° / 314 m Dir: West Slow travel	
	13:59:00 PDT	Body	Inside /
	20:59-GMT	254° / 356 m Dir: West Slow travel	Inside
Sighting Number	18 Good - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 1874-1951</i>	14:37:00 PDT	— / Body	
	21:37-GMT	214° / 412 m Dir: West Slow travel	
	<i>Calf/cow pair traveled west until around 238, where they meandered and reversed travel, turning back to the west after a few minutes.</i>		
	14:40:00 PDT	Body	
	21:40-GMT	244° / 489 m Dir: West Slow travel	
	14:41:00 PDT	Body	
	21:41-GMT	252° / 600 m Dir: West Slow travel	
	14:44:00 PDT	Body	
	21:44-GMT	252° / 600 m Dir: West Slow travel • Fluke	
	14:46:00 PDT	Body	Inside /
	21:46-GMT	256° / 600 m Dir: West	Inside
Sighting Number	22 Fair - 1	Er Total 1 — 0 Calves at sighting	
	15:02:00 PDT	— / Blow	
	22:02-GMT	169° / 1922 m Dir: West Slow travel	
	15:09:00 PDT	Body	
	22:09-GMT	207° / 1403 m Dir: West Slow travel	
	15:13:00 PDT	Body	
	22:13-GMT	227° / 1483 m Dir: West Slow travel	
	15:16:00 PDT	Body	Inside /
	22:16-GMT	240° / 1922 m Dir: West Slow travel	Outside

Apr 25 Total 15 Calves 6 Er Gray whale (northbound)
Day 73 of 98

Sighting Number	02 Poor - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 1996-2011</i>	9:47:00 PDT	— / Blow	
	16:47-GMT	115° / 913 m Dir: West Slow travel	
	<i>Adjusted from images:</i>		

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	9:51:00 PDT	Blow	
	16:51-GMT	133° / 528 m Dir: West Slow travel	
	9:55:00 PDT	Body	
	16:55-GMT	171° / 440 m Dir: West Slow travel	
	9:57:00 PDT	Blow	
	16:57-GMT	191° / 400 m Dir: West Slow travel	
	10:00:00 PDT	Blow	
	17:00-GMT	233° / 508 m Dir: West Slow travel	
	10:02:00 PDT	Blow	Inside / nd
	17:02-GMT	261° / 471 m Dir: West Slow travel	
Sighting Number	04 Poor - 1	Er Total 1 — 0 Calves at sighting	Disappeared
	10:30:00 PDT	— / Body	Inside / nd
	17:30-GMT	202° / 883 m Dir: West Slow travel	
Sighting Number	06 Poor - 1	Er Total 1 — 0 Calves at sighting	
	11:19:00 PDT	— / Blow	
	18:19-GMT	102° / 3088 m Dir: West Slow travel • Fluke	
	11:28:00 PDT	Blow	
	18:28-GMT	107° / 3088 m Dir: West Slow travel	
	11:31:00 PDT	Blow	
	18:31-GMT	112° / 1922 m Dir: West Slow travel	
	11:35:00 PDT	Blow	
	18:35-GMT	113° / 778 m Dir: West Slow travel	
	11:52:00 PDT	Blow	
	18:52-GMT	195° / 600 m Dir: West Slow travel • Fluke	
	11:56:00 PDT	Body	Inside / nd
	18:56-GMT	242° / 661 m Dir: West Slow travel	
Sighting Number	07 Poor - 1	Er Total 4 — 2 Calves at sighting	
Images: 2024-2083	11:25:00 PDT	— / Blow	
	18:25-GMT	106° / 1331 m Dir: West Slow travel	
		<i>very long downtimes after slipstream, surfacing before kelp with bubble blast, then outside kelp at Sands</i>	
	11:27:00 PDT	Blow	
	18:27-GMT	107° / 1208 m Dir: West Slow travel	
	11:29:00 PDT	Blow	
	18:29-GMT	108° / 913 m Dir: West Slow travel	
	11:30:00 PDT	Blow	
	18:30-GMT	110° / 913 m Dir: West Slow travel	
	11:32:00 PDT	Blow	
	18:32-GMT	117° / 629 m Dir: West Slow travel	
	11:35:00 PDT	Blow	
	18:35-GMT	136° / 426 m Dir: West Slow travel	
	11:36:00 PDT	Blow	
	18:36-GMT	140° / 412 m Dir: West Slow travel	
	11:44:00 PDT	Blow	
	18:44-GMT	257° / 440 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	11:49:00 PDT	Blow	Inside /
	18:49-GMT	288° / 696 m Dir: West Slow travel	Inside
Sighting Number	09 Poor - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 2088-2122</i>	12:13:00 PDT	— / Blow	
	19:13-GMT	145° / 400 m Dir: West Slow travel	
	12:14:00 PDT	Blow	
	19:14-GMT	157° / 400 m Dir: West Slow travel	
	12:15:00 PDT	Blow	
	19:15-GMT	164° / 366 m Dir: West Slow travel	
	12:15:00 PDT	Blow	
	19:15-GMT	176° / 400 m Dir: West Slow travel	
	12:17:00 PDT	Body	
	19:17-GMT	206° / 347 m Dir: West Slow travel	
	12:19:00 PDT	Body	
	19:19-GMT	231° / 388 m Dir: West Slow travel	
	12:21:00 PDT	Body	
	19:21-GMT	251° / 508 m Dir: West Slow travel	
	12:25:00 PDT	Blow	Inside /
	19:25-GMT	280° / 678 m Dir: West Slow travel	Inside
Sighting Number	13 Poor - 1	Er Total 2 — 1 Calf at sighting	
	13:28:00 PDT	— / Body	nd / nd
	20:28-GMT	180° / 3088 m Dir: West Slow travel	
	<i>with condor, ID in scope</i>		
Sighting Number	16 Poor - 1	Er Total 3 — 1 Calf at sighting	
<i>Images: 2130-2172</i>	13:43:00 PDT	— / Body	
	20:43-GMT	145° / 778 m Dir: West Slow travel	
	13:45:00 PDT	Body	
	20:45-GMT	170° / 600 m Dir: West Slow travel	
	13:46:00 PDT	Body	
	20:46-GMT	176° / 600 m Dir: West Slow travel	
	13:47:00 PDT	Blow	
	20:47-GMT	193° / 508 m Dir: West Slow travel	
	13:48:00 PDT	Body	
	20:48-GMT	201° / 489 m Dir: West Slow travel	
	13:53:00 PDT	Body	
	20:53-GMT	260° / 678 m Dir: West Slow travel	
	13:57:00 PDT	Body	Inside /
	20:57-GMT	285° / 946 m Dir: West Slow travel	Inside
Apr 26	Total 10 Calves 5	Er Gray whale (northbound)	
Day 74 of 98			
Sighting Number	01 Fair - 2	Er Total 2 — 1 Calf at sighting	
<i>Images: 2196-2232</i>	9:54:00 PDT	— / Blow	
	16:54-GMT	109° / 1674 m Dir: West Slow travel	
	<i>We were able to identify a mother and calf pair by the little puff. Didn't notice any erratic behaviors and no stopping. They traveled inside of buoys.</i>		

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	10:05:00 PDT	Body	
	17:05-GMT	121° / 946 m Dir: West Slow travel	
	10:10:00 PDT	Blow	
	17:10-GMT	140° / 600 m Dir: West Slow travel	
	10:14:00 PDT	Body	
	17:14-GMT	164° / 489 m Dir: West Slow travel	
	10:17:00 PDT	Blow	
	17:17-GMT	202° / 412 m Dir: West Slow travel	
	10:20:00 PDT	Body	
	17:20-GMT	238° / 440 m Dir: West Slow travel	
	10:24:00 PDT	Blow	Inside /
	17:24-GMT	276° / 489 m Dir: West Slow travel	Inside
Sighting Number	04	Fair - 3	Er Total 4 — 2 Calves at sighting
Images: 2238-2366	11:21:00 PDT	— / Blow	
	18:21-GMT	100° / 3088 m Dir: West Slow travel	
	<i>Saw multiple blows near Campus Point. As they traveled closer to Counter Point we witnessed 3 simultaneous blows. We saw one pair trailing behind group and decided it was 3 pairs.</i>		
	11:27:00 PDT	Blow	
	18:27-GMT	102° / 2749 m Dir: West Slow travel	
	11:34:00 PDT	Blow	
	18:34-GMT	109° / 2749 m Dir: West Slow travel	
	11:40:00 PDT	Blow	
	18:40-GMT	109° / 1331 m Dir: West Slow travel	
	11:45:00 PDT	Blow	
	18:45-GMT	110° / 1020 m Dir: West Slow travel	
	11:48:00 PDT	Blow	
	18:48-GMT	119° / 600 m Dir: West Slow travel	
	11:51:00 PDT	Blow	
	18:51-GMT	142° / 388 m Dir: West Slow travel	
	11:56:00 PDT	Blow	
	18:56-GMT	249° / 356 m Dir: West Slow travel	
	12:01:00 PDT	Blow	Inside /
	19:01-GMT	287° / 778 m Dir: West Slow travel	Inside
	<i>in surf at Ellwood</i>		
Sighting Number	05	Fair - 3	Er Total 4 — 2 Calves at sighting
Images: 2368-2511	12:12:00 PDT	— / Blow	
	19:12-GMT	101° / 3528 m Dir: West Slow travel	
	<i>We could see four simultaneous blows out by campus point, 2 big and 2 little puffs. As they traveled closer, we knew there were four but had to distinguish calves proximity to cows.</i>		
	12:20:00 PDT	Blow	
	19:20-GMT	107° / 3088 m Dir: West Slow travel	
	12:26:00 PDT	Blow	
	19:26-GMT	111° / 1403 m Dir: West Slow travel	
	12:33:00 PDT	Blow	
	19:33-GMT	134° / 600 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:36:00 PDT	Blow	
	19:36-GMT	161° / 489 m Dir: West Slow travel	
	12:38:00 PDT	Blow	
	19:38-GMT	179° / 412 m Dir: West Slow travel	
	12:41:00 PDT	Blow	
	19:41-GMT	234° / 489 m Dir: West Slow travel	
	12:43:00 PDT	Blow	
	19:43-GMT	249° / 489 m Dir: West Slow travel	
	12:46:00 PDT	Blow	Inside /
	19:46-GMT	276° / 661 m Dir: West Slow travel	Inside
Apr 27	Total 34 Calves 17	Er Gray whale (northbound)	
Day 75 of 98			
Sighting Number	01 Fair - 1	Er Total 6 — 3 Calves at sighting	
Images: 2567-2758	8:55:00 PDT	— / Blow	
	15:55-GMT	107° / 1674 m Dir: West Slow travel	
	9:02:00 PDT	Body	
	16:02-GMT	110° / 913 m Dir: West Slow travel • Fluke	
	9:08:00 PDT	Blow	
	16:08-GMT	132° / 539 m Dir: West Slow travel	
	9:13:00 PDT	Body	Inside /
	16:13-GMT	262° / 366 m Dir: West Slow travel	Through
Sighting Number	02 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 2763-2805	9:00:00 PDT	— / Blow	
	16:00-GMT	103° / 2749 m Dir: West Slow travel	
	9:04:00 PDT	Blow	
	16:04-GMT	109° / 1922 m Dir: West Slow travel	
	9:04:00 PDT	Body	
	16:04-GMT	144° / 388 m Dir: West Slow travel	
	9:12:00 PDT	Blow	Inside /
	16:12-GMT	189° / 314 m Dir: West Slow travel	Inside
Sighting Number	04 Fair - 1	Er Total 4 — 2 Calves at sighting	
Images: 2809-2901	9:20:00 PDT	— / Blow	
	16:20-GMT	152° / 388 m Dir: West Slow travel	
	9:27:00 PDT	Blow	
	16:27-GMT	167° / 388 m Dir: West Slow travel	
	9:29:00 PDT	Body	
	16:29-GMT	178° / 388 m Dir: West Slow travel	
	9:38:00 PDT	Blow	Inside /
	16:38-GMT	275° / 440 m Dir: West Slow travel	Inside
Sighting Number	05 Fair - 1	Er Total 4 — 2 Calves at sighting	
Images: 2903-2991	10:09:00 PDT	— / Blow	
	17:09-GMT	107° / 2260 m Dir: West Slow travel	
		<i>going outside slip stream</i>	
	10:33:00 PDT	Blow	
	17:33-GMT	135° / 778 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	10:37:00 PDT	Body	
	17:37-GMT	168° / 600 m Dir: West Slow travel	
	10:45:00 PDT	Blow	
	17:45-GMT	228° / 412 m Dir: West Slow travel	
		<i>maybe nursing</i>	
	10:51:00 PDT	Blow	
	17:51-GMT	251° / 489 m Dir: West Slow travel	
	10:56:00 PDT	Blow	Inside /
	17:56-GMT	294° / 946 m Dir: West Slow travel	Inside
Sighting Number	07 Good - 2	Er Total 2 — 1 Calf at sighting	
<i>Images: 2995-3018</i>	11:45:00 PDT	— / Blow	
	18:45-GMT	101° / 2749 m Dir: West Slow travel	
	11:52:00 PDT	Blow	
	18:52-GMT	104° / 2260 m Dir: West Slow travel	
	11:57:00 PDT	Blow	
	18:57-GMT	107° / 1674 m Dir: West Slow travel • Fluke	
	12:02:00 PDT	Blow	
	19:02-GMT	111° / 1483 m Dir: West Slow travel	
	12:08:00 PDT	Blow	
	19:08-GMT	115° / 1208 m Dir: West Slow travel	
		<i>going outside of slip stream</i>	
	12:15:00 PDT	Blow	
	19:15-GMT	154° / 455 m Dir: West Slow travel	
	12:26:00 PDT	Blow	Inside /
	19:26-GMT	246° / 883 m Dir: West Slow travel • Fluke	Through
Sighting Number	09 Good - 3	Er Total 6 — 3 Calves at sighting	
<i>Images: 3021-3162</i>	12:09:00 PDT	— / Blow	
	19:09-GMT	99° / 2749 m Dir: West Slow travel	
	12:10:00 PDT	Body	
	19:10-GMT	100° / 2749 m Dir: West Slow travel • Breach	
	12:21:00 PDT	Blow	
	19:21-GMT	104° / 2260 m Dir: West Slow travel • Breach	
	12:29:00 PDT	Blow	
	19:29-GMT	106° / 1922 m Dir: West Slow travel	
	12:37:00 PDT	Blow	
	19:37-GMT	109° / 1331 m Dir: West Slow travel • Fluke	
	12:41:00 PDT	Blow	
	19:41-GMT	112° / 1331 m Dir: West Slow travel • Breach	
	12:46:00 PDT	Blow	
	19:46-GMT	115° / 661 m Dir: West Slow travel	
		<i>through slip stream</i>	
	12:53:00 PDT	Blow	
	19:53-GMT	174° / 400 m Dir: West Slow travel	
	12:55:00 PDT	Body	
	19:55-GMT	207° / 338 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:57:00 PDT	Blow	
	19:57-GMT	232° / 338 m Dir: West Slow travel	
	12:58:00 PDT	Blow	
	19:58-GMT	248° / 400 m Dir: West Slow travel	
	13:03:00 PDT	Blow	Inside /
	20:03-GMT	281° / 550 m Dir: West Slow travel	Inside
Sighting Number	11 Good - 3	Er Total 2 — 1 Calf at sighting	
Images: 3164-3339	13:04:00 PDT	— / Blow	
	20:04-GMT	124° / 778 m Dir: West Slow travel	
	<i>Calf surfacing in oil. Hanging out at 190 for several minutes tail lobbing and rolling, spy hopping, outside slip stream.</i>		
	13:06:00 PDT	Blow	
	20:06-GMT	132° / 600 m Dir: West Slow travel	
	13:06:00 PDT	Blow	
	20:06-GMT	154° / 600 m Dir: West Slow travel	
	13:12:00 PDT	Blow	
	20:12-GMT	160° / 539 m Dir: West Slow travel	
	13:14:00 PDT	Blow	
	20:14-GMT	177° / 412 m Dir: West Slow travel	
	13:16:00 PDT	Blow	
	20:16-GMT	179° / 356 m Dir: West Slow travel	
	13:17:00 PDT	Blow	
	20:17-GMT	184° / 356 m Dir: West Slow travel	
	13:18:00 PDT	Blow	
	20:18-GMT	186° / 338 m Dir: West Slow travel	
	13:20:00 PDT	Body	
	20:20-GMT	204° / 338 m Dir: West Slow travel	
	13:22:00 PDT	Blow	
	20:22-GMT	204° / 314 m Dir: No direction Rolling • Fluke • Pec slap	
	<i>calf spy hopping and rolling</i>		
	13:27:00 PDT	Blow	
	20:27-GMT	240° / 412 m Dir: No direction Rolling	
	13:28:00 PDT	Blow	
	20:28-GMT	250° / 440 m Dir: No direction Rolling	
	13:31:00 PDT	Body	
	20:31-GMT	270° / 600 m Dir: No direction Rolling	
	13:33:00 PDT	Blow	Inside /
	20:33-GMT	280° / 778 m Dir: No direction Rolling	Inside
Sighting Number	14 Fair - 3	Er Total 2 — 1 Calf at sighting	
Images: 3341-3397	14:36:00 PDT	— / Body	
	21:36-GMT	107° / 1208 m Dir: West Slow travel	
	<i>Saw bodies along Isla Vista kelp, calf up more than cow, went through slip stream, in surf along sands, went inside large kelp off sands, all other pairs go outside that kelp then turn right to go inside buoys.</i>		
	14:44:00 PDT	Body	
	21:44-GMT	108° / 946 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	14:45:00 PDT	Body	
	21:45-GMT	110° / 883 m Dir: West Slow travel	
	14:48:00 PDT	Blow	
	21:48-GMT	129° / 489 m Dir: West Slow travel	
	14:51:00 PDT	Body	
	21:51-GMT	160° / 356 m Dir: West Slow travel	
	14:52:00 PDT	Body	
	21:52-GMT	175° / 338 m Dir: West Slow travel	
	14:53:00 PDT	Body	
	21:53-GMT	189° / 356 m Dir: West Slow travel	
	14:55:00 PDT	Blow	
	21:55-GMT	235° / 356 m Dir: West Slow travel	
	14:56:00 PDT	Body	
	21:56-GMT	251° / 412 m Dir: West Slow travel	
	14:59:00 PDT	Body	
	21:59-GMT	274° / 600 m Dir: West Slow travel	
	14:59:00 PDT	Blow	Inside /
	21:59-GMT	279° / 600 m Dir: West Slow travel	Inside
Sighting Number	16 Fair - 3	Er Total 2 — 1 Calf at sighting	
Images: 3400-3412	15:15:00 PDT	— / Blow	
	22:15-GMT	129° / 883 m Dir: West Slow travel	
	<i>Did not see much, surfaced separately after going around kelp outside slip stream calf surfaced many times but hard to track in chop, white caps, and glare. Both surfaced after going around kelp off of sands (saw in binos).</i>		
	15:19:00 PDT	Blow	
	22:19-GMT	170° / 600 m Dir: West Slow travel	
	15:19:00 PDT	Blow	
	22:19-GMT	179° / 600 m Dir: West Slow travel	
	15:23:00 PDT	Blow	
	22:23-GMT	218° / 489 m Dir: West Slow travel	
	15:26:00 PDT	Blow	Inside /
	22:26-GMT	252° / 489 m Dir: West Slow travel	Inside
Sighting Number	19 Fair - 3	Er Total 4 — 2 Calves at sighting	
Images: 3415-3436	16:08:00 PDT	— / Blow	
	23:08-GMT	104° / 2260 m Dir: West Slow travel	
	<i>Nice blows approaching, 2 big whales and 1 little whale, through chop and white caps not good images, abandoned camera for binos to track. In buoys saw second calf, which blew just before first calf that blew with cow as it had on most surfaces.</i>		
	16:10:00 PDT	Blow	
	23:10-GMT	105° / 1922 m Dir: West Slow travel	
	16:12:00 PDT	Blow	
	23:12-GMT	107° / 1674 m Dir: West Slow travel	
	16:17:00 PDT	Blow	
	23:17-GMT	112° / 1483 m Dir: West Slow travel	
	16:20:00 PDT	Blow	
	23:20-GMT	114° / 1106 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	16:22:00 PDT	Blow	
	23:22-GMT	122° / 946 m Dir: West	Slow travel
	16:24:00 PDT	Blow	
	23:24-GMT	138° / 600 m Dir: West	Slow travel
	16:28:00 PDT	Blow	
	23:28-GMT	174° / 600 m Dir: West	Slow travel
	16:30:00 PDT	Blow	
	23:30-GMT	220° / 528 m Dir: West	Slow travel
	16:33:00 PDT	Blow	
	23:33-GMT	251° / 946 m Dir: West	Slow travel
	16:36:00 PDT	Blow	
	23:36-GMT	274° / 1106 m Dir: West	Slow travel
	16:38:00 PDT	Blow	Inside /
	23:38-GMT	279° / 1403 m Dir: West	Through

Apr 28 Total 15 Calves 7 Er Gray whale (northbound)
Day 76 of 98

Sighting Number	Fair - 1	Er Total 2 — 1 Calf at sighting
Images: 3440-3483	10:54:00 PDT	— / Blow
	17:54-GMT	112° / 2749 m Dir: West
		<i>Farther out compared to other cow calf pairs, the work boat was still between the buoys. They were not moving especially slowly. From beginning of sighting on course further offshore-100 meters off Devereux kelp outside of stream. Bended in slightly by Counter Point then headed back outside. Work boats may not have been a factor (but they were there). Not good images</i>
	10:58:00 PDT	Blow
	17:58-GMT	115° / 1922 m Dir: West
	11:00:00 PDT	Blow
	18:00-GMT	120° / 1674 m Dir: West
	11:00:00 PDT	Blow
	18:00-GMT	121° / 1674 m Dir: West
	11:03:00 PDT	Blow
	18:03-GMT	130° / 1331 m Dir: West
	11:09:00 PDT	Blow
	18:09-GMT	161° / 528 m Dir: West
	11:12:00 PDT	Blow
	18:12-GMT	206° / 528 m Dir: West
	11:15:00 PDT	Blow
	18:15-GMT	239° / 778 m Dir: West
	11:20:00 PDT	Blow
	18:20-GMT	261° / 1483 m Dir: West
		Inside / Outside

Sighting Number	Fair - 1	Er Total 1 — 0 Calves at sighting
Images: 3485-6	11:41:00 PDT	— / Blow
	18:41-GMT	107° / 2749 m Dir: West
		<i>Vessel #5 turned toward whale, crossed path in front of whale submerged- long down time- V5 then slowly headed east looking, Er disappeared after boat went over</i>
	11:46:00 PDT	Blow
	18:46-GMT	114° / 2260 m Dir: West

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	11:54:00 PDT	Blow	
	18:54-GMT	125° / 1483 m Dir: West Slow travel	
	11:59:00 PDT	Blow	nd / nd
	18:59-GMT	146° / 1106 m Dir: West Slow travel	
Sighting Number	09 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 3492-3522	13:24:00 PDT	— / Blow	
	20:24-GMT	101° / 3088 m Dir: West Slow travel	
	<i>Whales came quite close to a Boston Whaler V10, then later to 2 kayakers, then later to the oil crane V1</i>		
	13:27:00 PDT	Body	
	20:27-GMT	104° / 3088 m Dir: West Slow travel	
	13:34:00 PDT	Body	
	20:34-GMT	109° / 1922 m Dir: West Slow travel	
	13:36:00 PDT	Body	
	20:36-GMT	114° / 1674 m Dir: West Slow travel	
	13:38:00 PDT	Body	
	20:38-GMT	116° / 1674 m Dir: West Slow travel	
	13:40:00 PDT	Body	
	20:40-GMT	120° / 1483 m Dir: West Slow travel	
	13:43:00 PDT	Blow	
	20:43-GMT	129° / 696 m Dir: West Slow travel	
	13:46:00 PDT	Blow	
	20:46-GMT	147° / 661 m Dir: West Slow travel	
	13:49:00 PDT	Blow	
	20:49-GMT	184° / 489 m Dir: West Slow travel • Bubbles seen	
	<i>whales quite close to kayakers</i>		
	13:51:00 PDT	Blow	
	20:51-GMT	198° / 489 m Dir: West Slow travel	
	13:52:00 PDT	Body	
	20:52-GMT	214° / 550 m Dir: West Slow travel	
	13:55:00 PDT	Blow	
	20:55-GMT	249° / 778 m Dir: West Slow travel	
	14:00:00 PDT	Body	Inside /
	21:00-GMT	272° / 1106 m Dir: West Slow travel	Through
Sighting Number	13 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 3567-3626	14:28:00 PDT	— / Blow	
	21:28-GMT	102° / 2749 m Dir: West Slow travel	
	<i>Slow travel, traveled along kelp, passed inside buoys. Came up every 3-4 min. Calf did not present much body, hidden behind waves when photographing.</i>		
	14:31:00 PDT	Blow	
	21:31-GMT	104° / 2749 m Dir: West Slow travel	
	14:35:00 PDT	Blow	
	21:35-GMT	107° / 2260 m Dir: West Slow travel	
	14:39:00 PDT	Blow	
	21:39-GMT	110° / 1922 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	14:45:00 PDT	Body	
	21:45-GMT	114° / 1483 m Dir: West Slow travel	
	14:49:00 PDT	Blow	
	21:49-GMT	127° / 827 m Dir: West Slow travel	
	14:52:00 PDT	Body	
	21:52-GMT	140° / 778 m Dir: West Slow travel	
	14:56:00 PDT	Body	
	21:56-GMT	175° / 550 m Dir: West Slow travel	
	14:59:00 PDT	Blow	
	21:59-GMT	222° / 455 m Dir: West Slow travel	
	15:02:00 PDT	Blow	
	22:02-GMT	246° / 550 m Dir: West Slow travel	
	15:05:00 PDT	Blow	Inside /
	22:05-GMT	273° / 778 m Dir: West Slow travel	Inside
Sighting Number	15	Fair - 1	Er Total 2 — 1 Calf at sighting
Images: 3628-3752	15:19:00 PDT	— / Blow	
	22:19-GMT	116° / 678 m Dir: West Slow travel	
	<i>Spotted the pair fairly late (102), pair surfaced 1 or more times per minute, pair traveled through slip stream. kelp passage, pair circled around large kelp patch just before buoys.</i>		
	15:23:00 PDT	Blow	
	22:23-GMT	121° / 489 m Dir: West Slow travel	
	15:24:00 PDT	Blow	
	22:24-GMT	132° / 489 m Dir: West Slow travel	
	15:25:00 PDT	Blow	
	22:25-GMT	135° / 356 m Dir: West Slow travel	
	15:26:00 PDT	Blow	
	22:26-GMT	148° / 366 m Dir: West Slow travel	
	15:28:00 PDT	ni	
	22:28-GMT	170° / 356 m Dir: West Slow travel	
	15:29:00 PDT	Blow	
	22:29-GMT	186° / 293 m Dir: West Slow travel	
	15:30:00 PDT	Blow	
	22:30-GMT	196° / 314 m Dir: West Slow travel	
	15:38:00 PDT	Blow	
	22:38-GMT	266° / 600 m Dir: West Slow travel	
	15:42:00 PDT	Blow	Inside /
	22:42-GMT	289° / 778 m Dir: West Slow travel	Inside
Sighting Number	16	Fair - 1	Er Total 2 — 1 Calf at sighting
Images: 3755-3777	15:48:00 PDT	— / Body	
	22:48-GMT	142° / 412 m Dir: West Slow travel	
	<i>Pair was spotted fairly late (128), traveled through slipstream, circled around large patch of kelp just before buoys.</i>		
	15:49:00 PDT	Blow	
	22:49-GMT	164° / 334 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:54:00 PDT	Blow	
	22:54-GMT	246° / 539 m Dir: West Slow travel	
	15:57:00 PDT	Blow	
	22:57-GMT	274° / 678 m Dir: West Slow travel	
	16:01:00 PDT	Blow	Inside /
	23:01-GMT	289° / 678 m Dir: West Slow travel	Inside
Sighting Number	18 Fair - 1	Er Total 2 — 1 Calf at sighting	
	16:41:00 PDT	— / Blow	
	23:41-GMT	104° / 2749 m Dir: West Slow travel	
	16:43:00 PDT	Blow	
	23:43-GMT	107° / 2260 m Dir: West Slow travel	
	16:49:00 PDT	Blow	
	23:49-GMT	108° / 2260 m Dir: West Slow travel	
	17:02:00 PDT	Blow	
	0:02; 4/29/2012-GMT	133° / 778 m Dir: West Slow travel	
	17:07:00 PDT	Blow	
	0:07; 4/29/2012-GMT	175° / 600 m Dir: West Slow travel	
	17:11:00 PDT	Blow	
	0:11; 4/29/2012-GMT	226° / 508 m Dir: West Slow travel	
	17:14:00 PDT	ni	Inside /
	0:14; 4/29/2012-GMT	264° / 778 m Dir: West Slow travel	Through
Sighting Number	19 Fair - 1	Er Total 2 — 1 Calf at sighting	
	16:46:00 PDT	— / Blow	
	23:46-GMT	106° / 2260 m Dir: West Slow travel	
	<i>2 separate cow calf pairs followed similar route one behind the other.</i>		
	16:49:00 PDT	Blow	
	23:49-GMT	107° / 1922 m Dir: West Slow travel	
	17:03:00 PDT	Blow	
	0:03; 4/29/2012-GMT	123° / 913 m Dir: West Slow travel	
	<i>Images for both 18 and 19 mixed in group</i>		
	17:08:00 PDT	Blow	
	0:08; 4/29/2012-GMT	139° / 539 m Dir: West Slow travel	
	17:11:00 PDT	Blow	
	0:11; 4/29/2012-GMT	164° / 382 m Dir: West Slow travel	
	17:12:00 PDT	Blow	
	0:12; 4/29/2012-GMT	181° / 447 m Dir: West Slow travel	
	17:16:00 PDT	Blow	
	0:16; 4/29/2012-GMT	231° / 539 m Dir: West Slow travel	
	17:18:00 PDT	Blow	Inside /
	0:18; 4/29/2012-GMT	245° / 489 m Dir: West Slow travel	Inside

Apr 29 Total 23 Calves 11
Day 77 of 98

Er Gray whale (northbound)

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number	04 Fair - 1	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 3883-3954</i>	9:55:00 PDT 16:55-GMT	Boat / Blow 102° / 2749 m Dir: West Slow travel • Rolling • Fluke	
		<i>Condor saw whales just other side of Campus Point- whales hung in and around kelp at Campus Point- spy hop- rolling- fluke- came through slip stream and greeted by 2 SUPs- one got photo of whales traveling underneath them. Close along surf at sands, inside kelp area and around towards Ellwood.</i>	
	10:05:00 PDT 17:05-GMT	Body 102° / 2749 m Dir: No direction	
	10:07:00 PDT 17:07-GMT	Body 102° / 2749 m Dir: No direction • Spyhop	
	10:14:00 PDT 17:14-GMT	Blow 103° / 2260 m Dir: West Slow travel	
	10:17:00 PDT 17:17-GMT	Blow 106° / 1922 m Dir: West Slow travel	
	10:18:00 PDT 17:18-GMT	Blow 108° / 1674 m Dir: West Slow travel	
	10:20:00 PDT 17:20-GMT	Blow 110° / 1483 m Dir: West Slow travel	
	10:25:00 PDT 17:25-GMT	Blow 113° / 1106 m Dir: West Slow travel	
	10:30:00 PDT 17:30-GMT	Blow 114° / 735 m Dir: West Slow travel	
		<i>along kelp</i>	
<i>Images: 3953</i>	10:46:00 PDT 17:46-GMT	Blow 280° / 539 m Dir: West Slow travel	Inside / Inside
		<i>image 3953</i>	
Sighting Number	11 Poor - 1	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 3959-4014</i>	12:22:00 PDT 19:22-GMT	— / Body 143° / 778 m Dir: West Slow travel	
		<i>Saw body outside Devereux kelp, urchin boat on same course, stopped right behind whales to watch, long down time, surfaced outside boat as boat was on its way.</i>	
<i>Images: 4013</i>	12:34:00 PDT 19:34-GMT	Blow 252° / 1208 m Dir: West Slow travel	Inside / Outside
Sighting Number	13 Poor - 1	<i>Er</i> Total 4 — 2 Calves at sighting	
<i>Images: 4016-4272</i>	12:55:00 PDT 19:55-GMT	— / Blow 100° / 3088 m Dir: West Slow travel	
		<i>All over each other, a lot of kelp time- through slip stream, then forward, then turned east (some left sides) very close, lots of surfacing, flukes and fins, once upside down.</i>	
	13:12:00 PDT 20:12-GMT	Blow 106° / 2260 m Dir: South Slow travel	
	13:14:00 PDT 20:14-GMT	Blow 108° / 1922 m Dir: West Slow travel	
	13:18:00 PDT 20:18-GMT	Blow 110° / 1674 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:21:00 PDT	Blow	
	20:21-GMT	113° / 1331 m Dir: West Slow travel	
	13:25:00 PDT	Blow	
	20:25-GMT	117° / 946 m Dir: West Slow travel	
	13:28:00 PDT	Blow	
	20:28-GMT	120° / 735 m Dir: West Slow travel	
	13:32:00 PDT	Body	
	20:32-GMT	135° / 489 m Dir: West Slow travel	
	13:33:00 PDT	Body	
	20:33-GMT	142° / 426 m Dir: West Slow travel • Rolling	
	13:36:00 PDT	Blow	
	20:36-GMT	157° / 366 m Dir: West Slow travel • Rolling	
	13:40:00 PDT	Blow	
	20:40-GMT	183° / 338 m Dir: West Slow travel	
	13:46:00 PDT	Body	
	20:46-GMT	252° / 455 m Dir: West Slow travel • Bubbles seen	
	13:51:00 PDT	Body	
	20:51-GMT	266° / 574 m Dir: West Slow travel	
	13:52:00 PDT	Blow	Inside /
	20:52-GMT	277° / 600 m Dir: West Slow travel	Inside
Sighting Number	15	Poor - 1	Er Total 2 — 1 Calf at sighting
Images: 4274-4335	13:44:00 PDT	Boat / Blow	
	20:44-GMT	100° / 2260 m Dir: West Slow travel	
	<i>Spotted by Condor at Campus Point, outside slip stream. Outside Devereux kelp, cow did not surface alot, outside sands kelp, turned right inside buoys.</i>		
	13:50:00 PDT	Blow	
	20:50-GMT	124° / 1106 m Dir: West Slow travel	
	13:53:00 PDT	Blow	
	20:53-GMT	134° / 913 m Dir: West Slow travel	
	13:58:00 PDT	Body	
	20:58-GMT	166° / 600 m Dir: West Slow travel	
	14:03:00 PDT	Body	
	21:03-GMT	207° / 471 m Dir: West Slow travel	
	14:05:00 PDT	Body	
	21:05-GMT	225° / 528 m Dir: West Slow travel • Rolling	
	14:07:00 PDT	Body	
	21:07-GMT	253° / 550 m Dir: West Slow travel	
	14:12:00 PDT	Blow	Inside /
	21:12-GMT	288° / 827 m Dir: West Slow travel	Inside
Sighting Number	18	Poor - 1	Er Total 2 — 1 Calf at sighting
Images: 4338-4372	14:16:00 PDT	— / Body	
	21:16-GMT	127° / 489 m Dir: West Slow travel	
	14:19:00 PDT	Blow	
	21:19-GMT	156° / 366 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	14:20:00 PDT	Body	
	21:20-GMT	179° / 400 m Dir: West Slow travel	
	14:23:00 PDT	Body	
	21:23-GMT	220° / 400 m Dir: West Slow travel	
	14:27:00 PDT	Body	
	21:27-GMT	264° / 574 m Dir: West Slow travel	
	14:29:00 PDT	Body	Inside /
	21:29-GMT	273° / 629 m Dir: West Slow travel	Inside
Sighting Number	19 Poor - 1	Er Total 2 — 1 Calf at sighting	
Images: 4374-4468	14:19:00 PDT	— / Blow	
	21:19-GMT	104° / 1331 m Dir: West Slow travel	
	<i>Outside slip stream.</i>		
	14:25:00 PDT	Body	
	21:25-GMT	137° / 696 m Dir: West Slow travel	
	14:29:00 PDT	Blow	
	21:29-GMT	157° / 550 m Dir: West Slow travel	
	14:34:00 PDT	Body	
	21:34-GMT	184° / 400 m Dir: West Slow travel	
	14:36:00 PDT	Body	
	21:36-GMT	224° / 356 m Dir: West Slow travel	
	14:38:00 PDT	Blow	
	21:38-GMT	238° / 347 m Dir: West Slow travel	
	14:47:00 PDT	Blow	Inside /
	21:47-GMT	266° / 600 m Dir: West Slow travel	Inside
Sighting Number	20 Poor - 1	Er Total 2 — 1 Calf at sighting	
Images: 4470-4539	14:40:00 PDT	— / Body	
	21:40-GMT	124° / 778 m Dir: West Slow travel	
	<i>Lots of blows- then long downtimes, after Devereux kelp urchin boat almost traveled over whales, calf in front and behind on flank.</i>		
	14:46:00 PDT	Blow	
	21:46-GMT	163° / 508 m Dir: West Slow travel	
	14:48:00 PDT	Blow	
	21:48-GMT	170° / 471 m Dir: West Slow travel	
	14:51:00 PDT	Body	
	21:51-GMT	196° / 528 m Dir: West Slow travel	
	14:55:00 PDT	Body	
	21:55-GMT	223° / 489 m Dir: West Slow travel	
	14:56:00 PDT	Blow	
	21:56-GMT	235° / 489 m Dir: West Slow travel	
	15:05:00 PDT	Blow	Inside /
	22:05-GMT	288° / 883 m Dir: West Slow travel	Inside
Sighting Number	23 Poor - 2	Er Total 2 — 1 Calf at sighting	
Images: 4541-4559	15:20:00 PDT	— / Blow	
	22:20-GMT	107° / 1674 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:22:00 PDT	Blow	
	22:22-GMT	106° / 1331 m Dir: West Slow travel	
	15:26:00 PDT	Body	
	22:26-GMT	108° / 1020 m Dir: West Slow travel	
	15:28:00 PDT	Blow	
	22:28-GMT	112° / 778 m Dir: West Slow travel	
	15:32:00 PDT	Body	
	22:32-GMT	130° / 426 m Dir: West Slow travel	
	15:35:00 PDT	Body	
	22:35-GMT	175° / 322 m Dir: West Slow travel	
	15:36:00 PDT	Body	
	22:36-GMT	202° / 322 m Dir: West Slow travel	
	15:43:00 PDT	Body	Inside /
	22:43-GMT	283° / 883 m Dir: West Slow travel	Inside
Sighting Number	24	Poor - 2	<i>Er</i> Total 1 — 0 Calves at sighting
	15:39:00 PDT	— / Body	
	22:39-GMT	218° / 1331 m Dir: West Slow travel	
	15:43:00 PDT	Blow	
	22:43-GMT	246° / 1331 m Dir: West Slow travel	
	15:49:00 PDT	Blow	
	22:49-GMT	266° / 1483 m Dir: West Slow travel	
	15:50:00 PDT	Blow	Inside /
	22:50-GMT	273° / 1483 m Dir: West Slow travel	Through
Sighting Number	26	Poor - 2	<i>Er</i> Total 2 — 1 Calf at sighting
Images: 4562-4588	15:51:00 PDT	— / Blow	
	22:51-GMT	112° / 1483 m Dir: West Slow travel	
		<i>Outside slip stream.</i>	
	15:55:00 PDT	Blow	
	22:55-GMT	115° / 1106 m Dir: West Slow travel	
	15:59:00 PDT	Blow	
	22:59-GMT	120° / 946 m Dir: West Slow travel	
	16:02:00 PDT	Blow	
	23:02-GMT	127° / 827 m Dir: West Slow travel	
	16:04:00 PDT	Blow	
	23:04-GMT	142° / 661 m Dir: West Slow travel	
	16:08:00 PDT	Body	
	23:08-GMT	166° / 550 m Dir: West Slow travel	
	16:10:00 PDT	Blow	
	23:10-GMT	190° / 528 m Dir: West Slow travel	
	16:13:00 PDT	Blow	
	23:13-GMT	223° / 489 m Dir: West Slow travel	
	16:16:00 PDT	Blow	Inside / nd
	23:16-GMT	253° / 528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number 27	Poor - 2	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 4590-4613</i>	15:52:00 PDT	— / Blow	
	22:52-GMT	101° / 2749 m Dir: West Slow travel	
	<i>Through slipstream. Saw first at Campus Point then along IV kelp. Started through slipstream, turned around and went clockwise around Devereux kelp.</i>		
	16:30:00 PDT	Body	
	23:30-GMT	109° / 1483 m Dir: West Slow travel	
	16:35:00 PDT	Blow	
	23:35-GMT	111° / 1483 m Dir: No direction Slow travel	
	16:37:00 PDT	Blow	
	23:37-GMT	115° / 883 m Dir: No direction Slow travel	
	16:41:00 PDT	Body	
	23:41-GMT	143° / 426 m Dir: No direction Slow travel	
	16:54:00 PDT	Blow	Inside / nd
	23:54-GMT	213° / 600 m Dir: No direction Slow travel	
Apr 30	Total 26 Calves 13	<i>Er</i> Gray whale (northbound)	
Day 78 of 98			
Sighting Number 06	Poor - 3	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 4620-4689</i>	11:30:00 PDT	— / Blow	
	18:30-GMT	106° / 1922 m Dir: West Slow travel	
	11:40:00 PDT	Blow	
	18:40-GMT	109° / 827 m Dir: West Slow travel • Pec slap	
	11:46:00 PDT	Blow	
	18:46-GMT	130° / 412 m Dir: West Slow travel	
	<i>calf behind, shore side</i>		
	11:49:00 PDT	Blow	
	18:49-GMT	172° / 314 m Dir: West Slow travel	
	<i>through slipstream</i>		
	11:52:00 PDT	Blow	Inside / nd
	18:52-GMT	234° / 314 m Dir: West Slow travel	
Sighting Number 07	Poor - 3	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 4691-4739</i>	11:42:00 PDT	— / Blow	
	18:42-GMT	105° / 2749 m Dir: West Slow travel	
	11:49:00 PDT	Blow	
	18:49-GMT	108° / 2260 m Dir: West Slow travel	
	11:51:00 PDT	Blow	
	18:51-GMT	111° / 1922 m Dir: West Slow travel	
	12:01:00 PDT	Blow	
	19:01-GMT	116° / 1331 m Dir: West Slow travel	
	12:09:00 PDT	Blow	
	19:09-GMT	140° / 412 m Dir: West Slow travel • Spyhop	
	<i>through slip stream, calf inside flank</i>		
	12:11:00 PDT	Blow	
	19:11-GMT	160° / 347 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:13:00 PDT	Blow	
	19:13-GMT	197° / 400 m Dir: West Slow travel	
	12:16:00 PDT	Blow	
	19:16-GMT	234° / 489 m Dir: West Slow travel • Spyhop	
	12:21:00 PDT	Blow	
	19:21-GMT	255° / 600 m Dir: West Slow travel	
	12:26:00 PDT	Blow	Inside /
	19:26-GMT	284° / 1106 m Dir: West Slow travel	Inside
Sighting Number	08 Poor - 3	Er Total 2 — 1 Calf at sighting	
Images: 4743-4795	12:07:00 PDT	— / Blow	
	19:07-GMT	132° / 883 m Dir: West Slow travel	
		<i>outside slip stream</i>	
	12:10:00 PDT	Blow	
	19:10-GMT	147° / 489 m Dir: West Slow travel	
	12:12:00 PDT	Blow	
	19:12-GMT	153° / 489 m Dir: West Slow travel	
	12:15:00 PDT	Blow	
	19:15-GMT	160° / 489 m Dir: West Slow travel • Spyhop	
		<i>calf spy hopping behind mother</i>	
	12:20:00 PDT	Blow	
	19:20-GMT	168° / 412 m Dir: West Slow travel	
	12:24:00 PDT	Blow	
	19:24-GMT	214° / 366 m Dir: West Slow travel	
	12:28:00 PDT	Blow	Inside / nd
	19:28-GMT	258° / 412 m Dir: West Slow travel	
Sighting Number	09 Poor - 3	Er Total 4 — 2 Calves at sighting	
Images: 4797-4899	12:29:00 PDT	— / Blow	
	19:29-GMT	114° / 778 m Dir: West Slow travel	
		<i>images include S#10</i>	
	12:31:00 PDT	Blow	
	19:31-GMT	125° / 600 m Dir: West Slow travel • Pec slap	
	12:33:00 PDT	Blow	
	19:33-GMT	137° / 508 m Dir: West Slow travel	
	12:36:00 PDT	Blow	
	19:36-GMT	148° / 412 m Dir: West Slow travel • Fluke • Pec slap	
	12:38:00 PDT	Blow	
	19:38-GMT	175° / 356 m Dir: West Slow travel	
	12:42:00 PDT	Blow	Inside / nd
	19:42-GMT	221° / 412 m Dir: West Slow travel	
Sighting Number	10 Poor - 3	Er Total 2 — 1 Calf at sighting	
	12:35:00 PDT	— / Blow	
	19:35-GMT	166° / 489 m Dir: West Slow travel	
		<i>outside slipstream</i>	
	12:38:00 PDT	Blow	
	19:38-GMT	194° / 440 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	12:42:00 PDT	Blow	
	19:42-GMT	244° / 489 m Dir: West Slow travel	
	12:45:00 PDT	ni	Inside / nd
	19:45-GMT	269° / 600 m Dir: West Slow travel	
Sighting Number	11 Poor - 3	Er Total 2 — 1 Calf at sighting	
Images: 4900-4908	12:50:00 PDT	— / Blow	Inside / nd
	19:50-GMT	224° / 356 m Dir: West Slow travel	
		<i>saw go through slip stream</i>	
Sighting Number	12 Poor - 3	Er Total 2 — 1 Calf at sighting	
	12:52:00 PDT	— / Blow	
	19:52-GMT	124° / 550 m Dir: West Slow travel	
	12:57:00 PDT	Blow	
	19:57-GMT	169° / 412 m Dir: West Slow travel	
	13:00:00 PDT	Blow	
	20:00-GMT	217° / 334 m Dir: West Slow travel	
	13:03:00 PDT	Body	Inside / nd
	20:03-GMT	251° / 447 m Dir: West Slow travel	
Sighting Number	14 Poor - 3	Er Total 2 — 1 Calf at sighting	
Images: 4975-5017	13:30:00 PDT	— / Blow	
	20:30-GMT	104° / 3088 m Dir: West Slow travel	
	13:36:00 PDT	Blow	
	20:36-GMT	105° / 2749 m Dir: West Slow travel	
	13:40:00 PDT	Blow	
	20:40-GMT	111° / 1922 m Dir: West Slow travel	
	13:43:00 PDT	Blow	
	20:43-GMT	116° / 1922 m Dir: West Slow travel	
	13:46:00 PDT	Blow	
	20:46-GMT	122° / 913 m Dir: West Slow travel	
	13:48:00 PDT	Blow	
	20:48-GMT	129° / 778 m Dir: West Slow travel	
		<i>outside slip stream</i>	
	13:52:00 PDT	Blow	
	20:52-GMT	159° / 600 m Dir: West Slow travel	
	13:58:00 PDT	Blow	
	20:58-GMT	234° / 412 m Dir: West Slow travel	
	13:59:00 PDT	Blow	
	20:59-GMT	250° / 489 m Dir: West Slow travel	
	14:09:00 PDT	Blow	Inside /
	21:09-GMT	294° / 1106 m Dir: West Slow travel	Inside
Sighting Number	17 Poor - 3	Er Total 2 — 1 Calf at sighting	
Images: 5021-54	13:43:00 PDT	— / Blow	
	20:43-GMT	110° / 1922 m Dir: West Slow travel	
		<i>outside slipstream</i>	
	13:47:00 PDT	Blow	
	20:47-GMT	112° / 1922 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:53:00 PDT	Blow	
	20:53-GMT	122° / 1106 m Dir: West Slow travel	
	13:57:00 PDT	Blow	
	20:57-GMT	136° / 778 m Dir: West Slow travel	
	14:01:00 PDT	Blow	
	21:01-GMT	182° / 600 m Dir: West Slow travel	
	14:05:00 PDT	Blow	
	21:05-GMT	232° / 412 m Dir: West Slow travel	
	14:14:00 PDT	Blow	
	21:14-GMT	274° / 412 m Dir: West Slow travel	
	14:19:00 PDT	Blow	Inside /
	21:19-GMT	289° / 412 m Dir: West Slow travel	Inside
Sighting Number	21	Poor - 3	Er Total 2 — 1 Calf at sighting
Images: 5062-5109	15:06:00 PDT	— / Blow	
	22:06-GMT	107° / 2260 m Dir: West Slow travel • Breach	
		<i>Outside slip stream. Boat passed through path (L13127-took wide path around) saw breaching during initial sightings</i>	
	15:12:00 PDT	Blow	
	22:12-GMT	110° / 1922 m Dir: West Slow travel • Fluke • Breach	
	15:20:00 PDT	Blow	
	22:20-GMT	127° / 946 m Dir: West Slow travel	
	15:25:00 PDT	Blow	
	22:25-GMT	160° / 678 m Dir: West Slow travel	
	15:30:00 PDT	Body	
	22:30-GMT	216° / 539 m Dir: West Slow travel	
	15:41:00 PDT	Body	Inside /
	22:41-GMT	281° / 778 m Dir: West Slow travel	Inside
Sighting Number	23	Poor - 3	Er Total 2 — 1 Calf at sighting
Images: 5114-5137	15:27:00 PDT	— / Blow	
	22:27-GMT	130° / 827 m Dir: West Slow travel	
		<i>outside slip stream. few sightings of pair- saw both arch twice- went around kelp at Devereux and Sands- through buoys with many boats inside</i>	
	15:32:00 PDT	Body	
	22:32-GMT	162° / 600 m Dir: West Slow travel	
	15:37:00 PDT	Blow	
	22:37-GMT	101° / 447 m Dir: West Slow travel	
	15:42:00 PDT	Blow	Inside /
	22:42-GMT	269° / 735 m Dir: West Slow travel	Through
Sighting Number	27	Poor - 3	Er Total 2 — 1 Calf at sighting
Images: 5140-5188	16:10:00 PDT	— / Blow	
	23:10-GMT	101° / 3088 m Dir: West Slow travel	
	16:14:00 PDT	Blow	
	23:14-GMT	104° / 3088 m Dir: West Slow travel	
	16:22:00 PDT	Blow	
	23:22-GMT	106° / 2260 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	16:35:00 PDT	Blow	
	23:35-GMT	115° / 1331 m Dir: West Slow travel	
	16:41:00 PDT	Blow	
	23:41-GMT	133° / 778 m Dir: West Slow travel	
		<i>outside slip stream</i>	
	16:50:00 PDT	Blow	nd / nd
	23:50-GMT	196° / 600 m Dir: West Slow travel	

May 01 Total 12 Calves 6
Day 79 of 98

Er Gray whale (northbound)

Sighting Number	Fair - 1	Er Total 6 — 3 Calves at sighting
Images: 5202-5412	12:08:00 PDT	— / Body
	19:08-GMT	99° / 2749 m Dir: West Slow travel
		<i>By campus point the pairs were physically separated and were playing. Furthest pair to the north had the calf on right side. Two calves were right next to each other at one point. Through the slip stream, the lead group had the calf on the left, the middle group had the calf on the right, and the tail group was not determined. The pairs moved faster once through the slip stream, still appearing to be following one another. The pairs went inside the buoys.</i>
	12:17:00 PDT	Blow
	19:17-GMT	102° / 2749 m Dir: West Slow travel
	12:25:00 PDT	Blow
	19:25-GMT	104° / 2749 m Dir: West Slow travel
	12:30:00 PDT	Blow
	19:30-GMT	106° / 1674 m Dir: West Slow travel
	12:39:00 PDT	Blow
	19:39-GMT	108° / 827 m Dir: West Slow travel
	12:43:00 PDT	Blow
	19:43-GMT	122° / 600 m Dir: West Slow travel
	12:45:00 PDT	Blow
	19:45-GMT	128° / 489 m Dir: West Moderate travel
		<i>traveled through slipstream</i>
	12:49:00 PDT	Body
	19:49-GMT	172° / 356 m Dir: West Moderate travel
		<i>3 pairs separated by 1 whale length</i>
	12:53:00 PDT	Body
	19:53-GMT	242° / 356 m Dir: West Slow travel
	12:56:00 PDT	Blow
	19:56-GMT	274° / 528 m Dir: West Slow travel
		<i>traveling inside group of oil services, boats at buoys near shore</i>
	12:59:00 PDT	Body
	19:59-GMT	287° / 778 m Dir: West Slow travel
		Inside / Inside
Sighting Number	Fair - 1	Er Total 2 — 1 Calf at sighting
Images: 5422-5491	13:12:00 PDT	— / Blow
	20:12-GMT	106° / 3088 m Dir: West Slow travel
		<i>Pair traveling slowly westward outside of kelp. Calf kept close to mother. The pair traveled outside buoys but inside Holly</i>
	13:18:00 PDT	Body
	20:18-GMT	109° / 2749 m Dir: West Slow travel

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:32:00 PDT	Blow	
	20:32-GMT	124° / 1483 m Dir: West Slow travel	
	13:35:00 PDT	Body	
	20:35-GMT	131° / 1483 m Dir: West Slow travel	
	13:41:00 PDT	Blow	
	20:41-GMT	154° / 696 m Dir: West Slow travel	
	13:42:00 PDT	Body	
	20:42-GMT	159° / 696 m Dir: West Slow travel	
	13:46:00 PDT	Blow	
	20:46-GMT	187° / 661 m Dir: West Slow travel	
	13:50:00 PDT	Blow	Inside /
	20:50-GMT	224° / 778 m Dir: West Slow travel	Outside
Sighting Number	17	Fair - 1	Er Total 2 — 1 Calf at sighting
Images: 5510-5532	15:47:00 PDT	— / Blow	
	22:47-GMT	107° / 1922 m Dir: West Slow travel	
	<i>Calf and cow pair traveling west at a very slow pace and surfaced frequently. Pair traveled outside of kelp and just outside slip stream.</i>		
	15:53:00 PDT	Blow	
	22:53-GMT	109° / 1483 m Dir: West Slow travel	
	15:57:00 PDT	Blow	
	22:57-GMT	116° / 913 m Dir: West Slow travel	
	16:01:00 PDT	Blow	
	23:01-GMT	137° / 678 m Dir: West Slow travel	
	<i>outside slip stream</i>		
	16:08:00 PDT	Blow	
	23:08-GMT	220° / 550 m Dir: West Slow travel	
	16:12:00 PDT	Blow	Inside /
	23:12-GMT	258° / 678 m Dir: West Slow travel	Inside
Sighting Number	19	Fair - 1	Er Total 2 — 1 Calf at sighting
Images: 5545-5614	16:13:00 PDT	— / Blow	
	23:13-GMT	104° / 2749 m Dir: West Slow travel	
	<i>Calf/cow pair traveling slowly with frequent surfacing, and blow. Calf stayed close to cow on right flank, they traveled outside of kelp and just outside of slip stream.</i>		
	16:19:00 PDT	Blow	
	23:19-GMT	107° / 2749 m Dir: West Slow travel	
	16:23:00 PDT	Blow	
	23:23-GMT	109° / 1483 m Dir: West Slow travel	
	16:25:00 PDT	Blow	
	23:25-GMT	112° / 1483 m Dir: West Slow travel	
	16:26:00 PDT	Blow	
	23:26-GMT	114° / 1106 m Dir: West Slow travel	
	16:29:00 PDT	Blow	
	23:29-GMT	126° / 913 m Dir: West Slow travel	
	<i>calf on inside flank</i>		

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	16:33:00 PDT	Body	
	23:33-GMT	147° / 678 m Dir: West Slow travel	
	<i>outside slip stream</i>		
	16:36:00 PDT	Body	
	23:36-GMT	164° / 539 m Dir: West Slow travel	
	16:37:00 PDT	Body	
	23:37-GMT	184° / 412 m Dir: West Slow travel	
	<i>2 bodies, calf on flank side</i>		
	16:40:00 PDT	Body	Inside / nd
	23:40-GMT	246° / 539 m Dir: West Slow travel	
<hr/>			
May 02	Total 15 Calves 7	Er Gray whale (northbound)	
Day 80 of 98			
Sighting Number	01 Fair - 1	Er Total 1 — 0 Calves at sighting	
<i>Images: 5616-5617</i>	8:47:00 PDT	— / Body	
	15:47-GMT	238° / 366 m Dir: West Slow travel	
	<i>sighting as day started (early), highly suspect cow calf pair</i>		
	8:48:00 PDT	Blow	Inside / nd
	15:48-GMT	255° / 412 m Dir: West Slow travel	
Sighting Number	09 Fair - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 5629-5658</i>	10:46:00 PDT	— / Blow	
	17:46-GMT	114° / 1922 m Dir: West Slow travel	
	<i>Frequent surfacing past Counter Point, calf swam at surface- V#11 carefully drove in whales path- no surfaces after boat interaction- disappeared.</i>		
	10:49:00 PDT	Blow	
	17:49-GMT	119° / 1674 m Dir: West Slow travel	
	10:54:00 PDT	Blow	
	17:54-GMT	133° / 1106 m Dir: West Slow travel	
	10:56:00 PDT	Blow	
	17:56-GMT	152° / 827 m Dir: West Slow travel	
	10:57:00 PDT	Body	
	17:57-GMT	155° / 827 m Dir: West Slow travel	
	10:58:00 PDT	Body	
	17:58-GMT	159° / 778 m Dir: West Slow travel	
	10:59:00 PDT	Blow	
	17:59-GMT	165° / 696 m Dir: West Slow travel	
	11:01:00 PDT	Body	Inside / nd
	18:01-GMT	188° / 696 m Dir: West Slow travel	
Sighting Number	13 Good - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 5665-5706</i>	11:37:00 PDT	— / Body	
	18:37-GMT	102° / 2749 m Dir: West Slow travel • Spyhop	
	<i>Frequent rostrum-first surfacing east of Counter Point, few calf surfaces in front of Counter Point, saw first at Campus Point, both in kelp- both put their head up. Headed outside where buoys were. Work with crane and other boats going on.</i>		
	11:40:00 PDT	Body	
	18:40-GMT	103° / 2260 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Time			
11:44:00 PDT	Body		
18:44-GMT	104° / 2749 m Dir: West	Slow travel • Spyhop	
11:45:00 PDT	Body		
18:45-GMT	105° / 2260 m Dir: West	Slow travel • Spyhop	
11:48:00 PDT	Blow		
18:48-GMT	106° / 1674 m Dir: West	Slow travel	
11:50:00 PDT	Blow		
18:50-GMT	107° / 1674 m Dir: West	Slow travel	
11:54:00 PDT	Blow		
18:54-GMT	111° / 1483 m Dir: West	Slow travel	
11:57:00 PDT	Body		
18:57-GMT	115° / 1106 m Dir: West	Slow travel	
12:00:00 PDT	Blow		
19:00-GMT	120° / 946 m Dir: West	Slow travel	
12:04:00 PDT	Body		
19:04-GMT	136° / 827 m Dir: West	Slow travel	
12:06:00 PDT	Body		
19:06-GMT	152° / 600 m Dir: West	Slow travel	
12:08:00 PDT	Body		
19:08-GMT	170° / 600 m Dir: West	Slow travel	
12:09:00 PDT	Body		
19:09-GMT	179° / 528 m Dir: West	Slow travel	
12:10:00 PDT	Body		
19:10-GMT	200° / 471 m Dir: West	Slow travel	
12:13:00 PDT	Body		
19:13-GMT	233° / 550 m Dir: West	Slow travel	
12:18:00 PDT	Body		Inside /
19:18-GMT	249° / 1106 m Dir: West	Slow travel	Outside
Sighting Number	16 Good - 3	Er Total 2 — 1 Calf at sighting	
Images: 5712-5733	13:00:00 PDT	— / Blow	
	20:00-GMT	110° / 1483 m Dir: West	Slow travel
		<i>Outside slip stream, infrequent surfacing- long down times,</i>	
	13:05:00 PDT	Blow	
	20:05-GMT	112° / 1483 m Dir: West	Slow travel
	13:09:00 PDT	Blow	
	20:09-GMT	122° / 827 m Dir: West	Slow travel
	13:15:00 PDT	Blow	
	20:15-GMT	160° / 600 m Dir: West	Slow travel
		<i>outside slipstream</i>	
	13:16:00 PDT	Blow	
	20:16-GMT	170° / 600 m Dir: West	Slow travel
	13:22:00 PDT	Blow	Inside /
	20:22-GMT	245° / 574 m Dir: West	Inside

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	17 Good - 3	Er Total 2 — 1 Calf at sighting	
Images: 5735-5798	13:28:00 PDT	— / Blow	
	20:28-GMT	109° / 778 m Dir: West Slow travel	
	<i>Lengthened surfacing, frequent surfacing in front of point, cow swam at surface, late surface past buoys.</i>		
	13:31:00 PDT	Body	
	20:31-GMT	114° / 778 m Dir: West Slow travel	
	13:35:00 PDT	Blow	
	20:35-GMT	127° / 440 m Dir: West Slow travel	
	13:37:00 PDT	Body	
	20:37-GMT	156° / 356 m Dir: West Slow travel	
	13:38:00 PDT	ni	
	20:38-GMT	166° / 356 m Dir: West Slow travel	
	13:39:00 PDT	Body	
	20:39-GMT	174° / 356 m Dir: West Slow travel	
	13:40:00 PDT	Body	
	20:40-GMT	189° / 347 m Dir: West Slow travel	
	13:40:00 PDT	Body	
	20:40-GMT	199° / 347 m Dir: West Slow travel	
	13:41:00 PDT	Body	
	20:41-GMT	219° / 253 m Dir: West Slow travel	
	13:43:00 PDT	Blow	
	20:43-GMT	252° / 600 m Dir: West Slow travel	
	13:46:00 PDT	Body	
	20:46-GMT	281° / 696 m Dir: West Slow travel	
			Inside / Inside
Sighting Number	18 Good - 3	Er Total 4 — 2 Calves at sighting	
Images: 5815-6059	14:17:00 PDT	— / Blow	
	21:17-GMT	101° / 3088 m Dir: West Slow travel	
	<i>Through slip stream, group, map on back of actual calf sheet: 17-18-20 ... Images 5815-6059 mixed all three.</i>		
	14:19:00 PDT	Blow	
	21:19-GMT	103° / 2749 m Dir: West Slow travel	
	14:24:00 PDT	Blow	
	21:24-GMT	105° / 2260 m Dir: West Slow travel	
	14:31:00 PDT	Blow	
	21:31-GMT	108° / 2260 m Dir: West Slow travel	
	14:34:00 PDT	Blow	
	21:34-GMT	109° / 1483 m Dir: West Slow travel	
	14:37:00 PDT	Blow	
	21:37-GMT	109° / 1483 m Dir: West Slow travel	
	14:40:00 PDT	Blow	
	21:40-GMT	109° / 1208 m Dir: West Slow travel	
	14:49:00 PDT	Blow	
	21:49-GMT	108° / 1106 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	14:50:00 PDT	Blow	
	21:50-GMT	114° / 1331 m Dir: West Slow travel	
	14:54:00 PDT	Blow	
	21:54-GMT	120° / 778 m Dir: West Slow travel	
	14:56:00 PDT	Blow	
	21:56-GMT	132° / 661 m Dir: West Slow travel	
	15:00:00 PDT	Body	
	22:00-GMT	143° / 600 m Dir: West Slow travel	
	15:03:00 PDT	Blow	
	22:03-GMT	128° / 600 m Dir: West Slow travel	
	15:06:00 PDT	Blow	
	22:06-GMT	164° / 356 m Dir: West Slow travel	
	15:09:00 PDT	Blow	
	22:09-GMT	189° / 356 m Dir: West Slow travel • Fluke • Bubbles seen	
	15:11:00 PDT	Blow	
	22:11-GMT	199° / 314 m Dir: West Slow travel	
	15:14:00 PDT	Body	
	22:14-GMT	209° / 322 m Dir: West Slow travel	
	15:16:00 PDT	Body	
	22:16-GMT	229° / 314 m Dir: West Slow travel	
	15:19:00 PDT	Body	Inside /
	22:19-GMT	264° / 550 m Dir: West Slow travel	Inside
Sighting Number	20 Good - 3	Er Total 2 — 1 Calf at sighting	
<i>Images: 5815-6059</i>	14:31:00 PDT	— / Blow	
	21:31-GMT	106° / 2260 m Dir: West Slow travel	
		<i>Pair playing in kelp, outside of slip stream</i>	
	14:33:00 PDT	Blow	
	21:33-GMT	106° / 1674 m Dir: West Slow travel	
	14:37:00 PDT	Blow	
	21:37-GMT	106° / 1674 m Dir: West Slow travel	
	14:38:00 PDT	Blow	
	21:38-GMT	106° / 1483 m Dir: West Slow travel	
	14:42:00 PDT	Blow	
	21:42-GMT	106° / 1483 m Dir: West Slow travel	
	14:44:00 PDT	Blow	
	21:44-GMT	106° / 1403 m Dir: West Slow travel	
	14:46:00 PDT	Blow	
	21:46-GMT	107° / 1106 m Dir: West Slow travel	
	14:49:00 PDT	Blow	
	21:49-GMT	107° / 1106 m Dir: West Slow travel	
	14:54:00 PDT	Blow	
	21:54-GMT	113° / 883 m Dir: West Slow travel	
	14:57:00 PDT	Blow	
	21:57-GMT	118° / 600 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	14:59:00 PDT	Blow	
	21:59-GMT	125° / 600 m Dir: West Slow travel	
	15:02:00 PDT	Body	
	22:02-GMT	134° / 489 m Dir: West Slow travel	
	15:05:00 PDT	Body	
	22:05-GMT	154° / 412 m Dir: West Slow travel	
	15:06:00 PDT	Body	
	22:06-GMT	174° / 412 m Dir: West Slow travel • Rolling	
	15:07:00 PDT	Body	
	22:07-GMT	178° / 356 m Dir: West Slow travel	
	15:08:00 PDT	Body	
	22:08-GMT	184° / 356 m Dir: West Slow travel	
	15:09:00 PDT	Body	
	22:09-GMT	194° / 314 m Dir: West Slow travel • Fluke	
	15:10:00 PDT	Body	
	22:10-GMT	224° / 314 m Dir: West Slow travel	
	15:12:00 PDT	Body	
	22:12-GMT	239° / 314 m Dir: West Slow travel	
	15:16:00 PDT	Body	
	22:16-GMT	253° / 412 m Dir: West Slow travel	
	15:18:00 PDT	Blow	
	22:18-GMT	259° / 489 m Dir: West Slow travel	
	15:20:00 PDT	Body	Inside /
	22:20-GMT	282° / 629 m Dir: West Slow travel	Inside

May 03 Total 16 Calves 8 Er Gray whale (northbound)

Day 81 of 98

Sighting Number 03 Fair - 1 Er Total 2 — 1 Calf at sighting

Images: 6071-6105

10:26:00 PDT Surface
17:26-GMT 117° / 1331 m Dir: West Slow travel

For awhile, we were only seeing the cow surface. Finally the calf blew and we saw obvious size difference. Michael saw the calf surface numerous times off Sands beach, but they only surfaced together once. Because calf was on the ocean side- not blowing- it was difficult to see calf.

10:31:00 PDT Body
17:31-GMT 135° / 778 m Dir: West Slow travel
outside of slip stream

10:33:00 PDT Blow
17:33-GMT 157° / 600 m Dir: West Slow travel
first and only blow

10:35:00 PDT Body
17:35-GMT 177° / 489 m Dir: West Slow travel

10:39:00 PDT Body
17:39-GMT 231° / 412 m Dir: West Slow travel

10:40:00 PDT Body
17:40-GMT 251° / 574 m Dir: West Slow travel

10:43:00 PDT Body Inside /
17:43-GMT 270° / 778 m Dir: West Slow travel Inside

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	04 Fair - 1	Er Total 4 — 2 Calves at sighting	
<i>Images: 6133-6379</i>	11:10:00 PDT	— / Blow	
	18:10-GMT	98° / 2749 m Dir: West Slow travel	
	<i>We saw simultaneous blows initially out by campus point, surfacing and blowing. They traveled through slip stream and we clearly saw 4 bodies. They were all very close making it difficult to distinguish calf to cow proximity's. One calf was definitely on shore side. There was a lot of rolling, bubble blasts and flukes.</i>		
	11:18:00 PDT	Blow	
	18:18-GMT	97° / 2749 m Dir: West	
	11:23:00 PDT	Body	
	18:23-GMT	99° / 2260 m Dir: West Slow travel	
	11:28:00 PDT	Blow	
	18:28-GMT	102° / 2260 m Dir: West Slow travel	
	11:37:00 PDT	Body	
	18:37-GMT	104° / 1674 m Dir: West Spyhop	
	11:43:00 PDT	Blow	
	18:43-GMT	105° / 1922 m Dir: West	
	11:48:00 PDT	Body	
	18:48-GMT	104° / 1483 m Dir: West Slow travel	
	11:53:00 PDT	Body	
	18:53-GMT	104° / 1106 m Dir: West Slow travel	
	11:56:00 PDT	Blow	
	18:56-GMT	107° / 946 m Dir: West Slow travel • Spyhop	
	12:05:00 PDT	Body	
	19:05-GMT	123° / 600 m Dir: West Slow travel	
	12:09:00 PDT	Body	
	19:09-GMT	139° / 412 m Dir: West Slow travel	
	12:15:00 PDT	Body	
	19:15-GMT	175° / 280 m Dir: West Slow travel	
	12:18:00 PDT	Body	
	19:18-GMT	208° / 244 m Dir: West Slow travel	
	12:22:00 PDT	Body	
	19:22-GMT	229° / 253 m Dir: West Slow travel • Rolling • Fluke	
	12:25:00 PDT	Body	
	19:25-GMT	244° / 314 m Dir: West Slow travel • Bubbles seen	
	12:30:00 PDT	Body	
	19:30-GMT	258° / 426 m Dir: West Slow travel	
			Inside / Inside
	<i>went inside kelp at sands</i>		

Sighting Number	06 Fair - 1	Er Total 4 — 2 Calves at sighting	
<i>Images: 6382-6500</i>	11:50:00 PDT	— / Blow	
	18:50-GMT	101° / 3528 m Dir: West Slow travel	
	<i>we saw simultaneous blows around Campus Point, they spent a lot of time near Campus Point, following a similar path of the earlier pairs, when they were in front of us we could see multiple bodies. There was also a lot of rolling, four breaches, spy hops, flukes, bubble blasting.</i>		
	11:54:00 PDT	Blow	
	18:54-GMT	103° / 2749 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	11:59:00 PDT	Body	
	18:59-GMT	105° / 2260 m Dir: West Slow travel	
	12:04:00 PDT	Body	
	19:04-GMT	107° / 1922 m Dir: West Slow travel • Spyhop	
	12:17:00 PDT	Body	
	19:17-GMT	106° / 1674 m Dir: West Slow travel	
	12:29:00 PDT	Blow	
	19:29-GMT	111° / 827 m Dir: West Slow travel • Rolling	
	12:33:00 PDT	Blow	
	19:33-GMT	129° / 528 m Dir: West Slow travel • Fluke • Rolling • Spyhop	
	12:37:00 PDT	Body	
	19:37-GMT	154° / 356 m Dir: West Slow travel • Rolling • Bubbles seen	
		<i>through slip stream</i>	
	12:39:00 PDT	Body	
	19:39-GMT	174° / 314 m Dir: West Slow travel • Rolling	
	12:41:00 PDT	Body	
	19:41-GMT	199° / 322 m Dir: West Slow travel • Rolling • Breach	
		<i>breached twice</i>	
	12:45:00 PDT	Body	
	19:45-GMT	255° / 489 m Dir: West Slow travel • Breach	
	12:48:00 PDT	Body	Inside /
	19:48-GMT	277° / 508 m Dir: West Slow travel	Inside
Sighting Number	08	Good - 3	<i>Er</i> Total 2 — 1 Calf at sighting
Images: 6509-6554	13:32:00 PDT	— / Blow	
	20:32-GMT	106° / 2749 m Dir: West Slow travel	
		<i>outside of slip stream. Traveled pretty far out before coming to the point. At 1341 there were some rolling, and a spy hop by the calf. Once they were along the kelp they traveled at a moderate pace and the calf didnt come up fully to the surface. Saw the calf body again at 1405, they traveled outside of slip stream.</i>	
	13:35:00 PDT	Blow	
	20:35-GMT	109° / 2260 m Dir: West Slow travel	
	13:41:00 PDT	Body	
	20:41-GMT	113° / 1922 m Dir: West Slow travel • Rolling • Spyhop	
	13:45:00 PDT	Blow	
	20:45-GMT	116° / 1674 m Dir: West Slow travel	
	13:46:00 PDT	Blow	
	20:46-GMT	116° / 1403 m Dir: West Slow travel • Rolling	
	13:47:00 PDT	Blow	
	20:47-GMT	121° / 1403 m Dir: West Slow travel	
	13:51:00 PDT	Body	
	20:51-GMT	136° / 778 m Dir: West Slow travel	
	13:54:00 PDT	Blow	
	20:54-GMT	160° / 661 m Dir: West Slow travel	
	13:55:00 PDT	Body	
	20:55-GMT	164° / 3528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Time			
13:56:00 PDT	Body		
20:56-GMT	174° / 550 m Dir: West	Slow travel	
13:58:00 PDT	Body		
20:58-GMT	188° / 528 m Dir: West	Slow travel	
13:59:00 PDT	Body		
20:59-GMT	208° / 528 m Dir: West	Slow travel	
14:02:00 PDT	Body		
21:02-GMT	244° / 678 m Dir: West	Slow travel	
14:03:00 PDT	Body		
21:03-GMT	249° / 661 m Dir: West	Slow travel	
14:05:00 PDT	Body		Inside /
21:05-GMT	261° / 778 m Dir: West	Slow travel	Inside
Sighting Number	10 Fair - 3	Er Total 2 — 1 Calf at sighting	
Images: 6556-6613	14:55:00 PDT	— / Blow	
	21:55-GMT	101° / 2749 m Dir: West	Slow travel
	<i>The two whales traveled along the outside of the kelp. They came up frequently as they traveled along the kelp. The calf traveled on the flank of cow, they traveled outside of the slip stream and outside kelp at Sands before heading inside were the buoys were.</i>		
	15:01:00 PDT	Blow	
	22:01-GMT	104° / 2260 m Dir: West	Slow travel
	15:09:00 PDT	Blow	
	22:09-GMT	107° / 1922 m Dir: West	Slow travel
	15:12:00 PDT	Blow	
	22:12-GMT	108° / 1674 m Dir: West	Slow travel
	15:17:00 PDT	Body	
	22:17-GMT	110° / 1331 m Dir: West	Slow travel
	15:21:00 PDT	Blow	
	22:21-GMT	116° / 827 m Dir: West	Slow travel
	15:27:00 PDT	Body	
	22:27-GMT	137° / 778 m Dir: West	Slow travel
	<i>outside of slip stream</i>		
	15:28:00 PDT	Body	
	22:28-GMT	146° / 661 m Dir: West	Slow travel
	15:29:00 PDT	Body	
	22:29-GMT	149° / 629 m Dir: West	Slow travel
	15:29:00 PDT	Body	
	22:29-GMT	158° / 574 m Dir: West	Slow travel
	15:32:00 PDT	Body	
	22:32-GMT	175° / 471 m Dir: West	Slow travel
	15:35:00 PDT	Body	
	22:35-GMT	219° / 338 m Dir: West	Slow travel
	15:37:00 PDT	Body	
	22:37-GMT	253° / 366 m Dir: West	Slow travel
	15:39:00 PDT	Body	Inside /
	22:39-GMT	264° / 550 m Dir: West	Slow travel Inside

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number 11	Fair - 2	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 6617-6659</i>	16:37:00 PDT	— / Blow	
	23:37-GMT	100° / 2749 m Dir: West Slow travel	
	16:42:00 PDT	Blow	
	23:42-GMT	101° / 2749 m Dir: West Slow travel	
	16:43:00 PDT	Blow	
	23:43-GMT	101° / 2749 m Dir: West Slow travel	
	16:48:00 PDT	Blow	
	23:48-GMT	104° / 1922 m Dir: West Slow travel	
	16:50:00 PDT	Blow	
	23:50-GMT	105° / 1922 m Dir: West Slow travel	
	16:54:00 PDT	Blow	
	23:54-GMT	108° / 1922 m Dir: West Slow travel	
	16:59:00 PDT	Blow	
	23:59-GMT	108° / 1331 m Dir: West Slow travel	
	17:03:00 PDT	Blow	
	0:03; 5/4/2012-GMT	110° / 1106 m Dir: West Slow travel	
	17:03:00 PDT	Blow	
	0:03; 5/4/2012-GMT	110° / 1106 m Dir: West Slow travel	
	17:04:00 PDT	ni	
	0:04; 5/4/2012-GMT	127° / 528 m Dir: West Slow travel	
		<i>through slip stream</i>	
	17:05:00 PDT	Blow	
	0:05; 5/4/2012-GMT	115° / 778 m Dir: West Slow travel	
	17:08:00 PDT	Body	
	0:08; 5/4/2012-GMT	129° / 600 m Dir: West Slow travel	
	17:21:00 PDT	Blow	Inside /
	0:21; 5/4/2012-GMT	279° / 735 m Dir: West Slow travel	Inside
May 04	Total 29 Calves 14	<i>Er</i> Gray whale (northbound)	
Day 82 of 98			
Sighting Number 01	Fair - 0	<i>Er</i> Total 1 — 0 Calves at sighting	
<i>Images: 6660</i>	8:53:00 PDT	— / Body	
	15:53-GMT	251° / 696 m Dir: West Slow travel	
		<i>Sighted as setting up. Started Count early. Only saw one whale. Likely a cow calf pair.</i>	
Sighting Number 03	Fair - 0	<i>Er</i> Total 4 — 2 Calves at sighting	
<i>Images: 6702-7006</i>	9:08:00 PDT	— / Blow	
	16:08-GMT	104° / 2260 m Dir: West Slow travel	
		<i>images for S#3 and #4 together</i>	
	9:12:00 PDT	Blow	
	16:12-GMT	107° / 2260 m Dir: West Slow travel	
	9:20:00 PDT	Blow	
	16:20-GMT	108° / 1674 m Dir: West	
	9:23:00 PDT	Blow	
	16:23-GMT	110° / 1020 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	Time	CueTip / Saw	Holly / Buoys
		9:29:00 PDT	Blow	
		16:29-GMT	126° / 600 m Dir: West Slow travel	
		9:31:00 PDT	Blow	Inside /
		16:31-GMT	140° / 574 m Dir: West Slow travel • Rolling • Fluke	Inside
			<i>calf fluke and flippers</i>	
Sighting Number	04	Fair - 0	Er Total 2 — 1 Calf at sighting	
	<i>Images: 6702-7006</i>	9:10:00 PDT	— / Blow	
		16:10-GMT	101° / 3528 m Dir: West Slow travel	
			<i>images for S#3 and #4 together</i>	
		9:15:00 PDT	Blow	
		16:15-GMT	104° / 2749 m Dir: West Slow travel	
		9:21:00 PDT	Blow	
		16:21-GMT	105° / 2260 m Dir: West Slow travel	
		9:25:00 PDT	Blow	
		16:25-GMT	110° / 1674 m Dir: West Slow travel	
		9:33:00 PDT	Body	
		16:33-GMT	124° / 600 m Dir: West Slow travel	
		9:36:00 PDT	Body	
		16:36-GMT	159° / 412 m Dir: West Slow travel	
			<i>joined group 3</i>	
		9:38:00 PDT	Body	
		16:38-GMT	212° / 314 m Dir: No direction Slow travel • Rolling • Fluke	
			<i>rolling</i>	
		9:42:00 PDT	Body	
		16:42-GMT	203° / 300 m Dir: No direction Slow travel • Rolling • Fluke	
		9:48:00 PDT	Body	
		16:48-GMT	265° / 426 m Dir: No direction Slow travel	
			<i>paddle boarder came to whales</i>	
		9:54:00 PDT	Blow	Inside /
		16:54-GMT	282° / 735 m Dir: No direction Slow travel	Inside
Sighting Number	05	Fair - 0	Er Total 2 — 1 Calf at sighting	
	<i>Images: 6662-6700</i>	9:17:00 PDT	— / Body	
		16:17-GMT	134° / 412 m Dir: West Slow travel	
			<i>through slip stream</i>	
		9:19:00 PDT	Body	
		16:19-GMT	164° / 412 m Dir: West Slow travel	
		9:22:00 PDT	Body	
		16:22-GMT	219° / 356 m Dir: West Slow travel	
		9:28:00 PDT	Body	Inside /
		16:28-GMT	276° / 735 m Dir: West Slow travel	Inside
Sighting Number	16	Good - 1	Er Total 2 — 1 Calf at sighting	
	<i>Images: 7020-7070</i>	12:21:00 PDT	— / Blow	
		19:21-GMT	107° / 1922 m Dir: West Slow travel	
			<i>We could see simultaneous blows early on. Michael identified a large white spot on calf making it clearly distinguishable. The pair stayed close with calf on shore side.</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	12:28:00 PDT	Blow	
	19:28-GMT	108° / 1483 m Dir: West Slow travel	
	12:33:00 PDT	Blow	
	19:33-GMT	116° / 778 m Dir: West Slow travel	
	12:39:00 PDT	Body	
	19:39-GMT	157° / 412 m Dir: West Slow travel	
	12:44:00 PDT	Blow	Inside /
	19:44-GMT	252° / 388 m Dir: West Slow travel	Inside
Sighting Number	18 Good - 1	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 7117-7152</i>	12:44:00 PDT	— / Blow	
	19:44-GMT	106° / 2260 m Dir: West Slow travel	
		<i>through slip stream</i>	
	12:56:00 PDT	Blow	
	19:56-GMT	106° / 1922 m Dir: West Slow travel	
	13:07:00 PDT	Blow	
	20:07-GMT	118° / 1106 m Dir: West Slow travel	
	13:07:00 PDT	Body	
	20:07-GMT	117° / 883 m Dir: West Slow travel	
	13:12:00 PDT	Body	
	20:12-GMT	119° / 661 m Dir: West Slow travel	
	13:12:00 PDT	Body	
	20:12-GMT	197° / 412 m Dir: West Slow travel	
	13:13:00 PDT	Body	
	20:13-GMT	249° / 528 m Dir: West Slow travel	
	13:14:00 PDT	Blow	
	20:14-GMT	137° / 440 m Dir: West Slow travel	
	13:16:00 PDT	Body	
	20:16-GMT	164° / 366 m Dir: West Slow travel	
	13:21:00 PDT	Body	
	20:21-GMT	229° / 356 m Dir: West Slow travel	
	13:22:00 PDT	Blow	
	20:22-GMT	248° / 412 m Dir: West Slow travel	
	13:27:00 PDT	Body	Inside /
	20:27-GMT	278° / 778 m Dir: West Slow travel	Inside
Sighting Number	19 Good - 1	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 7072-7115</i>	12:45:00 PDT	— / Blow	
	19:45-GMT	108° / 1674 m Dir: West Slow travel	
		<i>outside slip stream</i>	
	12:55:00 PDT	Blow	
	19:55-GMT	114° / 1106 m Dir: West Slow travel	
	12:59:00 PDT	Body	
	19:59-GMT	124° / 661 m Dir: West Slow travel	
	13:03:00 PDT	Blow	
	20:03-GMT	144° / 528 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:04:00 PDT	Body	
	20:04-GMT	149° / 528 m Dir: West Slow travel	
	13:05:00 PDT	Body	
	20:05-GMT	159° / 489 m Dir: West Slow travel	
	13:12:00 PDT	Body	Inside /
	20:12-GMT	239° / 440 m Dir: West Slow travel	Inside
Sighting Number	20 Good - 1	Er Total 2 — 1 Calf at sighting	
Images: 7155-7180	13:25:00 PDT	— / Blow	
	20:25-GMT	120° / 883 m Dir: West Slow travel	
		<i>outside of slip stream</i>	
	13:28:00 PDT	Body	
	20:28-GMT	130° / 883 m Dir: West Slow travel	
	13:30:00 PDT	Blow	
	20:30-GMT	148° / 661 m Dir: West Slow travel	
	13:33:00 PDT	Body	
	20:33-GMT	176° / 600 m Dir: West Slow travel	
	13:34:00 PDT	Blow	
	20:34-GMT	184° / 489 m Dir: West Slow travel	
	13:36:00 PDT	Blow	
	20:36-GMT	219° / 528 m Dir: West Slow travel	
	13:37:00 PDT	Blow	
	20:37-GMT	225° / 528 m Dir: West Slow travel	
	13:41:00 PDT	Blow	Inside /
	20:41-GMT	264° / 778 m Dir: West Slow travel	Inside
Sighting Number	21 Good - 1	Er Total 2 — 1 Calf at sighting	
Images: 7182-7235	13:36:00 PDT	— / Blow	
	20:36-GMT	120° / 696 m Dir: West Slow travel	
		<i>inside slip stream</i>	
	13:40:00 PDT	Blow	
	20:40-GMT	139° / 489 m Dir: West Slow travel	
	13:42:00 PDT	Blow	
	20:42-GMT	151° / 388 m Dir: West Slow travel	
	13:42:00 PDT	Blow	
	20:42-GMT	162° / 366 m Dir: West Slow travel	
	13:44:00 PDT	Blow	
	20:44-GMT	194° / 356 m Dir: West Slow travel	
	13:46:00 PDT	Blow	
	20:46-GMT	222° / 356 m Dir: West Slow travel	
	13:49:00 PDT	Body	
	20:49-GMT	241° / 440 m Dir: West Slow travel	
	13:51:00 PDT	Blow	
	20:51-GMT	259° / 539 m Dir: West Slow travel	
	13:54:00 PDT	Body	Inside / nd
	20:54-GMT	276° / 678 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	22 Good - 1	Er Total 2 — 1 Calf at sighting	
Images: 7237-7312	14:08:00 PDT	— / Blow	
	21:08-GMT	108° / 1403 m Dir: West Slow travel	
	14:14:00 PDT	Blow	
	21:14-GMT	106° / 946 m Dir: West Slow travel	
	14:15:00 PDT	Blow	
	21:15-GMT	109° / 946 m Dir: West Slow travel	
	14:19:00 PDT	Blow	
	21:19-GMT	121° / 600 m Dir: West Slow travel	
	14:21:00 PDT	Blow	
	21:21-GMT	128° / 489 m Dir: West Slow travel	
	14:25:00 PDT	Blow	
	21:25-GMT	164° / 356 m Dir: West Slow travel	
	14:27:00 PDT	Blow	
	21:27-GMT	179° / 388 m Dir: West Slow travel	
	14:29:00 PDT	Blow	
	21:29-GMT	215° / 377 m Dir: West Slow travel	
	14:30:00 PDT	Blow	
	21:30-GMT	228° / 412 m Dir: West Slow travel	
	14:31:00 PDT	Blow	
	21:31-GMT	253° / 528 m Dir: West Slow travel	
	14:33:00 PDT	Blow	
	21:33-GMT	261° / 550 m Dir: West Slow travel	
			Inside / Inside
Sighting Number	31 Good - 1	Er Total 2 — 1 Calf at sighting	
Images: 7314-7322	15:26:00 PDT	— / Blow	
	22:26-GMT	115° / 1106 m Dir: West Slow travel	
	15:29:00 PDT	Blow	
	22:29-GMT	123° / 661 m Dir: West Slow travel	
	15:31:00 PDT	Blow	
	22:31-GMT	134° / 489 m Dir: West Slow travel	
	15:33:00 PDT	Blow	
	22:33-GMT	177° / 356 m Dir: West Slow travel	
	15:34:00 PDT	Blow	
	22:34-GMT	186° / 366 m Dir: West Slow travel	
	15:40:00 PDT	Body	
	22:40-GMT	256° / 412 m Dir: West Slow travel	
			Inside / Inside
Sighting Number	32 Good - 1	Er Total 2 — 1 Calf at sighting	
Images: 7324-7348	15:50:00 PDT	— / Blow	
	22:50-GMT	102° / 2749 m Dir: West Slow travel	
	15:52:00 PDT	Body	
	22:52-GMT	103° / 2260 m Dir: West Slow travel	
	15:55:00 PDT	Blow	
	22:55-GMT	104° / 2260 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	16:00:00 PDT	Blow	
	23:00-GMT	106° / 1922 m Dir: West Slow travel	
	16:02:00 PDT	Blow	
	23:02-GMT	109° / 1922 m Dir: West Slow travel	
	16:05:00 PDT	Blow	
	23:05-GMT	109° / 1331 m Dir: West Slow travel	
	16:08:00 PDT	Body	
	23:08-GMT	113° / 946 m Dir: West Slow travel	
	16:14:00 PDT	Blow	
	23:14-GMT	139° / 489 m Dir: West Slow travel	
	16:15:00 PDT	Blow	
	23:15-GMT	169° / 356 m Dir: West Slow travel	
	16:19:00 PDT	Blow	
	23:19-GMT	235° / 489 m Dir: West Slow travel	
Sighting Number	33 Good - 1	<i>Er</i>	
	16:20:00 PDT	Blow	Inside /
	23:20-GMT	154° / 455 m Dir: West Slow travel	Inside
Sighting Number	35 Good - 1	<i>Er</i> Total 4 — 2 Calves at sighting	
Images: 7350-7433	16:44:00 PDT	— / Blow	
	23:44-GMT	99° / 3088 m Dir: West Slow travel	
	16:51:00 PDT	Blow	
	23:51-GMT	100° / 2260 m Dir: West Slow travel	
	16:53:00 PDT	Blow	
	23:53-GMT	101° / 2260 m Dir: West Slow travel	
		<i>group split, tracking done off effort</i>	
	17:11:00 PDT	Blow	
	0:11; 5/5/2012-GMT	108° / 1483 m Dir: West Slow travel	
	17:11:00 PDT	Blow	
	0:11; 5/5/2012-GMT	99° / 2260 m Dir: West Slow travel	
		<i>second group</i>	
	17:14:00 PDT	Blow	
	0:14; 5/5/2012-GMT	111° / 946 m Dir: West Slow travel	
	17:15:00 PDT	Blow	
	0:15; 5/5/2012-GMT	112° / 778 m Dir: West Slow travel	
	17:15:00 PDT	Blow	
	0:15; 5/5/2012-GMT	103° / 1922 m Dir: West Slow travel	
		<i>second group</i>	
	17:18:00 PDT	Blow	
	0:18; 5/5/2012-GMT	126° / 600 m Dir: West Slow travel	
	17:21:00 PDT	Blow	
	0:21; 5/5/2012-GMT	154° / 356 m Dir: West Slow travel	
	17:23:00 PDT	Blow	
	0:23; 5/5/2012-GMT	194° / 338 m Dir: West Slow travel	
	17:26:00 PDT	Blow	Inside /
	0:26; 5/5/2012-GMT	226° / 314 m Dir: West Slow travel	Inside

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	17:31:00 PDT	Blow	
	0:31; 5/5/2012-GMT	106° / 1208 m Dir: West Slow travel	
	<i>second group</i>		
	17:35:00 PDT	Blow	
	0:35; 5/5/2012-GMT	112° / 946 m Dir: West Slow travel	
	<i>second group</i>		
	17:40:00 PDT	Blow	
	0:40; 5/5/2012-GMT	126° / 455 m Dir: West Slow travel	
	<i>second group</i>		
	17:41:00 PDT	Blow	
	0:41; 5/5/2012-GMT	134° / 455 m Dir: West Slow travel	
	<i>second group</i>		
	17:44:00 PDT	Blow	
	0:44; 5/5/2012-GMT	196° / 338 m Dir: West Slow travel	
	<i>second group</i>		
	17:46:00 PDT	Blow	Inside /
	0:46; 5/5/2012-GMT	223° / 314 m Dir: West Slow travel	Inside
	<i>second group</i>		

May 05 Total 10 Calves 5 Er Gray whale (northbound)

Day 83 of 98

Sighting Number	Fair - 3	Er Total 2 — 1 Calf at sighting
Images: 7444-7509	9:30:00 PDT	— / Blow
	16:30-GMT	109° / 1020 m Dir: West Slow travel
	<i>through slip stream</i>	
	9:32:00 PDT	Blow
	16:32-GMT	112° / 946 m Dir: West Slow travel
	9:36:00 PDT	Blow
	16:36-GMT	120° / 574 m Dir: West Slow travel • Rolling
	9:38:00 PDT	Blow
	16:38-GMT	135° / 455 m Dir: West Slow travel
	<i>dolphins in front of whales</i>	
9:42:00 PDT	Blow	
16:42-GMT	201° / 322 m Dir: West Slow travel	
9:44:00 PDT	Blow	Inside / nd
16:44-GMT	240° / 400 m Dir: West Slow travel	
<i>disappeared after kelp at Sands</i>		

Sighting Number	Fair - 3	Er Total 2 — 1 Calf at sighting
Images: 7511-7560	10:12:00 PDT	— / Blow
	17:12-GMT	102° / 2749 m Dir: West Slow travel
	<i>through slip stream</i>	
	10:20:00 PDT	Blow
	17:20-GMT	107° / 2260 m Dir: West Slow travel
	10:30:00 PDT	Blow
	17:30-GMT	108° / 946 m Dir: West Slow travel
	10:31:00 PDT	Blow
17:31-GMT	110° / 827 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	10:34:00 PDT	Blow	
	17:34-GMT	124° / 574 m Dir: West Slow travel	
	10:36:00 PDT	Blow	
	17:36-GMT	148° / 400 m Dir: West Slow travel	
	10:38:00 PDT	Blow	
	17:38-GMT	180° / 347 m Dir: West Slow travel	
	10:41:00 PDT	Body	
	17:41-GMT	237° / 388 m Dir: West Slow travel	
	10:46:00 PDT	Blow	Inside /
	17:46-GMT	277° / 471 m Dir: West Slow travel	Inside
Sighting Number	11 Fair - 3	Er Total 2 — 1 Calf at sighting	
Images: 7563-7585	10:58:00 PDT	— / Blow	
	17:58-GMT	105° / 2749 m Dir: West Slow travel	
		<i>through slip stream</i>	
	11:03:00 PDT	Blow	
	18:03-GMT	108° / 2260 m Dir: West Slow travel	
	11:11:00 PDT	Blow	
	18:11-GMT	114° / 1483 m Dir: West Slow travel	
	11:13:00 PDT	Blow	
	18:13-GMT	116° / 1331 m Dir: West Slow travel	
	11:18:00 PDT	Blow	
	18:18-GMT	130° / 827 m Dir: West Slow travel	
	11:19:00 PDT	Blow	
	18:19-GMT	132° / 735 m Dir: West Slow travel	
	11:22:00 PDT	Blow	
	18:22-GMT	157° / 629 m Dir: West Slow travel	
	11:23:00 PDT	Blow	
	18:23-GMT	168° / 574 m Dir: West Slow travel	
	11:27:00 PDT	Body	Inside / nd
	18:27-GMT	205° / 574 m Dir: West Slow travel	
Sighting Number	18 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 7593-7609	13:53:00 PDT	— / Blow	
	20:53-GMT	104° / 3088 m Dir: West Slow travel	
		<i>outside slip stream</i>	
	13:57:00 PDT	Blow	
	20:57-GMT	106° / 2749 m Dir: West Slow travel	
	14:08:00 PDT	Blow	
	21:08-GMT	112° / 1208 m Dir: West Slow travel	
	14:15:00 PDT	Blow	
	21:15-GMT	124° / 778 m Dir: West Slow travel	
	14:19:00 PDT	Blow	
	21:19-GMT	159° / 489 m Dir: West Slow travel	
	14:24:00 PDT	Blow	Inside / nd
	21:24-GMT	226° / 489 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
Sighting Number	25 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 7611-7641	15:59:00 PDT	— / Blow	
	22:59-GMT	101° / 2749 m Dir: West Slow travel	
		<i>through slip stream</i>	
	16:05:00 PDT	Blow	
	23:05-GMT	103° / 2260 m Dir: West Slow travel	
	16:11:00 PDT	Blow	
	23:11-GMT	104° / 2260 m Dir: West Slow travel	
	16:20:00 PDT	Blow	
	23:20-GMT	106° / 1674 m Dir: West Slow travel	
	16:20:00 PDT	Blow	
	23:20-GMT	107° / 1483 m Dir: West Slow travel	
		<i>whales have moved to other side of boat</i>	
	16:24:00 PDT	Blow	
	23:24-GMT	108° / 1208 m Dir: East Slow travel	
	16:33:00 PDT	Blow	
	23:33-GMT	125° / 600 m Dir: West Slow travel	
	16:35:00 PDT	Body	
	23:35-GMT	144° / 412 m Dir: West Slow travel	
	16:40:00 PDT	Blow	
	23:40-GMT	226° / 296 m Dir: West Slow travel	
	16:46:00 PDT	Blow	Inside /
	23:46-GMT	284° / 883 m Dir: West Slow travel	Inside

May 06 Total 18 Calves 9 Er Gray whale (northbound)

Day 84 of 98

Sighting Number	01 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 7644-7688	8:47:00 PDT	— / ni	
	15:47-GMT	135° / 574 m Dir: West Slow travel	
		<i>through slip stream</i>	
	8:56:00 PDT	ni	
	15:56-GMT	256° / 388 m Dir: West Slow travel	
Sighting Number	10 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 7709-7723	10:40:00 PDT	— / Blow	
	17:40-GMT	117° / 1331 m Dir: West Slow travel • Fluke	
		<i>outside of slip stream Tt hasseling Er</i>	
	10:45:00 PDT	Blow	
	17:45-GMT	135° / 678 m Dir: West Slow travel • Fluke	
	10:49:00 PDT	Blow	
	17:49-GMT	174° / 600 m Dir: West Moderate travel • Fluke	
	10:53:00 PDT	Body	
	17:53-GMT	226° / 600 m Dir: West Moderate travel	
	10:55:00 PDT	Blow	Inside / nd
	17:55-GMT	243° / 678 m Dir: West Moderate travel	
		<i>outside slip stream</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
Sighting Number	11 Fair - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 7725-7770</i>	10:57:00 PDT	— / Blow	
	17:57-GMT	137° / 347 m Dir: West Slow travel <i>through slip stream</i>	
	11:00:00 PDT	Blow	
	18:00-GMT	177° / 314 m Dir: West Slow travel	
	11:04:00 PDT	Blow	
	18:04-GMT	247° / 356 m Dir: West Slow travel	
	11:08:00 PDT	Blow	
	18:08-GMT	278° / 778 m Dir: West Moderate travel Inside / Inside	
Sighting Number	12 Fair - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 7772-7795</i>	11:26:00 PDT	— / Blow	
	18:26-GMT	105° / 2260 m Dir: West Slow travel <i>outside slip stream</i>	
	11:29:00 PDT	Blow	
	18:29-GMT	108° / 1922 m Dir: West Slow travel	
	11:32:00 PDT	Blow	
	18:32-GMT	111° / 1674 m Dir: West Slow travel	
	11:35:00 PDT	Blow	
	18:35-GMT	114° / 1403 m Dir: West Slow travel	
	11:41:00 PDT	Blow	
	18:41-GMT	132° / 696 m Dir: West Slow travel	
	11:54:00 PDT	Blow	
	18:54-GMT	266° / 678 m Dir: West Slow travel Inside / Inside	
Sighting Number	13 Fair - 1	Er Total 2 — 1 Calf at sighting	
<i>Images: 7797-7842</i>	11:37:00 PDT	— / Blow	
	18:37-GMT	101° / 3088 m Dir: West Slow travel <i>through slip stream</i>	
	11:55:00 PDT	ni	
	18:55-GMT	106° / 1922 m Dir: West Slow travel	
	12:01:00 PDT	Blow	
	19:01-GMT	104° / 1674 m Dir: West Slow travel	
	12:07:00 PDT	Blow	
	19:07-GMT	112° / 913 m Dir: West Slow travel	
	12:12:00 PDT	ni	
	19:12-GMT	134° / 447 m Dir: West Slow travel	
	12:18:00 PDT	Blow	
	19:18-GMT	266° / 600 m Dir: West Slow travel Inside / Inside	
Sighting Number	14 Fair - 1	Er Total 6 — 3 Calves at sighting	
<i>Images: 7644-8046</i>	11:59:00 PDT	— / Blow	
	18:59-GMT	103° / 2749 m Dir: West Slow travel <i>through slip stream</i>	
	12:01:00 PDT	Blow	
	19:01-GMT	104° / 2260 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	12:06:00 PDT	Blow	
	19:06-GMT	106° / 1922 m Dir: West Slow travel	
	12:21:00 PDT	Blow	
	19:21-GMT	119° / 778 m Dir: West Slow travel	
	12:23:00 PDT	Blow	
	19:23-GMT	124° / 629 m Dir: West Slow travel	
	12:43:00 PDT	Blow	ni / ni
	19:43-GMT	290° / 913 m Dir: No direction Rolling	
		<i>playing</i>	
Sighting Number	26 Fair - 3	<i>Er</i> Total 2 — 1 Calf at sighting	
<i>Images: 8048-8106</i>	16:02:00 PDT	— / Blow	
	23:02-GMT	110° / 1922 m Dir: West Slow travel	
		<i>outside slip stream</i>	
	16:04:00 PDT	Blow	
	23:04-GMT	110° / 1674 m Dir: West Slow travel	
	16:06:00 PDT	Blow	
	23:06-GMT	113° / 1331 m Dir: West Slow travel	
	16:10:00 PDT	Body	
	23:10-GMT	118° / 827 m Dir: West Slow travel	
	16:11:00 PDT	Blow	
	23:11-GMT	124° / 696 m Dir: West Slow travel	
	16:14:00 PDT	Body	
	23:14-GMT	135° / 550 m Dir: West Slow travel	
	16:17:00 PDT	Blow	
	23:17-GMT	165° / 528 m Dir: West Slow travel	
	16:20:00 PDT	Blow	
	23:20-GMT	196° / 489 m Dir: West Slow travel	
	16:30:00 PDT	Blow	Inside / nd
	23:30-GMT	281° / 883 m Dir: West Slow travel	

May 07 Total 5 Calves 2
Day 85 of 98

Er Gray whale (northbound)

Sighting Number	01 Poor - 1	<i>Er</i> Total 1 — 0 Calves at sighting
<i>Images: 8175-8178</i>	8:51:00 PDT	— / Body
	15:51-GMT	217° / 778 m Dir: West Slow travel
		<i>notch before dorsal ridge</i>
Sighting Number	04 Fair - 2	<i>Er</i> Total 2 — 1 Calf at sighting
<i>Images: 8181-8214</i>	10:40:00 PDT	— / Blow
	17:40-GMT	112° / 1331 m Dir: West Slow travel
		<i>through slip stream. Pair traveled through slip stream then came along kelp, and traveled inside where buoys used to be</i>
	10:44:00 PDT	Blow
	17:44-GMT	120° / 1208 m Dir: West Slow travel
	10:48:00 PDT	Blow
	17:48-GMT	149° / 400 m Dir: West Slow travel

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	10:52:00 PDT	Blow	
	17:52-GMT	211° / 388 m Dir: West Slow travel	
	10:54:00 PDT	Blow	
	17:54-GMT	246° / 508 m Dir: West Slow travel	
	10:57:00 PDT	Body	Inside /
	17:57-GMT	276° / 574 m Dir: West Slow travel	Inside

Sighting Number **10** Fair - 3 Er Total 2 — 1 Calf at sighting

Images: 8218-8282

	13:59:00 PDT	— / Blow	
	20:59-GMT	124° / 1403 m Dir: West Slow travel	
	<i>outside slip streamwindy- could not see animal interaction much- calf close- surfaced more</i>		
	14:02:00 PDT	Blow	
	21:02-GMT	142° / 778 m Dir: West Slow travel	
	14:09:00 PDT	Blow	
	21:09-GMT	174° / 600 m Dir: West Slow travel	
	14:13:00 PDT	Blow	
	21:13-GMT	202° / 539 m Dir: West Slow travel	
	14:15:00 PDT	Blow	
	21:15-GMT	217° / 489 m Dir: West Slow travel	
	14:18:00 PDT	Blow	
	21:18-GMT	257° / 678 m Dir: West Slow travel	
	14:22:00 PDT	Blow	Inside /
	21:22-GMT	290° / 946 m Dir: West Slow travel	Inside

Sighting Number **18** Poor - 5 Er

	17:13:00 PDT	Blow	Inside / nd
	0:13; 5/8/2012-GMT	130° / 528 m Dir: West Slow travel	
	<i>last image 8369 by sands kelp through slip stream</i>		

May 08 Total 4 Calves 2 Er Gray whale (northbound)
Day 86 of 98

Sighting Number **01** Fair - 1 Er Total 2 — 1 Calf at sighting

Images: 8376-8382

	14:18:00 PDT	— / Blow	
	21:18-GMT	136° / 735 m Dir: West Slow travel	
	<i>Outside slip stream. Very fast travel, infrequent surfacing for cow/calf pair, but calf surfaced more frequently than cow.</i>		
	14:25:00 PDT	ni	
	21:25-GMT	114° / 600 m Dir: West Slow travel	
	14:31:00 PDT	Body	Inside / nd
	21:31-GMT	272° / 946 m Dir: West Slow travel	

Sighting Number **06** Fair - 3 Er Total 2 — 1 Calf at sighting

Images: 8385-8432

	16:08:00 PDT	— / Blow	
	23:08-GMT	101° / 2749 m Dir: West Slow travel	
	<i>Through slip stream. Cow and calf were surfacing separately but frequently. They traveled along kelp, inside slip stream. Very slow travel during initial sightings. Calf snorkeling.</i>		
	16:12:00 PDT	Blow	
	23:12-GMT	104° / 2749 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	16:23:00 PDT	Blow	
	23:23-GMT	107° / 2749 m Dir: West Slow travel	
	16:26:00 PDT	Blow	
	23:26-GMT	108° / 1483 m Dir: West Slow travel	
	16:31:00 PDT	Blow	
	23:31-GMT	110° / 1106 m Dir: West Slow travel	
	16:34:00 PDT	Body	
	23:34-GMT	114° / 913 m Dir: West Slow travel	
	16:39:00 PDT	Body	
	23:39-GMT	137° / 539 m Dir: West Slow travel	
	16:41:00 PDT	Body	
	23:41-GMT	174° / 388 m Dir: West Slow travel	
	16:45:00 PDT	Blow	
	23:45-GMT	244° / 440 m Dir: West Slow travel	
	16:47:00 PDT	Body	
	23:47-GMT	252° / 489 m Dir: West Slow travel	
	16:49:00 PDT	Body	Inside /
	23:49-GMT	274° / 629 m Dir: West Slow travel	Inside

May 09 Total 10 Calves 5 Er Gray whale (northbound)
Day 87 of 98

Sighting Number	Fair - 1	Er Total 2 — 1 Calf at sighting
Images: 8438-8463	8:47:00 PDT	— / Blow
	15:47-GMT	117° / 946 m Dir: West Slow travel
	<i>Through slip stream. Saw setting up, cows blows prominent, back lit, little puff of calf, traveled through slip stream, not much surfacing by cow until Holly, calf surfaced three times, and did not show much. Pair reached kelp off Sands and turned south, may have made a counter-clockwise circle back towards buoys, saw at a position indicating through where buoys were.</i>	
	8:52:00 PDT	Blow
	15:52-GMT	135° / 574 m Dir: West Slow travel
	8:54:00 PDT	Blow
	15:54-GMT	156° / 388 m Dir: West Slow travel
	8:59:00 PDT	Blow
	15:59-GMT	237° / 400 m Dir: West Slow travel
	9:02:00 PDT	Blow
16:02-GMT	259° / 661 m Dir: West Slow travel	
9:06:00 PDT	Blow	Inside /
16:06-GMT	276° / 1106 m Dir: West Slow travel	Through
Sighting Number	14 Fair - 1	Er Total 4 — 2 Calves at sighting
Images: 8470-8621	11:55:00 PDT	— / Blow
	18:55-GMT	100° / 3088 m Dir: West Slow travel
	<i>Through slip stream. Meandering along IV kelp, frequent surfaces, saw along surface, calves very close to cows</i>	
	11:59:00 PDT	Blow
	18:59-GMT	101° / 2749 m Dir: West Slow travel
	12:04:00 PDT	Blow
19:04-GMT	103° / 2749 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:10:00 PDT	Blow	
	19:10-GMT	106° / 1922 m Dir: West Slow travel	
	12:13:00 PDT	Blow	
	19:13-GMT	109° / 1483 m Dir: West Slow travel	
	12:18:00 PDT	Blow	
	19:18-GMT	111° / 1208 m Dir: West Slow travel	
	12:19:00 PDT	Blow	
	19:19-GMT	113° / 1020 m Dir: West Slow travel	
	12:23:00 PDT	Blow	
	19:23-GMT	125° / 696 m Dir: West Slow travel	
	12:25:00 PDT	Blow	
	19:25-GMT	135° / 412 m Dir: West Slow travel	
	12:26:00 PDT	Blow	
	19:26-GMT	151° / 388 m Dir: West Slow travel	
	12:27:00 PDT	Blow	
	19:27-GMT	176° / 366 m Dir: West Slow travel	
	12:28:00 PDT	Blow	
	19:28-GMT	182° / 356 m Dir: West Slow travel	
	12:29:00 PDT	Blow	
	19:29-GMT	212° / 338 m Dir: West Slow travel	
	12:31:00 PDT	Blow	
	19:31-GMT	230° / 330 m Dir: West Slow travel	
	12:32:00 PDT	Blow	
	19:32-GMT	239° / 455 m Dir: West Slow travel	
	12:32:00 PDT	Blow	
	19:32-GMT	248° / 455 m Dir: West Slow travel	
	12:33:00 PDT	Blow	
	19:33-GMT	255° / 471 m Dir: West Slow travel	
	12:34:00 PDT	Blow	Inside /
	19:34-GMT	269° / 661 m Dir: West Slow travel	Inside
Sighting Number	16 Fair - 1	Er Total 2 — 1 Calf at sighting	
Images: 8623-8639	12:17:00 PDT	— / Blow	
	19:17-GMT	104° / 2749 m Dir: West Slow travel	
	<i>Outside slip stream.</i>		
	12:24:00 PDT	Blow	
	19:24-GMT	110° / 1674 m Dir: West Slow travel	
	12:38:00 PDT	Body	
	19:38-GMT	179° / 528 m Dir: West Slow travel	
	12:52:00 PDT	Body	Inside /
	19:52-GMT	283° / 1020 m Dir: West Slow travel	Inside
Sighting Number	20 Good - 2	Er Total 2 — 1 Calf at sighting	
Images: 8650-8769	15:28:00 PDT	— / Body	
	22:28-GMT	128° / 1922 m Dir: West Slow travel	
	<i>Outside slip stream. Calf liked to have head above water, long downtimes (5-6 min), good view of cow back and calf head, very slow travel, went outside kelp by buoys.</i>		

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	15:33:00 PDT	Body	
	22:33-GMT	139° / 1483 m Dir: West Slow travel	
	15:39:00 PDT	Body	
	22:39-GMT	159° / 778 m Dir: West Slow travel	
	15:44:00 PDT	Blow	
	22:44-GMT	158° / 600 m Dir: West Slow travel	
	15:48:00 PDT	Blow	
	22:48-GMT	170° / 600 m Dir: West Slow travel	
	15:52:00 PDT	Body	
	22:52-GMT	196° / 489 m Dir: West Slow travel	
	15:53:00 PDT	Body	
	22:53-GMT	202° / 528 m Dir: West Slow travel	
	15:58:00 PDT	Blow	
	22:58-GMT	248° / 600 m Dir: West Slow travel	
	16:03:00 PDT	Blow	
	23:03-GMT	257° / 629 m Dir: West Slow travel	
	16:04:00 PDT	Blow	
	23:04-GMT	261° / 600 m Dir: West Slow travel	
	16:06:00 PDT	Blow	
	23:06-GMT	269° / 629 m Dir: West Slow travel	
	16:08:00 PDT	Blow	
	23:08-GMT	272° / 661 m Dir: West Slow travel	
	16:11:00 PDT	Blow	ni / ni
	23:11-GMT	278° / 661 m Dir: West Slow travel	

May 11 Total 17 Calves 8
Day 89 of 98

Er Gray whale (northbound)

Sighting Number **07** Poor - 1 Er Total 2 — 1 Calf at sighting

Images: 8884-8962

13:01:00 PDT	— / Blow	
20:01-GMT	105° / 1922 m Dir: West Slow travel	
<i>Through slip stream.</i>		
13:04:00 PDT	Blow	
20:04-GMT	108° / 1674 m Dir: West Slow travel	
13:10:00 PDT	Blow	
20:10-GMT	112° / 1106 m Dir: West Slow travel	
13:13:00 PDT	Blow	
20:13-GMT	119° / 735 m Dir: West Slow travel	
13:16:00 PDT	Blow	
20:16-GMT	132° / 528 m Dir: West Slow travel	
13:18:00 PDT	Blow	
20:18-GMT	172° / 356 m Dir: West Slow travel	
13:19:00 PDT	Blow	
20:19-GMT	191° / 314 m Dir: West Slow travel	
13:21:00 PDT	Body	
20:21-GMT	238° / 356 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	13:25:00 PDT	Blow	Inside /
	20:25-GMT	274° / 735 m Dir: West Slow travel	Inside
Sighting Number	08 Poor - 1	Er Total 8 — 4 Calves at sighting	
Images: 8967-9164	13:37:00 PDT	— / Blow	
	20:37-GMT	99° / 2749 m Dir: West Slow travel	
	<i>2 pairs through slip stream, and 2 pairs outside. All pairs remained close to kelp down towards Sands.</i>		
	13:41:00 PDT	Blow	
	20:41-GMT	101° / 2749 m Dir: West Slow travel	
	13:47:00 PDT	Blow	
	20:47-GMT	105° / 2260 m Dir: West Slow travel	
	13:52:00 PDT	Blow	
	20:52-GMT	109° / 1922 m Dir: West Slow travel	
	13:57:00 PDT	Blow	
	20:57-GMT	113° / 1208 m Dir: West Slow travel	
	14:00:00 PDT	Blow	
	21:00-GMT	117° / 1020 m Dir: West Slow travel	
	14:03:00 PDT	Blow	
	21:03-GMT	126° / 696 m Dir: West Slow travel	
	14:06:00 PDT	Body	
	21:06-GMT	158° / 550 m Dir: West Slow travel • Fluke	
	14:08:00 PDT	Blow	
	21:08-GMT	199° / 356 m Dir: West Slow travel	
	14:10:00 PDT	Body	
	21:10-GMT	227° / 356 m Dir: West Slow travel	
	14:12:00 PDT	Blow	
	21:12-GMT	247° / 356 m Dir: West Slow travel	
	14:16:00 PDT	Blow	Inside /
	21:16-GMT	274° / 778 m Dir: West Slow travel	Inside
Sighting Number	10 Poor - 1	Er Total 5 — 2 Calves at sighting	
Images: 9208-9385	15:20:00 PDT	— / Blow	
	22:20-GMT	99° / 2260 m Dir: West Slow travel	
	15:24:00 PDT	Blow	
	22:24-GMT	102° / 2749 m Dir: West Slow travel	
	15:30:00 PDT	Blow	
	22:30-GMT	104° / 1922 m Dir: West Slow travel	
	15:34:00 PDT	Blow	
	22:34-GMT	108° / 1922 m Dir: West Slow travel	
	15:38:00 PDT	Blow	
	22:38-GMT	108° / 1331 m Dir: West Slow travel	
	15:43:00 PDT	Blow	
	22:43-GMT	108° / 1208 m Dir: West Slow travel	
	15:46:00 PDT	Blow	
	22:46-GMT	108° / 1020 m Dir: West Slow travel	
	15:51:00 PDT	Blow	
	22:51-GMT	124° / 600 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:54:00 PDT	Blow	
	22:54-GMT	148° / 412 m Dir: West Slow travel	
	15:56:00 PDT	Blow	
	22:56-GMT	174° / 307 m Dir: West Slow travel	
	15:58:00 PDT	Blow	
	22:58-GMT	199° / 307 m Dir: West Slow travel	
	16:01:00 PDT	Blow	Inside /
	23:01-GMT	245° / 412 m Dir: West Slow travel	Inside
Sighting Number	11	Poor - 1	Er Total 2 — 1 Calf at sighting
Images: 9167-9206	15:26:00 PDT	— / Blow	
	22:26-GMT	133° / 629 m Dir: West Slow travel	
	15:30:00 PDT	Body	
	22:30-GMT	167° / 489 m Dir: West Slow travel	
	15:32:00 PDT	Body	
	22:32-GMT	193° / 412 m Dir: West Slow travel	
	15:34:00 PDT	Body	Inside / nd
	22:34-GMT	225° / 400 m Dir: West Slow travel	

May 12 Total 12 Calves 6 Er Gray whale (northbound)
Day 90 of 98

Sighting Number	08	Poor - 3	Er Total 6 — 3 Calves at sighting
Images: 9523-9674	15:04:00 PDT	— / Blow	
	22:04-GMT	100° / 2749 m Dir: West Slow travel	
		<i>Through slip stream. Kite surfer very close, may have gone over. Interactions with kite surfer and stand up paddler.</i>	
	15:09:00 PDT	Blow	
	22:09-GMT	104° / 2749 m Dir: West Slow travel	
		<i>at edge of kelp</i>	
	15:17:00 PDT	Blow	
	22:17-GMT	106° / 2260 m Dir: West Slow travel	
		<i>being pursued by surfer</i>	
	15:20:00 PDT	Blow	
	22:20-GMT	106° / 1483 m Dir: West Slow travel	
	15:23:00 PDT	Blow	
	22:23-GMT	108° / 1483 m Dir: West Slow travel	
	15:27:00 PDT	Blow	
	22:27-GMT	114° / 913 m Dir: West Slow travel	
	15:29:00 PDT	Blow	
	22:29-GMT	122° / 600 m Dir: West Slow travel	
	15:30:00 PDT	Blow	
	22:30-GMT	132° / 539 m Dir: West Slow travel	
	15:33:00 PDT	Blow	
	22:33-GMT	144° / 412 m Dir: West Slow travel	
		<i>4 animals</i>	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	15:33:00 PDT	Blow	
	22:33-GMT	168° / 412 m Dir: West Slow travel	
	<i>3 animals</i>		
	15:34:00 PDT	Body	
	22:34-GMT	194° / 356 m Dir: West Slow travel	
	15:37:00 PDT	Blow	
	22:37-GMT	244° / 412 m Dir: West Slow travel	
	<i>2 calf blows, 1 adult</i>		
	15:38:00 PDT	Blow	
	22:38-GMT	220° / 334 m Dir: West Slow travel	
	15:38:00 PDT	Blow	
	22:38-GMT	256° / 489 m Dir: West Slow travel	
	15:42:00 PDT	Blow	
	22:42-GMT	259° / 471 m Dir: West Slow travel • Rolling • Pec slap	
	15:46:00 PDT	Blow	
	22:46-GMT	279° / 600 m Dir: West Slow travel	
	15:49:00 PDT	Blow	Inside /
	22:49-GMT	293° / 913 m Dir: West Slow travel	Inside
Sighting Number	11	Poor - 3	<i>Er</i> Total 6 — 3 Calves at sighting
Images: 9685-9905	16:02:00 PDT	— / Blow	
	23:02-GMT	98° / 3088 m Dir: West Slow travel	
	<i>3 simultaneous blows/bodies. 2 SUPs in pursuit. SUPs and a jet skier briefly interacted with group. Group split and rejoined as a result of SUP interaction.</i>		
	16:06:00 PDT	Blow	
	23:06-GMT	102° / 2260 m Dir: West Slow travel • Rolling • Fluke	
	<i>whales at edge of kelp, 1 SUP still in pursuit</i>		
	16:10:00 PDT	Blow	
	23:10-GMT	104° / 2749 m Dir: West Slow travel • Bubbles seen • Rolling	
	<i>paddler retreating</i>		
	16:11:00 PDT	Blow	
	23:11-GMT	106° / 2260 m Dir: West Slow travel • Bubbles seen	
	<i>3 little blows simultaneous</i>		
	16:14:00 PDT	Blow	
	23:14-GMT	104° / 2749 m Dir: West Slow travel	
	<i>whales have split up this at edge of kelp</i>		
	16:19:00 PDT	Blow	
	23:19-GMT	106° / 2260 m Dir: West Slow travel	
	16:20:00 PDT	Blow	
	23:20-GMT	108° / 1403 m Dir: West Slow travel	
	16:22:00 PDT	Blow	
	23:22-GMT	109° / 1403 m Dir: West Slow travel	
	16:23:00 PDT	Blow	
	23:23-GMT	112° / 913 m Dir: West Slow travel	
	16:26:00 PDT	Body	
	23:26-GMT	133° / 489 m Dir: West Slow travel • Rolling • Pec slap	
	<i>rolling in slip stream, forward group</i>		

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	16:30:00 PDT	Blow	
	23:30-GMT	150° / 539 m Dir: West Slow travel	
	<i>back group, outside slip stream</i>		
	16:33:00 PDT	Blow	
	23:33-GMT	154° / 600 m Dir: West Slow travel	
	<i>rejoined</i>		
	16:37:00 PDT	Blow	
	23:37-GMT	169° / 447 m Dir: West Slow travel • Bubbles seen	
	16:39:00 PDT	Body	
	23:39-GMT	182° / 382 m Dir: West Slow travel	
	16:41:00 PDT	Blow	
	23:41-GMT	211° / 382 m Dir: West Slow travel	
	<i>moving quickly past point</i>		
	16:42:00 PDT	Blow	
	23:42-GMT	229° / 382 m Dir: West Slow travel	
	16:44:00 PDT	Blow	
	23:44-GMT	248° / 447 m Dir: West Slow travel	
	16:46:00 PDT	Body	
	23:46-GMT	262° / 539 m Dir: West Slow travel	
	<i>outside kelp vortex</i>		
	16:49:00 PDT	Blow	Inside /
	23:49-GMT	276° / 539 m Dir: West Slow travel	Inside

May 13 Total 3 Calves 1 Er Gray whale (northbound)
Day 91 of 98

Sighting Number	12	Poor - 2	Er Total 1 — 0 Calves at sighting
Images: 9906-9909	12:17:00 PDT	— / Blow	
	19:17-GMT	108° / 2749 m Dir: West Slow travel	
	12:18:00 PDT	Blow	
	19:18-GMT	110° / 2749 m Dir: West Slow travel	
	12:23:00 PDT	Blow	
	19:23-GMT	114° / 2260 m Dir: West Slow travel • Breach	
	12:34:00 PDT	Body	
	19:34-GMT	146° / 1020 m Dir: West Slow travel	
	12:39:00 PDT	Blow	
	19:39-GMT	189° / 696 m Dir: West Slow travel	
	12:45:00 PDT	Blow	Inside /
	19:45-GMT	239° / 678 m Dir: West Slow travel	Outside
Sighting Number	15	Poor - 3	Er Total 2 — 1 Calf at sighting
Images: 9911-9921	12:41:00 PDT	— / Blow	
	19:41-GMT	104° / 2749 m Dir: West Slow travel	
	<i>outside slip stream. Longer downtime, between 4-10 min for cow/calf</i>		
	12:46:00 PDT	Blow	
	19:46-GMT	108° / 1922 m Dir: West Slow travel	
	12:56:00 PDT	Blow	
	19:56-GMT	124° / 1483 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	Time	CueTip / Saw	Holly / Buoys
		13:05:00 PDT	Body	
		20:05-GMT	169° / 550 m Dir: West Slow travel	
		13:09:00 PDT	Blow	Inside / nd
		20:09-GMT	225° / 356 m Dir: West Slow travel	
<hr/>				
May 14	Total 4 Calves 2	Er Gray whale (northbound)		
Day 92 of 98				
Sighting Number	09	Fair - 3	<i>Er</i> Total 2 — 1 Calf at sighting	
Images: 9951-0023		11:05:00 PDT	— / Blow	
		18:05-GMT	104° / 2260 m Dir: West Slow travel	
		<i>Outside slip stream. Had relatively close encounter with urchin boat following the same path S#10. Disappeared before the buoys.</i>		
		11:12:00 PDT	Blow	
		18:12-GMT	110° / 1922 m Dir: West Slow travel	
		11:17:00 PDT	Blow	
		18:17-GMT	115° / 1403 m Dir: West Slow travel	
		11:20:00 PDT	Blow	
		18:20-GMT	122° / 1331 m Dir: West Slow travel	
		<i>calf inside</i>		
		11:26:00 PDT	Body	
		18:26-GMT	149° / 696 m Dir: West Slow travel	
		11:30:00 PDT	Body	
		18:30-GMT	175° / 550 m Dir: West Slow travel	
		11:35:00 PDT	Blow	Inside / nd
		18:35-GMT	226° / 600 m Dir: West Slow travel • Fluke	
Sighting Number	11	Poor - 4	<i>Er</i> Total 2 — 1 Calf at sighting	
		11:58:00 PDT	— / Blow	
		18:58-GMT	102° / 946 m Dir: West Slow travel	
		<i>calf in water between kelp fingers</i>		
		12:00:00 PDT	Blow	
		19:00-GMT	104° / 946 m Dir: West Slow travel	
		<i>cow/calf heading out of kelp, disappeared, heavy wind</i>		
<hr/>				
May 15	Total 5 Calves 2	Er Gray whale (northbound)		
Day 93 of 98				
Sighting Number	10	Fair - 1	<i>Er</i> Total 1 — 0 Calves at sighting	
Images: 0030-0040		12:33:00 PDT	— / Blow	
		19:33-GMT	139° / 1483 m Dir: West Slow travel	
		<i>Juvenile</i>		
		12:39:00 PDT	Body	
		19:39-GMT	164° / 883 m Dir: West Slow travel	
		12:42:00 PDT	Body	Inside / nd
		19:42-GMT	194° / 661 m Dir: West Slow travel	
Sighting Number	11	Fair - 1	<i>Er</i> Total 2 — 1 Calf at sighting	
Images: 0043-0149		13:37:00 PDT	— / Blow	
		20:37-GMT	103° / 2749 m Dir: West Slow travel	
		<i>Through slip stream, inside kelp at sands. Pair lingered in kelp around 90, meandered before progressing west. Calf stayed close to cow along left side flank.</i>		

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	Cue/Tip / Saw	Holly / Buoys
	13:41:00 PDT	Blow	
	20:41-GMT	104° / 2260 m Dir: West Slow travel • Spyhop	
		<i>turned back to 89</i>	
	13:47:00 PDT	Blow	
	20:47-GMT	103° / 1922 m Dir: West Slow travel	
	13:50:00 PDT	Blow	
	20:50-GMT	105° / 1922 m Dir: West Slow travel	
	13:52:00 PDT	Blow	
	20:52-GMT	105° / 1483 m Dir: West Slow travel	
	14:00:00 PDT	Blow	
	21:00-GMT	104° / 1208 m Dir: West Slow travel	
	14:05:00 PDT	Body	
	21:05-GMT	108° / 913 m Dir: West Slow travel	
	14:08:00 PDT	Body	
	21:08-GMT	110° / 778 m Dir: West Slow travel	
	14:10:00 PDT	Body	
	21:10-GMT	118° / 696 m Dir: West Slow travel	
	14:11:00 PDT	Body	
	21:11-GMT	125° / 600 m Dir: West Slow travel	
		<i>calf on flank</i>	
	14:13:00 PDT	Body	
	21:13-GMT	127° / 489 m Dir: West Slow travel	
	14:15:00 PDT	Body	
	21:15-GMT	138° / 440 m Dir: West Slow travel	
	14:17:00 PDT	Body	
	21:17-GMT	156° / 356 m Dir: West Slow travel	
	14:18:00 PDT	Body	
	21:18-GMT	164° / 338 m Dir: West Slow travel	
	14:20:00 PDT	Body	
	21:20-GMT	188° / 314 m Dir: West Slow travel	
	14:22:00 PDT	Body	
	21:22-GMT	241° / 356 m Dir: West Slow travel	
	14:24:00 PDT	Body	
	21:24-GMT	257° / 382 m Dir: West Slow travel	
	14:25:00 PDT	Body	Inside / nd
	21:25-GMT	272° / 489 m Dir: West Slow travel	
Sighting Number	19	Fair - 3	<i>Er</i> Total 2 — 1 Calf at sighting
<i>Images: 0154-0188</i>	15:46:00 PDT	— / Blow	
	22:46-GMT	106° / 2749 m Dir: West Slow travel	
		<i>Pair traveled outside slip stream and kelp at Sands. Calf stayed close to cow on ocean side.</i>	
	15:51:00 PDT	Blow	
	22:51-GMT	110° / 2260 m Dir: West Slow travel	
	16:04:00 PDT	Body	
	23:04-GMT	128° / 913 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	16:09:00 PDT	Blow	
	23:09-GMT	159° / 661 m Dir: West Slow travel	
	<i>calf on ocean side</i>		
	16:12:00 PDT	Blow	
	23:12-GMT	183° / 661 m Dir: West Slow travel	
	16:22:00 PDT	Blow	Inside / nd
	23:22-GMT	272° / 696 m Dir: West Slow travel	

May 16 Total 8 Calves 4
Day 94 of 98

Er Gray whale (northbound)

Sighting Number	Fair - 2	Er Total 6 — 3 Calves at sighting
<i>Images: 0201-0399</i>	11:56:00 PDT	— / Blow
	18:56-GMT	101° / 3088 m Dir: West Slow travel
	<i>Through slip stream. Very slow travel past IV kelp, a lot of rolling, pairs remained close to each other, through slip stream, traveled through previously located buoys. As they approached they went around. See sheet for drawing.</i>	
	12:02:00 PDT	Blow
	19:02-GMT	102° / 2749 m Dir: West Slow travel
	12:08:00 PDT	Blow
	19:08-GMT	104° / 2260 m Dir: West Slow travel
	12:14:00 PDT	Blow
	19:14-GMT	107° / 1922 m Dir: West Slow travel
	12:18:00 PDT	Blow
	19:18-GMT	108° / 1674 m Dir: West Slow travel
	12:21:00 PDT	Blow
	19:21-GMT	108° / 1331 m Dir: West Slow travel
	12:25:00 PDT	Blow
	19:25-GMT	113° / 946 m Dir: West Slow travel • Rolling
	12:26:00 PDT	Blow
	19:26-GMT	116° / 778 m Dir: West Slow travel • Rolling
	12:29:00 PDT	Blow
	19:29-GMT	126° / 550 m Dir: West Slow travel • Rolling
	12:30:00 PDT	Blow
	19:30-GMT	133° / 412 m Dir: West Slow travel
	12:32:00 PDT	Blow
	19:32-GMT	153° / 388 m Dir: West Slow travel
	12:33:00 PDT	Blow
	19:33-GMT	162° / 334 m Dir: West Slow travel
	12:34:00 PDT	Blow
	19:34-GMT	171° / 338 m Dir: West Slow travel • Rolling
	12:34:00 PDT	Blow
	19:34-GMT	184° / 280 m Dir: West Slow travel
	12:35:00 PDT	Blow
	19:35-GMT	202° / 314 m Dir: West Slow travel
	12:37:00 PDT	Blow
	19:37-GMT	239° / 338 m Dir: West Slow travel

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort	CueTip / Saw	Holly / Buoys
	12:38:00 PDT	Blow	
	19:38-GMT	244° / 440 m Dir: West Slow travel	
	12:39:00 PDT	Blow	
	19:39-GMT	256° / 508 m Dir: West Slow travel	
	12:42:00 PDT	Blow	Inside /
	19:42-GMT	282° / 778 m Dir: West Slow travel	Through
Sighting Number	19 Fair - 2	Er Total 2 — 1 Calf at sighting	
Images: 0402-0433	14:51:00 PDT	— / Blow	
	21:51-GMT	102° / 3088 m Dir: West Slow travel • Fluke	
	<i>Outside slip stream. Calf not very visible, saw double blow twice with calf on outside, one time, calf may have surfaced independent of cow. Odd, cow fluked 5 times.</i>		
	14:58:00 PDT	Blow	
	21:58-GMT	105° / 2749 m Dir: West Slow travel	
	15:02:00 PDT	Blow	
	22:02-GMT	107° / 2749 m Dir: West Slow travel	
	15:06:00 PDT	Blow	
	22:06-GMT	109° / 2260 m Dir: West Slow travel • Fluke	
	15:11:00 PDT	Blow	
	22:11-GMT	113° / 1674 m Dir: West Slow travel • Fluke	
	15:19:00 PDT	Blow	
	22:19-GMT	125° / 883 m Dir: West Slow travel	
	15:21:00 PDT	Blow	
	22:21-GMT	136° / 696 m Dir: West Slow travel	
	15:22:00 PDT	Blow	
	22:22-GMT	143° / 661 m Dir: West Slow travel • Fluke	
	15:28:00 PDT	Blow	
	22:28-GMT	207° / 489 m Dir: West Slow travel	
	15:29:00 PDT	Blow	
	22:29-GMT	216° / 455 m Dir: West Slow travel	
	15:30:00 PDT	Blow	
	22:30-GMT	241° / 528 m Dir: West Slow travel	
	15:38:00 PDT	Blow	Inside /
	22:38-GMT	287° / 1106 m Dir: West Slow travel • Fluke	Through

May 19 Total 2 Calves 1 Er Gray whale (northbound)
Day 97 of 98

Sighting Number	12 Poor - 3	Er Total 2 — 1 Calf at sighting	
Images: 0543-0585	12:52:00 PDT	— / Blow	
	19:52-GMT	122° / 1020 m Dir: West Slow travel	
	<i>Outside slip stream.</i>		
	12:56:00 PDT	Blow	
	19:56-GMT	136° / 946 m Dir: West Slow travel	
	12:57:00 PDT	Blow	
	19:57-GMT	142° / 827 m Dir: West Slow travel	
	13:03:00 PDT	Blow	
	20:03-GMT	189° / 661 m Dir: West Slow travel	

2012 Gray whale (north) Sighting + Tracking

Daily Totals	Quality-Beaufort Time	CueTip / Saw	Holly / Buoys
	13:04:00 PDT	Blow	
	20:04-GMT	193° / 661 m Dir: West Slow travel	
	13:07:00 PDT	Blow	
	20:07-GMT	232° / 735 m Dir: West Slow travel	
	13:08:00 PDT	Blow	
	20:08-GMT	238° / 735 m Dir: West Slow travel	
	13:12:00 PDT	Blow	Inside /
	20:12-GMT	270° / 1106 m Dir: West Slow travel	Through