 SANTA BARBARA CHANNEL

## 2013 Gray whales (northbound) Sighting + Tracking, On Effort

# Gray whale (northbound) Eschrichtius robustus 

Total: $736 \quad$ Calves: $126 \quad$ Number of Sightings: 357

part of 2013 Gray Whales Count, Survey Report © Gray Whales Count, 2016,
prepared by Michael H Smith, Project Coordinator, Gray Whales Count, Santa Barbara, California, USA.
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2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



|  |  | 2013 Gray Whale | (northbound) Sighting + Tracking, On-Effort |  |
| :---: | :---: | :---: | :---: | :---: |
| Daily Totals |  | Quality-Beaufort Time | CueTip / Saw | Route Past Holly |
|  |  | 14:28:00 PST | Blow |  |
|  |  | 22:28-GMT | Position: $230^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | 14:31:00 PST | Blow | Inside |
|  |  | 22:31-GMT | Position: $235^{\circ} / 1403 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 18 | Fair - 4 | Total 3-0 Calves at sighting |  |
|  |  | 15:45:00 PST | ni / Blow |  |
|  |  | 23:45-GMT | Position: $212^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 15:52:00 PST | Blow |  |
|  |  | 23:52-GMT | Position: $218^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | Further than . 2 reticles |  |  |
|  |  | 15:56:00 PST | Blow |  |
|  |  | 23:56-GMT | Position: 223 / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:04:00 PST |  | Outside |
|  |  | 0:04; 2/22/2013-GMT | Position: $231^{\circ}$ / 5027 m Direction: West; Behavior: Slow travel |  |
| Feb 22 Total 6 Calves 0 |  | Gray whale (northbound) |  |  |
| Day 12 of 98 |  |  |  |  |
| Sighting Number | 01 | Fair - 2 | Total $2-0$ Calves at sighting |  |
|  |  | 9:12:00 PST | ni / Blow |  |
|  |  | 17:12-GMT | Position: $157^{\circ} / 3088$ m Direction: West; Behavior: Slow travel |  |
|  |  | 9:22:00 PST | Blow |  |
|  |  | 17:22-GMT | Position: $165^{\circ} / 3088$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 9:28:00 PST | Blow |  |
|  |  | 17:28-GMT | Position: $178^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 9:37:00 PST | Blow |  |
|  |  | 17:37-GMT | Position: 195 / 3088 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 9:46:00 PST | Blow |  |
|  |  | 17:46-GMT | Position: $212^{\circ} / 3088 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 9:56:00 PST | Blow | Outside |
|  |  | 17:56-GMT | Position: $228^{\circ} / 3528$ m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 03 | Fair - 2 | Total 1 - 0 Calves at sighting |  |
|  |  | 9:42:00 PST | ni / Blow |  |
|  |  | 17:42-GMT | Position: 107 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 9:47:00 PST | Blow |  |
|  |  | 17:47-GMT | Position: 114 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:07:00 PST | Blow |  |
|  |  | 18:07-GMT | Position: $171^{\circ} / 539 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | Possibly feeding along kelp |  |  |
|  |  | 10:15:00 PST | Blow |  |
|  |  | 18:15-GMT | Position: 214 / 508 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:19:00 PST | ni | Inside |
|  |  | 18:19-GMT | Position: $248^{\circ} / 735 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 17 | Good - 0 | Total 3-0 Calves at sighting |  |
|  |  | 14:20:00 PST | ni / Blow |  |
|  |  | 22:20-GMT | Position: 190 / 3088 m Direction: West; Behavior: Slow travel |  |





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2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort | CueTip/Saw | Past Holly |
| :---: | :---: | :---: | :---: | :---: |
| Sighting Number | 20 | Fair - 3 | Total 2 - 0 Calves at sighting |  |
|  |  | 16:35:00 PST | ni / Blow |  |
|  |  | 0:35; 3/6/2013-GMT | Position: 119 / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:41:00 PST | Blow |  |
|  |  | 0:41;3/6/2013-GMT | Position: $120^{\circ} / 3528$ m Direction: West; Behavior: Slow travel |  |
|  |  | 16:44:00 PST | Blow |  |
|  |  | 0:44; 3/6/2013-GMT | Position: $122^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:48:00 PST | Blow |  |
|  |  | 0:48; 3/6/2013-GMT | Position: 129 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:52:00 PST | Blow |  |
|  |  | 0:52; 3/6/2013-GMT | Position: 138 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:56:00 PST | Blow |  |
|  |  | 0:56; 3/6/2013-GMT | Position: 148 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:00:00 PST | Blow | ni |
|  |  | 1:00; 3/6/2013-GMT | Position: $166^{\circ} / 1674 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Mar 06 Total 19 Calves 0 Day 24 of 98 |  | Gray whale (northbound) |  |  |
|  |  |  |  |  |
| Sighting Number | 06 | Fair - 2 | Total 5-0 Calves at sighting |  |
|  |  | 9:45:00 PST | ni / Blow |  |
|  |  | 17:45-GMT | Position: $156^{\circ} / 3528$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | $1+4$ |  |  |
|  |  | 9:58:00 PST | Blow |  |
|  |  | 17:58-GMT | Position: $161^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:02:00 PST | Body |  |
|  |  | 18:02-GMT | Position: $167^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 10:25:00 PST | Blow |  |
|  |  | 18:25-GMT | Position: 191 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:34:00 PST | Blow |  |
|  |  | 18:34-GMT | Position: $203^{\circ} / 3528$ m Direction: West; Behavior: Slow travel |  |
|  |  | 10:38:00 PST | Body |  |
|  |  | 18:38-GMT | Position: 208 / 3528 m Direction: West; Behavior: Slow travel • Rolling |  |
|  |  | Mating behavior |  |  |
|  |  | 10:50:00 PST | Blow |  |
|  |  | 18:50-GMT | Position: $224^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | 11:00:00 PST | Blow | Outside |
|  |  | 19:00-GMT | Position: $236^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel • Fluke |  |
| Sighting Number | 14 | Fair-3 | Total $2-0$ Calves at sighting |  |
|  |  | 11:04:00 PST | ni / Blow |  |
|  |  | 19:04-GMT | Position: $169^{\circ} / 3088$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:23:00 PST | Blow |  |
|  |  | 19:23-GMT | Position: 182 / 3528 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:34:00 PST | Blow |  |
|  |  | 19:34-GMT | Position: $197^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel • Fluke |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



|  |  | 2013 Gray Whal | (northbound) Sighting + Tracking, On-Effort |  |
| :---: | :---: | :---: | :---: | :---: |
| Daily Totals |  | Quality-Beaufort Time | CueTip / Saw | Route Past Holly |
|  |  | 16:17:00 PST | Blow |  |
|  |  | 0:17; 3/7/2013-GMT | Position: $175{ }^{\circ} / 1922$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 16:22:00 PST | Blow | nd |
|  |  | 0:22; 3/7/2013-GMT | Position: $196{ }^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 26 | Fair - 3 | Total 2 - 0 Calves at sighting |  |
|  |  | 16:08:00 PST | - / Blow |  |
|  |  | 0:08; 3/7/2013-GMT | Position: $141^{\circ}$ / 5027 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 16:19:00 PST | Blow |  |
|  |  | 0:19; 3/7/2013-GMT | Position: $152^{\circ}$ / 5027 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 16:25:00 PST | Blow | ni |
|  |  | 0:25; 3/7/2013-GMT | Position: $161^{\circ} / 3528$ m Direction: West; Behavior: Slow travel • Fluke |  |
| Sighting Number | 28 | Fair - 3 | Total 1 - 0 Calves at sighting |  |
|  |  | 16:53:00 PST | - / Blow |  |
|  |  | 0:53; 3/7/2013-GMT | Position: $168^{\circ} / 550 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 16:55:00 PST | Blow |  |
|  |  | 0:55; 3/7/2013-GMT | Position: 182 / 629 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:00:00 PST | Blow | Inside |
|  |  | 1:00; 3/7/2013-GMT | Position: $234^{\circ}$ / 678 m Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
| Mar 07 Total 6 Calves 0 Day 25 of 98 |  | Gray whale (northbound) |  |  |
|  |  |  |  |  |
| Sighting Number | 10 | Fair - 1 | Total 3-0 Calves at sighting |  |
|  |  | 11:27:00 PST | - / Blow |  |
|  |  | 19:27-GMT | Position: $138^{\circ} / 3528$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:34:00 PST | Blow |  |
|  |  | 19:34-GMT | Position: 141 / 3528 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:40:00 PST | Blow |  |
|  |  | 19:40-GMT | Position: 144 / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:59:00 PST | Body |  |
|  |  | 19:59-GMT | Position: $160^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:02:00 PST | Body |  |
|  |  | 20:02-GMT | Position: $164^{\circ} / 2749$ m Direction: West; Behavior: Slow travel |  |
|  |  | 12:13:00 PST | Blow |  |
|  |  | 20:13-GMT | Position: $187^{\circ} / 2749 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:17:00 PST | Body |  |
|  |  | 20:17-GMT | Position: 198 / 2260 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 12:19:00 PST | Blow | Inside |
|  |  | 20:19-GMT | Position: $205^{\circ} / 2749$ m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 11 | Fair - 1 | Total 2 - 0 Calves at sighting |  |
|  |  | 11:30:00 PST | - / Blow |  |
|  |  | 19:30-GMT | Position: $143^{\circ} / 3088$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:36:00 PST | Blow |  |
|  |  | 19:36-GMT | Position: 150 / 2749 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:45:00 PST | Body |  |
|  |  | 19:45-GMT | Position: $163^{\circ} / 3088$ m Direction: West; Behavior: Slow travel |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


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2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Time | CueTip / Saw | Route Past Holly |
|  |  | 10:28:00 PDT | Blow |  |
|  |  | 17:28-GMT | Position: $205^{\circ} / 3528$ m Direction: West; Behavior: Slow travel |  |
|  |  | 10:31:00 PDT | Blow |  |
|  |  | 17:31-GMT | Position: $208^{\circ} / 3528$ m Direction: West; Behavior: Slow travel |  |
|  |  | 10:34:00 PDT | Blow |  |
|  |  | 17:34-GMT | Position: $211^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:39:00 PDT | Blow |  |
|  |  | 17:39-GMT | Position: $215^{\circ} / 3528$ m Direction: West; Behavior: Slow travel |  |
|  |  | 10:55:00 PDT | Blow | Outside |
|  |  | 17:55-GMT | Position: $230^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 04 | Good - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 9:51:00 PDT | ni / Blow |  |
|  |  | 16:51-GMT | Position: $120^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 9:59:00 PDT | Blow |  |
|  |  | 16:59-GMT | Position: 118 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:08:00 PDT | Blow |  |
|  |  | 17:08-GMT | Position: 120 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:14:00 PDT | Blow |  |
|  |  | 17:14-GMT | Position: 125 / 1483 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:21:00 PDT | Blow |  |
|  |  | 17:21-GMT | Position: $154^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:26:00 PDT | Blow |  |
|  |  | 17:26-GMT | Position: $180^{\circ} / 528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:29:00 PDT | Blow |  |
|  |  | 17:29-GMT | Position: $205^{\circ} / 528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:33:00 PDT | Body | Inside |
|  |  | 17:33-GMT | Position: $243^{\circ}$ / 778 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 08 | Good - 1 | Total 6-0 Calves at sighting |  |
|  |  | 10:52:00 PDT | ni / Blow |  |
|  |  | 17:52-GMT | Position: $124^{\circ} / 5027$ m Direction: West; Behavior: Slow travel |  |
|  |  | Group of four in front and a pair behind |  |  |
|  |  | 11:02:00 PDT | Blow |  |
|  |  | 18:02-GMT | Position: $124^{\circ} / 5027$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:11:00 PDT | Blow |  |
|  |  | 18:11-GMT | Position: $124^{\circ} / 5027$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:19:00 PDT | Blow |  |
|  |  | 18:19-GMT | Position: $126^{\circ}$ / 5027 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:27:00 PDT | Blow |  |
|  |  | 18:27-GMT | Position: $125^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | 11:34:00 PDT | Blow |  |
|  |  | 18:34-GMT | Position: $126^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel - Breach |  |
|  |  | 11:40:00 PDT | Blow |  |
|  |  | 18:40-GMT | Position: $126^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel ${ }^{\text {- Breach }}$ |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals | Quality-Beaufort Time | CueTip / Saw | Route Past Holly |
| :---: | :---: | :---: | :---: |
|  | 11:42:00 PDT | Blow |  |
|  | 18:42-GMT | Position: $126^{\circ} / 3528$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  | 11:47:00 PDT | Blow |  |
|  | 18:47-GMT | Position: 127 / 3088 m Direction: West; Behavior: Slow travel • Fluke |  |
|  | 11:50:00 PDT | Blow |  |
|  | 18:50-GMT | Position: 129 / 2749 m Direction: West; Behavior: Slow travel • Fluke |  |
|  | 11:55:00 PDT | Blow |  |
|  | 18:55-GMT | Position: 130 / 2749 m Direction: West; Behavior: Slow travel |  |
|  | 12:02:00 PDT | Blow |  |
|  | 19:02-GMT | Position: 134 / 2749 m Direction: West; Behavior: Slow travel • Fluke |  |
|  | 12:07:00 PDT | Blow |  |
|  | 19:07-GMT | Position: $140^{\circ} / 1922$ m Direction: West; Behavior: Slow travel |  |
|  | 12:09:00 PDT | Blow |  |
|  | 19:09-GMT | Position: 142 / 1922 m Direction: West; Behavior: Slow travel • Fluke |  |
|  | 12:15:00 PDT | Blow |  |
|  | 19:15-GMT | Position: $160^{\circ} / 1331 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  | With dolphins |  |  |
|  | 12:18:00 PDT | Blow |  |
|  | 19:18-GMT | Position: $165^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel • Fluke |  |
|  | 12:24:00 PDT | Blow |  |
|  | 19:24-GMT | Position: 204 / 883 m Direction: West; Behavior: Slow travel • Fluke |  |
|  | 12:27:00 PDT | Blow |  |
|  | 19:27-GMT | Position: $227^{\circ} / 1208 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  | 12:32:00 PDT | Blow | Inside |
|  | 19:32-GMT | Position: $245^{\circ} / 883 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | Good - 1 | Total 3-0 Calves at sighting |  |
|  | 12:26:00 PDT | ni / Blow |  |
|  | 19:26-GMT | Position: 114 / 5027 m Direction: West; Behavior: Slow travel |  |
|  | 12:34:00 PDT | Blow |  |
|  | 19:34-GMT | Position: 117 / 3528 m Direction: West; Behavior: Slow travel |  |
|  | 12:39:00 PDT | Blow |  |
|  | 19:39-GMT | Position: 118 / 3528 m Direction: West; Behavior: Slow travel |  |
|  | 12:50:00 PDT | Blow |  |
|  | 19:50-GMT | Position: $122^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel |  |
|  | 12:53:00 PDT | Blow |  |
|  | 19:53-GMT | Position: 123 / 2749 m Direction: West; Behavior: Slow travel |  |
|  | 12:55:00 PDT | Blow |  |
|  | 19:55-GMT | Position: 124 / 2749 m Direction: West; Behavior: Slow travel |  |
|  | 13:03:00 PDT | Blow |  |
|  | 20:03-GMT | Position: 129 / 1922 m Direction: West; Behavior: Slow travel |  |
|  | 13:09:00 PDT | Blow |  |
|  | 20:09-GMT | Position: 136 / 1106 m Direction: West; Behavior: Slow travel |  |
|  | 13:13:00 PDT | Blow |  |
|  | 20:13-GMT | Position: 152 / 1208 m Direction: West; Behavior: Slow travel |  |

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2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


| Daily Totals |  | 2013 Gray Whales (northbound) Sighting + Tracking, On-Effort |  | Route Past Holly |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Quality-Beaufort Time | CueTip / Saw |  |
|  |  | 16:14:00 PDT | Blow |  |
|  |  | 23:14-GMT | Position: $218^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 16:24:00 PDT |  | Outside |
|  |  | 23:24-GMT | Position: $227^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Mar 14 Total 4 Calves 0 |  | Gray whale (northbound) |  |  |
| Day 32 of 98 |  |  |  |  |
| Sighting Number | 05 | Good - 2 | Total 1 - 0 Calves at sighting |  |
| Images: 1427-44 |  | 15:24:00 PDT | ni / Blow |  |
|  |  | 22:24-GMT | Position: $128^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | Perhaps yearling - observed in kelp (no position) 35 min. earlier |  |  |
|  |  | 15:28:00 PDT | Blow |  |
|  |  | 22:28-GMT | Position: 182 / 366 m Direction: West; Behavior: Slow travel • Breach |  |
|  |  | 3 breaches |  |  |
|  |  | 15:32:00 PDT | Blow | Inside |
|  |  | 22:32-GMT | Position: $235^{\circ} / 574 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 09 | Fair - 2 | Total 3-0 Calves at sighting |  |
|  |  | 16:26:00 PDT | ni / Breach |  |
|  |  | 23:26-GMT | Position: $124^{\circ} / 3528$ m Direction: West; Behavior: Slow travel • Breach |  |
|  |  | 3 breaches |  |  |
|  |  | 16:32:00 PDT | Blow |  |
|  |  | 23:32-GMT | Position: 124 / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:39:00 PDT | Blow |  |
|  |  | 23:39-GMT | Position: $126^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:45:00 PDT | Blow |  |
|  |  | 23:45-GMT | Position: 127 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:52:00 PDT | ni | nd |
|  |  | 23:52-GMT | Position: $130^{\circ} / 3088 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Mar 16 Total 9 Calves 0 Day 34 of 98 |  | Gray whale (northbound) |  |  |
|  |  |  |  |  |
| Sighting Number | 09 | Poor - 1 | Total 2 - 0 Calves at sighting |  |
|  |  | 11:46:00 PDT | ni / Blow |  |
|  |  | 18:46-GMT | Position: $160^{\circ}$ / 1403 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:52:00 PDT | Blow |  |
|  |  | 18:52-GMT | Position: 182 / 1403 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:02:00 PDT | Blow |  |
|  |  | 19:02-GMT | Position: 220 / 1403 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:08:00 PDT | ni | Inside |
|  |  | 19:08-GMT | Position: $240^{\circ} / 1403 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 10 | Poor - 1 | Total 5-0 Calves at sighting |  |
|  |  | 12:11:00 PDT | ni / Blow |  |
|  |  | 19:11-GMT | Position: 103 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | $3+2$ |  |  |
|  |  | 12:15:00 PDT | Blow |  |
|  |  | 19:15-GMT | Position: 102 / 3088 m Direction: West; Behavior: Slow travel |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Time | CueTip / Saw | Route Past Holly |
|  |  | 12:27:00 PDT | Blow |  |
|  |  | 19:27-GMT | Position: 108 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:37:00 PDT | Blow |  |
|  |  | 19:37-GMT | Position: 115 / 1922 m Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | 12:44:00 PDT | Blow |  |
|  |  | 19:44-GMT | Position: 132 / 1331 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 12:49:00 PDT | Blow |  |
|  |  | 19:49-GMT | Position: $158^{\circ} / 735 \mathrm{~m}$ Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | 12:54:00 PDT | Blow |  |
|  |  | 19:54-GMT | Position: $210^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | 13:03:00 PDT | Blow | Inside |
|  |  | 20:03-GMT | Position: $261^{\circ} / 1331 \mathrm{~m}$ Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
| Sighting Number | 14 | Poor - 1 | Total $2-0$ Calves at sighting |  |
|  |  | 15:03:00 PDT | ni / Blow |  |
|  |  | 22:03-GMT | Position: 168 / 2749 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 13:09:00 PDT | Blow |  |
|  |  | 20:09-GMT | Position: 178 / 2260 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 15:14:00 PDT | Blow |  |
|  |  | 22:14-GMT | Position: 190 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:18:00 PDT | Blow |  |
|  |  | 22:18-GMT | Position: 199 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:20:00 PDT | Blow |  |
|  |  | 22:20-GMT | Position: $203^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 15:26:00 PDT | Blow |  |
|  |  | 22:26-GMT | Position: $223^{\circ}$ / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:28:00 PDT | Blow |  |
|  |  | 22:28-GMT | Position: $228^{\circ} / 2260$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 15:33:00 PDT | Blow | Inside |
|  |  | 22:33-GMT | Position: $236^{\circ} / 2260 \mathrm{~m}$ Direction: West; Behavior: Slow travel • Fluke |  |
| Mar 17 Total 1 Calves 0 Day 35 of 98 <br> Sighting Number |  | Gray whale (northbound) |  |  |
|  |  |  |  |  |
|  | 09 | Fair - 2 | Total 1 - 0 Calves at sighting |  |
|  |  | 16:10:00 PDT | ni / Blow | Inside |
|  |  | 23:10-GMT | Position: 147 / 600 m Direction: West; Behavior: Slow travel |  |
| Mar 18 Total 10 Calves 0 Day 36 of 98 |  | Gray whale (northbound) |  |  |
|  |  |  |  |  |
| Sighting Number | 01 | Poor - 1 | Total 4-0 Calves at sighting |  |
|  |  | 9:06:00 PDT | - / Blow |  |
|  |  | 16:06-GMT | Position: $181^{\circ} / 2749 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | $1+3$ leading by about 200 m |  |  |
|  |  | 9:08:00 PDT | Blow |  |
|  |  | 16:08-GMT | Position: 182 / 2749 m Direction: West; Behavior: Slow travel • Breach |  |
|  |  | 9:11:00 PDT | Body |  |
|  |  | 16:11-GMT | Position: $189^{\circ}$ / 2260 m Direction: West; Behavior: Slow travel • Breach |  |






|  |  | 2013 Gray Wh | (northbound) Sighting + Tracking, On-Effort |  |
| :---: | :---: | :---: | :---: | :---: |
| Daily Totals | Quality-Beaufort |  |  | Route Past Holly |
|  |  | 10:36:00 PDT | Blow | Inside |
|  |  | 17:36-GMT | Position: $255^{\circ} / 1674$ m Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
| Sighting Number | 14 | Fair - 1 | Total 1 - 0 Calves at sighting |  |
| Images: 1709-1717 |  | 11:05:00 PDT | ni / Blow |  |
|  |  | 18:05-GMT | Position: $117^{\circ} / 1331$ m Direction: West; Behavior: Slow travel |  |
|  |  | Juvenile |  |  |
|  |  | 11:14:00 PDT | Blow |  |
|  |  | 18:14-GMT | Position: 153 / 678 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:24:00 PDT | Body | Inside |
|  |  | 18:24-GMT | Position: $247^{\circ} / 946 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 16 | Fair - 2 | Total 1 - 0 Calves at sighting |  |
|  |  | 11:50:00 PDT | ni / Body |  |
|  |  | 18:50-GMT | Position: $165^{\circ}$ / m Direction: West; Behavior: Slow travel - Spyhop |  |
|  |  | 11:51:00 PDT | Blow |  |
|  |  | 18:51-GMT | Position: 176 / 471 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:53:00 PDT | Blow | Inside |
|  |  | 18:53-GMT | Position: 200 / 471 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 20 | Fair - 2 | Total 4-0 Calves at sighting |  |
|  |  | 13:21:00 PDT | - / Blow |  |
|  |  | 20:21-GMT | Position: 116 / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:27:00 PDT | Blow |  |
|  |  | 20:27-GMT | Position: 119 / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:44:00 PDT | Blow |  |
|  |  | 20:44-GMT | Position: 130 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:47:00 PDT | Blow |  |
|  |  | 20:47-GMT | Position: 133 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:58:00 PDT | Blow |  |
|  |  | 20:58-GMT | Position: 144 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:01:00 PDT | Body |  |
|  |  | 21:01-GMT | Position: 148 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:03:00 PDT | Blow |  |
|  |  | 21:03-GMT | Position: 151 ${ }^{\circ}$ / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:05:00 PDT | Body |  |
|  |  | 21:05-GMT | Position: 154 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:07:00 PDT | Body |  |
|  |  | 21:07-GMT | Position: 157 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:09:00 PDT | Blow |  |
|  |  | 21:09-GMT | Position: $162^{\circ} / 1922$ m Direction: West; Behavior: Slow travel |  |
|  |  | 14:15:00 PDT | Body |  |
|  |  | 21:15-GMT | Position: $176^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:21:00 PDT | Blow |  |
|  |  | 21:21-GMT | Position: 187$/ 1922$ m Direction: West; Behavior: Slow travel |  |
|  |  | 14:26:00 PDT | Blow |  |
|  |  | 21:26-GMT | Position: 199 / 2260 m Direction: West; Behavior: Slow travel |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


Mar 23 Total 23 Calves $0 \quad$ Gray whale (northbound)
Day 41 of 98

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Time | CueTip / Saw | Route Past Holly |
| Sighting Number | 02 | Fair - 3 | Total 1 - 0 Calves at sighting |  |
|  |  | 9:12:00 PDT | - / Blow |  |
|  |  | 16:12-GMT | Position: $166^{\circ} / 550 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | Very choppy |  |  |
|  |  | 9:14:00 PDT | Blow | Inside |
|  |  | 16:14-GMT | Position: 201 / 550 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 05 | Fair - 3 | Total 1 - 0 Calves at sighting |  |
|  |  | 10:02:00 PDT | SD / Body | Inside |
|  |  | 17:02-GMT | Position: $242^{\circ}$ / 400 m Direction: West; Behavior: Slow travel |  |
|  |  | In kelp |  |  |
| Sighting Number | 08 | Fair - 2 | Total 4-0 Calves at sighting |  |
|  |  | 10:26:00 PDT | - / Blow |  |
|  |  | 17:26-GMT | Position: 144 / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:34:00 PDT | Blow |  |
|  |  | 17:34-GMT | Position: $160^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:44:00 PDT | Blow |  |
|  |  | 17:44-GMT | Position: $163^{\circ} / 3088$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 10:53:00 PDT | Blow |  |
|  |  | 17:53-GMT | Position: 184 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:03:00 PDT | Blow | nd |
|  |  | 18:03-GMT | Position: $222^{\circ} / 3088$ m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 10 | Fair - 2 | Total $2-0$ Calves at sighting |  |
|  |  | 11:19:00 PDT | Phone / Blow |  |
|  |  | 18:19-GMT | Position: $107^{\circ} / 3088$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:22:00 PDT | Blow |  |
|  |  | 18:22-GMT | Position: 112 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:25:00 PDT | Blow |  |
|  |  | 18:25-GMT | Position: 113 / 1674 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:29:00 PDT | Blow |  |
|  |  | 18:29-GMT | Position: $120^{\circ}$ / 1483 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:34:00 PDT | Blow |  |
|  |  | 18:34-GMT | Position: $138^{\circ}$ / 1208 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:35:00 PDT | Blow |  |
|  |  | 18:35-GMT | Position: 149 / 913 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:40:00 PDT | Blow | Inside |
|  |  | 18:40-GMT | Position: 202 / 539 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 12 | Fair - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 11:57:00 PDT | - / Blow |  |
|  |  | 18:57-GMT | Position: $120^{\circ} / 1483 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:00:00 PDT | Blow |  |
|  |  | 19:00-GMT | Position: $131^{\circ} / 1483 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:06:00 PDT | Blow | Inside |
|  |  | 19:06-GMT | Position: $172^{\circ} / 539 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort




| Daily Totals |  | 2013 Gray Whales (northbound) Sighting + Tracking, On-Effort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Quality-Beaufort Time | CueTip / Saw | Route Past Holly |
| Sighting Number | 33 | Fair - 1 | Total $2-0$ Calves at sighting |  |
|  |  | 16:10:00 PDT | — / Blow |  |
|  |  | 23:10-GMT | Position: 110 / 2749 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 16:15:00 PDT |  |  |
|  |  | 23:15-GMT | Position: 112 / 2260 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 16:23:00 PDT | Body |  |
|  |  | 23:23-GMT | Position: 120 / 1331 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:29:00 PDT | ni |  |
|  |  | 23:29-GMT | Position: $138^{\circ} / 1331 \mathrm{~m}$ Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 16:36:00 PDT | Blow | Inside |
|  |  | 23:36-GMT | Position: 197 / 735 m Direction: West; Behavior: Slow travel • Fluke |  |
| Sighting Number | 34 | Fair - 1 | Total 2 - 0 Calves at sighting |  |
|  |  | 16:48:00 PDT | ni / Blow |  |
|  |  | 23:48-GMT | Position: $139^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 16:52:00 PDT | Blow |  |
|  |  | 23:52-GMT | Position: 134 / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:55:00 PDT | Blow | nd |
|  |  | 23:55-GMT | Position: 144 / 3528 m Direction: West; Behavior: Slow travel |  |
| Mar 26 Total 7 Calves 0 |  | Gray whale (northbound) |  |  |
| Day 44 of 98 |  |  |  |  |
| Sighting Number | 13 | Fair - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 13:13:00 PDT | - / Blow |  |
|  |  | 20:13-GMT | Position: 181 / 661 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:19:00 PDT | Blow | Inside |
|  |  | 20:19-GMT | Position: $239^{\circ} / 678 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting NumberImages: 1884-1890 | 17 | Good - 3 | Total $2-0$ Calves at sighting |  |
|  |  | 14:41:00 PDT | ni / Blow |  |
|  |  | 21:41-GMT | Position: $106^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:46:00 PDT | Blow |  |
|  |  | 21:46-GMT | Position: 110 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:50:00 PDT | Blow |  |
|  |  | 21:50-GMT | Position: 112 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:54:00 PDT | Blow |  |
|  |  | 21:54-GMT | Position: $118^{\circ} / 1483 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 15:01:00 PDT | Blow |  |
|  |  | 22:01-GMT | Position: $143^{\circ}$ / 1208 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:05:00 PDT | Blow |  |
|  |  | 22:05-GMT | Position: $164^{\circ} / 1208 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 15:06:00 PDT | Blow |  |
|  |  | 22:06-GMT | Position: $175^{\circ}$ / 827 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:11:00 PDT | Blow |  |
|  |  | 22:11-GMT | Position: $230^{\circ}$ / 735 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:17:00 PDT | Blow | Inside |
|  |  | 22:17-GMT | Position: $261^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort | CueTip/S |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 10:33:00 PDT | Blow |  |
|  |  | 17:33-GMT | Position: 129 / 3528 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 10:39:00 PDT |  |  |
|  |  | 17:39-GMT | Position: $133^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 10:45:00 PDT | Blow |  |
|  |  | 17:45-GMT | Position: $138^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 10:53:00 PDT | Body |  |
|  |  | 17:53-GMT | Position: 148 / 2749 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:01:00 PDT | Body |  |
|  |  | 18:01-GMT | Position: $161^{\circ} / 2749 \mathrm{~m}$ Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:09:00 PDT | Blow |  |
|  |  | 18:09-GMT | Position: 184 / 2260 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:15:00 PDT | Body |  |
|  |  | 18:15-GMT | Position: $206^{\circ} / 2260$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:23:00 PDT | Body | Outside |
|  |  | 18:23-GMT | Position: $228^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 11 | Good - 2 | Total 1 - 0 Calves at sighting |  |
|  |  | 10:42:00 PDT | ni / Body |  |
|  |  | 17:42-GMT | Position: 182 / 377 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:44:00 PDT | Body |  |
|  |  | 17:44-GMT | Position: $222^{\circ} / 400 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:51:00 PDT | Body | Inside |
|  |  | 17:51-GMT | Position: $256^{\circ}$ / 827 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 12 | Good - 2 | Total 2 - 0 Calves at sighting |  |
|  |  | 11:08:00 PDT | ni / Body |  |
|  |  | 18:08-GMT | Position: $172^{\circ}$ / 1020 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:17:00 PDT | Body | Inside |
|  |  | 18:17-GMT | Position: $226^{\circ}$ / 913 m Direction: West; Behavior: Slow travel • Fluke |  |
| Sighting Number | 17 | Good - 2 | Total 1 - 0 Calves at sighting |  |
|  |  | 12:29:00 PDT | ni / Blow |  |
|  |  | 19:29-GMT | Position: $114^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:40:00 PDT | Blow |  |
|  |  | 19:40-GMT | Position: $126^{\circ} / 1674 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:48:00 PDT | Body |  |
|  |  | 19:48-GMT | Position: $163^{\circ}$ / 883 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:03:00 PDT | Blow | Inside |
|  |  | 20:03-GMT | Position: 214 / 913 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 20 | Good - 2 | Total $2-0$ Calves at sighting |  |
|  |  | 12:46:00 PDT | ni / Blow |  |
|  |  | 19:46-GMT | Position: 134 / 3528 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 12:58:00 PDT | Blow |  |
|  |  | 19:58-GMT | Position: $143^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:05:00 PDT | Blow |  |
|  |  | 20:05-GMT | Position: $153^{\circ} / 2749 \mathrm{~m}$ Direction: West; Behavior: Slow travel • Fluke |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort




2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


|  |  | 2013 Gray Wha | (northbound) Sighting + Tracking, On-Effort |  |
| :---: | :---: | :---: | :---: | :---: |
| Daily Totals |  | Quality-Beaufort Time | CueTip / Saw | Route Past Holly |
|  |  | 15:56:00 PDT | Blow |  |
|  |  | 22:56-GMT | Position: $137^{\circ} / 1208 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 15:58:00 PDT | Blow |  |
|  |  | 22:58-GMT | Position: $140^{\circ} / 1106 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 15:59:00 PDT | Blow |  |
|  |  | 22:59-GMT | Position: 148 / 1106 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:02:00 PDT |  | Inside |
|  |  | 23:02-GMT | Position: $171^{\circ}$ / 883 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 32 | Poor - 3 | Total $2-0$ Calves at sighting |  |
|  |  | 15:55:00 PDT | - / Blow |  |
|  |  | 22:55-GMT | Position: 109 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:55:00 PDT | Blow |  |
|  |  | 22:55-GMT | Position: 112 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:59:00 PDT | Blow |  |
|  |  | 22:59-GMT | Position: 114 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:08:00 PDT | Blow |  |
|  |  | 23:08-GMT | Position: 139 / 946 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:11:00 PDT | Blow |  |
|  |  | 23:11-GMT | Position: 159 / 946 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:12:00 PDT | Blow | Inside |
|  |  | 23:12-GMT | Position: 174 / 600 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 36 | Poor - 3 | Total 1 - 0 Calves at sighting |  |
|  |  | 16:45:00 PDT | - / Blow |  |
|  |  | 23:45-GMT | Position: 104 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:48:00 PDT | Blow |  |
|  |  | 23:48-GMT | Position: 106 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:54:00 PDT | Blow | nd |
|  |  | 23:54-GMT | Position: 112 / 2260 m Direction: West; Behavior: Slow travel |  |
| Mar 29 Total 9 Calves 2 <br> Day 47 of 98 <br> Sighting Number |  | Gray whale (northbound) |  |  |
|  |  |  |  |  |
|  | 08 | Poor-1 | Total 2 - 1 Calf at sighting |  |
|  |  | 11:02:00 PDT | - / Body |  |
|  |  | 18:02-GMT | Position: $130^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | We saw what at first looked like one whale, but as it got closer we noticed something smaller surface next to it - when looking through the scope, I could see the calf's rostrum surfacing frequently - they traveled along the kelp and we lost track of them shortly after they passed Holly |  |  |
|  |  | 11:06:00 PDT | Blow |  |
|  |  | 18:06-GMT | Position: $147^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:08:00 PDT | Blow |  |
|  |  | 18:08-GMT | Position: $160^{\circ}$ / 778 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:12:00 PDT | Blow |  |
|  |  | 18:12-GMT | Position: $183^{\circ} / 696$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:18:00 PDT | Blow | Inside |
|  |  | 18:18-GMT | Position: $244^{\circ} / 696 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


| Daily Totals |  | Quality-Beaufort | CueTip/Saw |  |
| :---: | :---: | :---: | :---: | :---: |
| Mar 30 Total 7 Calves 0 |  | Gray whale (northbound) |  |  |
| Day 48 of 98 |  |  |  |  |
| Sighting Number | 07 | Poor-1 | Total 1 - 0 Calves at sighting |  |
|  |  | 10:37:00 PDT | - / Body |  |
|  |  | 17:37-GMT | Position: 176 / 661 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:41:00 PDT | Body |  |
|  |  | 17:41-GMT | Position: $213^{\circ} / 661 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:46:00 PDT | Body | Inside |
|  |  | 17:46-GMT | Position: $243^{\circ} / 735 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 11 | Poor - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 12:06:00 PDT | $-/ \text { Body }$ |  |
|  |  | 19:06-GMT | Position: 110 / 2260 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 12:13:00 PDT | Blow |  |
|  |  | 19:13-GMT | Position: $120^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:19:00 PDT | Blow |  |
|  |  | 19:19-GMT | Position: $135^{\circ} / 160 \mathrm{~m}$ Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | 12:25:00 PDT | Blow |  |
|  |  | 19:25-GMT | Position: $178^{\circ}$ / 778 m Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | 12:32:00 PDT | Blow |  |
|  |  | 19:32-GMT | Position: $239^{\circ} / 913$ m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 17 | Good - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 13:33:00 PDT | - / Body |  |
|  |  | 20:33-GMT | Position: 115 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:48:00 PDT | Blow | nd |
|  |  | 20:48-GMT | Position: $231^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel • Breach |  |
| Sighting Number | 18 | Good - 1 | Total 3-0 Calves at sighting |  |
|  |  | 13:41:00 PDT | - / Body |  |
|  |  | 20:41-GMT | Position: 109 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | $1+2$ |  |  |
|  |  | 13:54:00 PDT | Body |  |
|  |  | 20:54-GMT | Position: $124^{\circ} / 735 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 13:57:00 PDT | Blow |  |
|  |  | 20:57-GMT | Position: $126^{\circ}$ / 913 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 14:01:00 PDT | Blow |  |
|  |  | 21:01-GMT | Position: 144 / 455 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:03:00 PDT | Blow |  |
|  |  | 21:03-GMT | Position: $161^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 14:05:00 PDT | Blow |  |
|  |  | 21:05-GMT | Position: $182^{\circ}$ / 661 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:05:00 PDT | Blow |  |
|  |  | 21:05-GMT | Position: $186^{\circ} / 550 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 14:09:00 PDT | Blow |  |
|  |  | 21:09-GMT | Position: $215^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |


| Daily Totals |  | 2013 Gray Whales (northbound) Sighting + Tracking, On-Effort |  | Route Past Holly |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Quality-Beaufort Time | CueTip / Saw |  |
|  |  | 14:11:00 PDT <br> 21:11-GMT | Body <br> Position: $233^{\circ}$ / 883 m Direction: West; Behavior: Slow travel | Inside |
| Sighting Number | 22 | Fair - 2 | Total 1 - 0 Calves at sighting |  |
|  |  | $\begin{aligned} & \text { 15:07:00 PDT } \\ & \text { 22:07-GMT } \end{aligned}$ | - / Body <br> Position: $112^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 15:15:00 PDT | Blow |  |
|  |  | 22:15-GMT | Position: 132 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:17:00 PDT | Body |  |
|  |  | 22:17-GMT | Position: 139 / 1674 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:22:00 PDT | Body |  |
|  |  | 22:22-GMT | Position: 159 / 1403 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:29:00 PDT | Body |  |
|  |  | 22:29-GMT | Position: $207^{\circ} / 1106 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 15:36:00 PDT | Body |  |
|  |  | 22:36-GMT | Position: $244^{\circ} / 1106 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 15:40:00 PDT | Body | Inside |
|  |  | 22:40-GMT | Position: $262^{\circ} / 1483 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Mar 31 Total 1 Calves 0 <br> Day 49 of 98 <br> Sighting Number |  | Gray whale (northbound) |  |  |
|  |  |  |  |  |
|  | 02 | Poor - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 12:54:00 PDT | Passerby / Body | Inside |
|  |  | 19:54-GMT | Position: $201^{\circ} / 489 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Apr 01 Total 10 Calves 0 <br> Day 50 of 98 <br> Sighting Number |  | Gray whale (northbound) |  |  |
|  |  |  |  |  |
|  | 01 | Poor - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 8:55:00 PDT | - / Body |  |
|  |  |  | Position: 170 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 9:02:00 PDT | Body |  |
|  |  | 16:02-GMT | Position: 199 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 9:05:00 PDT | Blow | Inside |
|  |  | 16:05-GMT | Position: 216 / 1922 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 08 | Poor-1 | Total 1 - 0 Calves at sighting |  |
|  |  | 11:57:00 PDT | - / Blow |  |
|  |  | 18:57-GMT | Position: $132^{\circ}$ / 883 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:02:00 PDT | Blow |  |
|  |  | 19:02-GMT | Position: $171^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:04:00 PDT | Body |  |
|  |  | 19:04-GMT | Position: $209^{\circ}$ / 550 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:07:00 PDT | Blow | Inside |
|  |  | 19:07-GMT | Position: $246^{\circ}$ / 661 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 09 | Poor - 0 | Total $2-0$ Calves at sighting |  |
| Images: 1926-1943 |  | 12:18:00 PDT | - / Body |  |
|  |  | 19:18-GMT | Position: $109^{\circ} / 1483 \mathrm{~m}$ Direction: West; Behavior: Slow travel • Fluke |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort Time | CueTip / Saw | Route Past Holly |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 12:22:00 PDT | Body |  |
|  |  | 19:22-GMT | Position: $118^{\circ} / 1106 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:25:00 PDT | Body |  |
|  |  | 19:25-GMT | Position: $129^{\circ} / 778$ m Direction: West; Behavior: Slow travel |  |
|  |  | 12:26:00 PDT | Blow |  |
|  |  | 19:26-GMT | Position: $135^{\circ} / 678 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:28:00 PDT | Blow |  |
|  |  | 19:28-GMT | Position: $146^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:30:00 PDT | Body |  |
|  |  | 19:30-GMT | Position: $155^{\circ}$ / 489 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:36:00 PDT | Blow |  |
|  |  | 19:36-GMT | Position: 196 / 539 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 12:40:00 PDT | Blow |  |
|  |  | 19:40-GMT | Position: $240^{\circ} / 678 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:43:00 PDT | Body | Inside |
|  |  | 19:43-GMT | Position: $260^{\circ}$ / 913 m Direction: West; Behavior: Slow travel • Fluke |  |
| Sighting Number | 14 | Poor-3 | Total 1 - 0 Calves at sighting |  |
|  |  | 14:33:00 PDT | ni / Blow |  |
|  |  | 21:33-GMT | Position: $160^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 14:45:00 PDT | ni | Inside |
|  |  | 21:45-GMT | Position: $257^{\circ} / 913 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 16 | Fair - 3 | Total 2 - 0 Calves at sighting |  |
| Images: 2022-8 |  | 15:47:00 PDT | ni / Blow |  |
|  |  | 22:47-GMT | Position: $105^{\circ} / 2749 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 15:50:00 PDT | Blow |  |
|  |  | 22:50-GMT | Position: $109^{\circ} / 2749$ m Direction: West; Behavior: Slow travel |  |
|  |  | 15:58:00 PDT | Blow |  |
|  |  | 22:58-GMT | Position: 110 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:10:00 PDT | Blow |  |
|  |  | 23:10-GMT | Position: $122^{\circ} / 1106 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 16:17:00 PDT | Blow |  |
|  |  | 23:17-GMT | Position: 137 / 600 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:20:00 PDT | Body |  |
|  |  | 23:20-GMT | Position: $179^{\circ}$ / 550 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:24:00 PDT | Blow |  |
|  |  | 23:24-GMT | Position: 209 / 696 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:26:00 PDT | Blow |  |
|  |  | 23:26-GMT | Position: $232^{\circ}$ / 778 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:36:00 PDT | Blow | Inside |
|  |  | 23:36-GMT | Position: $282^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 17 | Fair - 3 | Total 1 - 0 Calves at sighting |  |
|  |  | 16:22:00 PDT | ni / Blow |  |
|  |  | 23:22-GMT | Position: $221^{\circ}$ / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | Started with S | - separated - came together again after Holly |  |



2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


|  |  | 2013 Gray Wh | (northbound) Sighting + Tracking, On-Effort |  |
| :---: | :---: | :---: | :---: | :---: |
| Daily Totals |  | Quality-Beaufort Time | CueTip / Saw | Route Past Holly |
|  |  | 12:57:00 PDT | Blow |  |
|  |  | 19:57-GMT | Position: $172^{\circ}$ / 827 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:02:00 PDT | Body |  |
|  |  | 20:02-GMT | Position: $211^{\circ}$ / 778 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:06:00 PDT | Blow | Inside |
|  |  | 20:06-GMT | Position: $237^{\circ} / 883 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 21 | Poor-1 | Total 2 - 0 Calves at sighting |  |
|  |  | 12:58:00 PDT | ni / Blow |  |
|  |  | 19:58-GMT | Position: 110 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:12:00 PDT | Blow |  |
|  |  | 20:12-GMT | Position: $130^{\circ}$ / 1208 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:20:00 PDT | Splash |  |
|  |  | 20:20-GMT | Position: $177^{\circ} / 735 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 13:22:00 PDT | Body |  |
|  |  | 20:22-GMT | Position: 190 / 696 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 13:28:00 PDT | Body | Inside |
|  |  | 20:28-GMT | Position: $246^{\circ} / 735 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting NumberSighting Number | 24 | Poor-1 | Total 2 - 0 Calves at sighting |  |
|  |  | 14:11:00 PDT | ni / Blow |  |
|  |  | 21:11-GMT | Position: $130^{\circ}$ / 1483 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:23:00 PDT | Body | Inside |
|  |  | 21:23-GMT | Position: 188 / 1020 m Direction: West; Behavior: Slow travel |  |
|  | 27 | Poor-1 | Total 2 - 0 Calves at sighting |  |
|  |  | 14:43:00 PDT | - / Blow |  |
|  |  | 21:43-GMT | Position: 105 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 14:53:00 PDT | Blow |  |
|  |  | 21:53-GMT | Position: 114 / 2260 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 15:04:00 PDT | Blow | Inside |
|  |  | 22:04-GMT | Position: $142^{\circ} / 883 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 29 | Poor-3 | Total 1 - 0 Calves at sighting |  |
|  |  | 16:52:00 PDT | - / Body | ni |
|  |  | 23:52-GMT | Position: $169^{\circ} / 330 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 30 | Poor - 3 | Total 2 - 0 Calves at sighting |  |
|  |  | 16:58:00 PDT | - / Blow | ni |
|  |  | 23:58-GMT | Position: 208 / 913 m Direction: West; Behavior: Slow travel |  |
| Apr 04 Total 7 Calves 0 |  | Gray whale (n | hbound) |  |
| Day 53 of 98 |  |  |  |  |
| Sighting Number | 01 | Poor - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 9:06:00 PDT | - / Body |  |
|  |  | 16:06-GMT | Position: $158^{\circ} / 661$ m Direction: West; Behavior: Slow travel • Slow travel |  |
| Sighting Number | 02 | Poor - 1 |  |  |
|  |  | 9:08:00 PDT | Blow |  |
|  |  | 16:08-GMT | Position: $173^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel $\bullet$ Slow travel |  |



Apr 05 Total 8 Calves 0
Gray whale (northbound)
Day 54 of 98

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Time | CueTip / Saw | Route Past Holly |
| Sighting Number | 02 | Fair - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 9:32:00 PDT | - / Body |  |
|  |  | 16:32-GMT | Position: $188^{\circ}$ / 471 m Direction: West; Behavior: Slow travel • Slow travel |  |
|  |  | 9:33:00 PDT | Blow |  |
|  |  | 16:33-GMT | Position: $207^{\circ} / 455 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 9:36:00 PDT | Body |  |
|  |  | 16:36-GMT | Position: $244^{\circ}$ / 629 m Direction: West; Behavior: Slow travel |  |
|  |  | 9:40:00 PDT | Blow | Inside |
|  |  | 16:40-GMT | Position: $266^{\circ}$ / 946 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 04 | Fair - 2 | Total 2 - 0 Calves at sighting |  |
|  |  | 10:21:00 PDT | - / Blow |  |
|  |  | 17:21-GMT | Position: $100^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel • Rolling |  |
|  |  | 10:26:00 PDT | Blow |  |
|  |  | 17:26-GMT | Position: 105 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:31:00 PDT | Blow |  |
|  |  | 17:31-GMT | Position: $109^{\circ} / 2749$ m Direction: West; Behavior: Slow travel |  |
|  |  | 10:34:00 PDT | Blow |  |
|  |  | 17:34-GMT | Position: 112 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:37:00 PDT | Blow |  |
|  |  | 17:37-GMT | Position: 114 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:40:00 PDT | Blow |  |
|  |  | 17:40-GMT | Position: $121^{\circ} / 1922 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:46:00 PDT | Blow |  |
|  |  | 17:46-GMT | Position: $138^{\circ} / 1106 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:50:00 PDT | Blow |  |
|  |  | 17:50-GMT | Position: $164^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:59:00 PDT | Body |  |
|  |  | 17:59-GMT | Position: $242^{\circ}$ / 827 m Direction: West; Behavior: Slow travel • Breach |  |
|  |  | 11:01:00 PDT | Body | Inside |
|  |  | 18:01-GMT | Position: $248^{\circ} / 913 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 06 | Good - 2 |  |  |
|  |  | 10:46:00 PDT | - / Blow |  |
|  |  | 17:46-GMT | Position: $135^{\circ} / 3528$ m Direction: West; Behavior: Slow travel |  |
|  |  | 10:51:00 PDT | Blow |  |
|  |  | 17:51-GMT | Position: $142^{\circ} / 3528 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 11:16:00 PDT | Blow |  |
|  |  | 18:16-GMT | Position: $144^{\circ}$ / 2749 m Direction: East; Behavior: Slow travel |  |
|  |  | 11:18:00 PDT | Blow |  |
|  |  | 18:18-GMT | Position: 136 / 2749 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:25:00 PDT | Blow |  |
|  |  | 18:25-GMT | Position: 150 / 2260 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:34:00 PDT | Blow |  |
|  |  | 18:34-GMT | Position: $175^{\circ}$ / 946 m Direction: West; Behavior: Slow travel • Fluke |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Time | CueTip / Saw | Route Past Holly |
|  |  | 11:43:00 PDT | Blow | Inside |
|  |  | 18:43-GMT | Position: $244^{\circ}$ / 1020 m Direction: West; Behavior: Slow travel • Fluke |  |
| Sighting Number | 09 | Good - 2 | Total $2-0$ Calves at sighting |  |
|  |  | 11:34:00 PDT | - / Blow |  |
|  |  | 18:34-GMT | Position: 159 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:36:00 PDT | Blow |  |
|  |  | 18:36-GMT | Position: $164^{\circ} / 2260 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 11:38:00 PDT | Blow |  |
|  |  | 18:38-GMT | Position: 170 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:42:00 PDT | Blow |  |
|  |  | 18:42-GMT | Position: 181 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 11:50:00 PDT | Blow |  |
|  |  | 18:50-GMT | Position: $218^{\circ} / 1674$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | 11:57:00 PDT | Blow | Inside |
|  |  | 18:57-GMT | Position: $237^{\circ} / 1331 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 11 | Good - 2 | Total $2-0$ Calves at sighting |  |
|  |  | 12:33:00 PDT | - / Blow |  |
|  |  | 19:33-GMT | Position: $100^{\circ} / 3088$ m Direction: West; Behavior: Slow travel |  |
|  |  | 12:35:00 PDT | Blow |  |
|  |  | 19:35-GMT | Position: 101 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:38:00 PDT | Blow |  |
|  |  | 19:38-GMT | Position: $102^{\circ} / 3088$ m Direction: West; Behavior: Slow travel |  |
|  |  | 12:42:00 PDT | Blow |  |
|  |  | 19:42-GMT | Position: 104 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:46:00 PDT | Blow |  |
|  |  | 19:46-GMT | Position: 108 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:49:00 PDT | Blow |  |
|  |  | 19:49-GMT | Position: $112^{\circ} / 1922$ m Direction: West; Behavior: Slow travel |  |
|  |  | 12:53:00 PDT | Blow |  |
|  |  | 19:53-GMT | Position: $115^{\circ} / 1483 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:58:00 PDT | Blow |  |
|  |  | 19:58-GMT | Position: $124^{\circ}$ / 946 m Direction: West; Behavior: Slow travel $\bullet$ Fluke |  |
|  |  | 13:01:00 PDT | Body |  |
|  |  | 20:01-GMT | Position: $137^{\circ} / 827 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 13:07:00 PDT | Blow |  |
|  |  | 20:07-GMT | Position: 184 / 696 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:14:00 PDT | Blow |  |
|  |  | 20:14-GMT | Position: $270^{\circ}$ / 778 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:21:00 PDT | Blow | Inside |
|  |  | 20:21-GMT | Position: $291^{\circ}$ / 1483 m Direction: West; Behavior: Slow travel |  |

Apr 06 Total 7 Calves 0
Gray whale (northbound)
Day 55 of 98

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort





2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Time | CueTip / Saw | Route Past Holly |
|  |  | 10:18:00 PDT | Blow |  |
|  |  | 17:18-GMT | Position: 103 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:20:00 PDT | Blow |  |
|  |  | 17:20-GMT | Position: 104 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:25:00 PDT | Blow |  |
|  |  | 17:25-GMT | Position: 109 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:38:00 PDT | Blow |  |
|  |  | 17:38-GMT | Position: $122^{\circ} / 696 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:40:00 PDT | Blow |  |
|  |  | 17:40-GMT | Position: $142^{\circ} / 661 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 10:50:00 PDT | Blow |  |
|  |  | 17:50-GMT | Position: 237 / 600 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:52:00 PDT | Blow | Inside |
|  |  | 17:52-GMT | Position: 261 / 661 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 08 | Poor - 3 | Total $2-0$ Calves at sighting |  |
|  |  | 11:58:00 PDT | - / Blow |  |
|  |  | 18:58-GMT | Position: 108 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:02:00 PDT | Blow |  |
|  |  | 19:02-GMT | Position: 109 / 1483 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:09:00 PDT | Blow |  |
|  |  | 19:09-GMT | Position: $124^{\circ} / 1922 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:13:00 PDT | Blow |  |
|  |  | 19:13-GMT | Position: $144^{\circ}$ / 550 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:15:00 PDT | Blow |  |
|  |  | 19:15-GMT | Position: $158^{\circ} / 489 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:21:00 PDT | Blow |  |
|  |  | 19:21-GMT | Position: $239^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:26:00 PDT | Blow | Inside |
|  |  | 19:26-GMT | Position: $267^{\circ}$ / 946 m Direction: West; Behavior: Slow travel |  |
| Apr 13 Total 1 Calves 0 |  | Gray whale (northbound) |  |  |
| Day 62 of 98 |  |  |  |  |
| Sighting Number | 10 | Poor - 3 | Total 1 - 0 Calves at sighting |  |
|  |  | 16:21:00 PDT | - / Blow |  |
|  |  | 23:21-GMT | Position: 178 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:27:00 PDT | Blow |  |
|  |  | 23:27-GMT | Position: 195 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:30:00 PDT | Blow |  |
|  |  | 23:30-GMT | Position: 204 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:36:00 PDT | Blow |  |
|  |  | 23:36-GMT | Position: 224² 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:42:00 PDT | Blow | Inside |
|  |  | 23:42-GMT | Position: $244^{\circ} / 2749 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |

Apr 14 Total 7 Calves $0 \quad$ Gray whale (northbound)
Day 63 of 98

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals | Quality-Beaufort |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Sighting NumberImages: 2589-2603 | 04 | Poor-2 | Total 1 - 0 Calves at sighting |  |
|  |  | $\begin{aligned} & \text { 9:34:00 PDT } \\ & \text { 16:34-GMT } \\ & \text { white sider } \end{aligned}$ | - / Blow <br> Position: $144^{\circ} / 696$ m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 9:38:00 PDT } \\ & \text { 16:38-GMT } \end{aligned}$ | Blow <br> Position: $189^{\circ}$ / 600 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 9:43:00 PDT } \\ & \text { 16:43-GMT } \end{aligned}$ | Blow <br> Position: $236^{\circ}$ / 600 m Direction: West; Behavior: Slow travel | Inside |
| Sighting Number | 08 | Fair - 2 | Total 3-0 Calves at sighting |  |
|  |  | 11:15:00 PDT 18:15-GMT | - / Blow <br> Position: $232^{\circ}$ / 5027 m Direction: West; Behavior: Slow travel • Fluke |  |
| Sighting Number | 12 | Fair - 2 | Total 2 - 0 Calves at sighting |  |
|  |  | 12:46:00 PDT <br> 19:46-GMT | $-/ \text { Body }$ <br> Position: $133^{\circ}$ / 913 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 12:52:00 PDT } \\ & \text { 19:52-GMT } \end{aligned}$ | Body <br> Position: $198^{\circ}$ / 600 m Direction: West; Behavior: Slow travel | Inside |
| Sighting Number | 17 | Fair - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | $\begin{aligned} & \text { 16:02:00 PDT } \\ & \text { 23:02-GMT } \end{aligned}$ | - / Blow <br> Position: $137^{\circ} / 1331$ m Direction: West; Behavior: Slow travel • Fluke |  |
| Apr 15 Total 7 Calves 1 |  | Gray whale (northbound) |  |  |
| Day 64 of 98 |  |  |  |  |
| Sighting Number | 03 | Fair-2 | Total 2-1 Calf at sighting |  |
| Images: 2619-33 |  | $\begin{aligned} & \text { 9:04:00 PDT } \\ & \text { 16:04-GMT } \end{aligned}$ | - / Blow <br> Position: $114^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | $\begin{aligned} & \text { 9:09:00 PDT } \\ & \text { 16:09-GMT } \end{aligned}$ | Blow <br> Position: $120^{\circ}$ / 1674 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 9:14:00 PDT } \\ & \text { 16:14-GMT } \end{aligned}$ | Blow <br> Position: $134^{\circ} / 1208$ m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | $\begin{aligned} & \text { 9:22:00 PDT } \\ & \text { 16:22-GMT } \end{aligned}$ | Blow <br> Position: $180^{\circ}$ / 661 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 9:36:00 PDT } \\ & \text { 16:36-GMT } \end{aligned}$ | Blow <br> Position: $269^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel | Inside |
| Sighting NumberImages: 2616-17 | 04 | Fair - 2 | Total 1 - 0 Calves at sighting |  |
|  |  | $\begin{aligned} & \text { 9:13:00 PDT } \\ & \text { 16:13-GMT } \\ & \text { appeared just } \end{aligned}$ | - / Body <br> Position: $130^{\circ}$ / 440 m Direction: West; Behavior: Slow travel <br> de of slip stream - small juvenile - possibly an abandoned calf |  |
|  |  | $\begin{aligned} & 9: 15: 00 \text { PDT } \\ & \text { 16:15-GMT } \end{aligned}$ | Body <br> Position: $169^{\circ}$ / 388 m Direction: West; Behavior: Slow travel | Inside |
| Sighting Number | 08 | Fair-3 | Total 1 - 0 Calves at sighting |  |
|  |  | 10:43:00 PDT <br> 17:43-GMT | - / Blow <br> Position: $126^{\circ}$ / 778 m Direction: West; Behavior: Slow travel |  |
|  |  | 10:49:00 PDT <br> 17:49-GMT | Blow <br> Position: $169^{\circ}$ / 388 m Direction: West; Behavior: Slow travel | Inside |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort Time | CueTip / Saw | ly |
| :---: | :---: | :---: | :---: | :---: |
| Sighting Number | 09 | Fair - 3 | Total 3-0 Calves at sighting |  |
|  |  | 11:40:00 PDT <br> 18:40-GMT | - / Blow <br> Position: $102^{\circ} / 3088$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:46:00 PDT <br> 18:46-GMT | Blow <br> Position: $104^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 11:50:00 PDT } \\ & \text { 18:50-GMT } \end{aligned}$ | Blow <br> Position: $109^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 11:54:00 PDT } \\ & \text { 18:54-GMT } \end{aligned}$ | Blow <br> Position: 113 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 12:00:00 PDT } \\ & \text { 19:00-GMT } \end{aligned}$ | Blow <br> Position: $124^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 12:04:00 PDT } \\ & \text { 19:04-GMT } \end{aligned}$ | Blow <br> Position: $134^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 12:06:00 PDT } \\ & \text { 19:06-GMT } \end{aligned}$ | Blow <br> Position: $149^{\circ}$ / 946 m Direction: West; Behavior: Slow travel | Inside |
| Apr 17 Total 3 Calves 1 |  | Gray whale (northbound) |  |  |
| Day 66 of 98 |  |  |  |  |
| Sighting Number | 04 | Fair - 3 | Total 1 - 0 Calves at sighting |  |
|  |  | $\begin{aligned} & \text { 9:39:00 PDT } \\ & \text { 16:39-GMT } \end{aligned}$ | Boat / Blow <br> Position: $127^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 9:47:00 PDT } \\ & \text { 16:47-GMT } \end{aligned}$ | Blow <br> Position: $129^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | $\begin{aligned} & \text { 9:54:00 PDT } \\ & \text { 16:54-GMT } \end{aligned}$ | Blow <br> Position: $134^{\circ}$ / 3528 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 10:01:00 PDT } \\ & \text { 17:01-GMT } \end{aligned}$ | Blow <br> Position: $137^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | $\begin{aligned} & \text { 10:08:00 PDT } \\ & \text { 17:08-GMT } \end{aligned}$ | Blow <br> Position: $144^{\circ} / 2260$ m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 10:15:00 PDT } \\ & \text { 17:15-GMT } \end{aligned}$ | Blow <br> Position: $156^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 10:18:00 PDT } \\ & \text { 17:18-GMT } \end{aligned}$ | Blow <br> Position: $164^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | $\begin{aligned} & \text { 10:24:00 PDT } \\ & \text { 17:24-GMT } \end{aligned}$ | Blow <br> Position: $184^{\circ}$ / 1483 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | $\begin{aligned} & \text { 10:31:00 PDT } \\ & \text { 17:31-GMT } \end{aligned}$ | Blow <br> Position: $216^{\circ}$ / 1483 m Direction: West; Behavior: Slow travel • Fluke |  |
|  |  | $\begin{aligned} & \text { 10:40:00 PDT } \\ & \text { 17:40-GMT } \end{aligned}$ | Blow <br> Position: $240^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 08 | Fair-4 |  |  |
|  |  | $\begin{aligned} & \text { 12:04:00 PDT } \\ & \text { 19:04-GMT } \end{aligned}$ | Body <br> Position: $226^{\circ}$ / 377 m Direction: West; Behavior: Slow travel | Inside |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals | Quality-Beaufort |  |
| :---: | :---: | :---: |
|  | Time | CueTip / Saw Route Past Holly |
|  | 17:19:00 PDT | Blow |
|  | 0:19; 4/19/2013-GMT | Position: $173^{\circ} / 661 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
|  | 17:24:00 PDT | Blow |
|  | 0:24; 4/19/2013-GMT | Position: $224^{\circ}$ / 600 m Direction: West; Behavior: Slow travel |
| Sighting NumberImages: 3012-3037 | Fair - 3 | Total 2 - 1 Calf at sighting |
|  | 17:18:00 PDT | - / Blow |
|  | 0:18; 4/19/2013-GMT | Position: 99 / 3088 m Direction: West; Behavior: Slow travel |
|  | 17:21:00 PDT | Blow |
|  | 0:21; 4/19/2013-GMT | Position: 103 / 3088 m Direction: West; Behavior: Slow travel |
|  | Calf on ocean side |  |
|  | 17:33:00 PDT | Blow |
|  | 0:33;4/19/2013-GMT | Position: 109 / 1922 m Direction: West; Behavior: Slow travel |
|  | Calf on shore side |  |
|  | 17:41:00 PDT | Blow |
|  | 0:41; 4/19/2013-GMT | Position: $117^{\circ} / 1331 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
|  | 17:50:00 PDT | Blow |
|  | 0:50; 4/19/2013-GMT | Position: 153 / 661 m Direction: West; Behavior: Slow travel |
| Apr 19 Total 4 Calves 2 | Gray whale (northbound) |  |
| Day 68 of 98 |  |  |
| Sighting Number | Fair - 1 | Total 2 - 1 Calf at sighting |
| Images: 3039-3151 | 9:34:00 PDT | SD / Blow |
|  | 16:34-GMT | Position: $124^{\circ}$ / 883 m Direction: West; Behavior: Slow travel |
|  | Special pair - special experience. Picked up whales just off IV kelp to east of us - probably because of haze and glare at Campus Point. We saw the pair traveling along the kelp, moving very slowly. The calf surfaced frequently. We saw a lot of rolling, indicating possible nursing. We saw them stop a few times, while the calf spyhopped. The calf did a mini-breach as they were traveling. |  |
|  | 9:39:00 PDT | Body |
|  | 16:39-GMT | Position: $145^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
|  | 9:47:00 PDT | Body |
|  | 16:47-GMT | Position: $169^{\circ} / 550 \mathrm{~m}$ Direction: West; Behavior: Slow travel $\bullet$ Breach $\bullet$ Rolling |
|  | Possible nursing |  |
|  | 9:52:00 PDT | Body |
|  | 16:52-GMT | Position: 190 / 539 m Direction: West; Behavior: Slow travel |
|  | 9:58:00 PDT | Body |
|  | 16:58-GMT | Position: 199 / 489 m Direction: West; Behavior: Slow travel |
|  | 10:00:00 PDT | Body |
|  | 17:00-GMT | Position: 202 / 489 m Direction: West; Behavior: Slow travel • Spyhop |
|  | 10:07:00 PDT | Body |
|  | 17:07-GMT | Position: $235^{\circ} / 471 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
|  | 10:13:00 PDT | Body Inside |
|  | 17:13-GMT | Position: $263^{\circ}$ / 600 m Direction: West; Behavior: Slow travel |



2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


| 14:09:00 PDT | Blow |  |
| :---: | :---: | :---: |
| 21:09-GMT | Position: $106^{\circ} / 1922$ m Direction: West; Behavior: Slow travel |  |
| 14:13:00 PDT | Blow |  |
| 21:13-GMT | Position: $107^{\circ} / 1403$ m Direction: West; Behavior: Slow travel |  |
| 14:17:00 PDT | Blow |  |
| 21:17-GMT | Position: 108 / 1106 m Direction: West; Behavior: Slow travel |  |
| 14:22:00 PDT | Blow |  |
| 21:22-GMT | Position: 108 / 1483 m Direction: East; Behavior: Slow travel |  |
| 14:27:00 PDT | Blow |  |
| 21:27-GMT | Position: $109^{\circ} / 1106$ m Direction: West; Behavior: Slow travel |  |
| 14:30:00 PDT | Blow |  |
| 21:30-GMT | Position: $111^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| 14:35:00 PDT | Blow |  |
| 21:35-GMT | Position: $126^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| 14:39:00 PDT | Blow |  |
| 21:39-GMT | Position: $174{ }^{\circ} / 338$ m Direction: West; Behavior: Slow travel |  |
| 14:41:00 PDT | Blow |  |
| 21:41-GMT | Position: $221^{\circ}$ / 366 m Direction: West; Behavior: Slow travel |  |
| 14:44:00 PDT | Blow |  |
| 21:44-GMT | Position: 246 / 539 m Direction: West; Behavior: Slow travel |  |
| 14:47:00 PDT | Blow | Inside |
| 21:47-GMT | Position: $274{ }^{\circ} / 600$ m Direction: West; Behavior: Slow travel |  |




Apr 22 Total 12 Calves 6 Gray whale (northbound)
Day 71 of 98


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



| 15:12:00 PDT | Blow |
| :---: | :---: |
| 22:12-GMT | Position: 105 / 2749 m Direction: West; Behavior: Slow travel |
| 15:17:00 PDT | Blow |
| 22:17-GMT | Position: 106 / 2260 m Direction: West; Behavior: Slow travel |
| 15:22:00 PDT | Blow |
| 22:22-GMT | Position: 108 / 2260 m Direction: West; Behavior: Slow travel |
| 15:24:00 PDT | Blow |
| 22:24-GMT | Position: 106 / 2260 m Direction: West; Behavior: Slow travel |
| 15:25:00 PDT | Blow |
| 22:25-GMT | Position: 105 / 1922 m Direction: West; Behavior: Slow travel |
| 15:29:00 PDT | Blow |
| 22:29-GMT | Position: 106 / 1483 m Direction: West; Behavior: Slow travel |
| 15:32:00 PDT | Blow |
| 22:32-GMT | Position: 104 / 1106 m Direction: West; Behavior: Slow travel |
| 15:34:00 PDT | Blow |
| 22:34-GMT | Position: 104 / 883 m Direction: West; Behavior: Slow travel |
| 15:36:00 PDT | Blow |
| 22:36-GMT | Position: 107 / 778 m Direction: West; Behavior: Slow travel |
| 15:42:00 PDT | Body |
| 22:42-GMT | Position: $125^{\circ} / 574$ m Direction: West; Behavior: Slow travel |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: |
|  | Time | CueTip / Saw | Route Past Holly |
|  | 15:44:00 PDT | Blow |  |
|  | 22:44-GMT | Position: $132^{\circ} / 471 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  | 15:46:00 PDT | Body |  |
|  | 22:46-GMT | Position: $139^{\circ}$ / 356 m Direction: West; Behavior: Slow travel |  |
|  | 15:47:00 PDT | Body |  |
|  | 22:47-GMT | Position: 149 / 356 m Direction: West; Behavior: Slow travel |  |
|  | 15:49:00 PDT | Body |  |
|  | 22:49-GMT | Position: 184 / 314 m Direction: West; Behavior: Slow travel |  |
|  | 15:51:00 PDT | Body |  |
|  | 22:51-GMT | Position: $224^{\circ}$ / 314 m Direction: West; Behavior: Slow travel |  |
|  | 15:51:00 PDT | Body |  |
|  | 22:51-GMT | Position: 228 / 314 m Direction: West; Behavior: Slow travel |  |
|  | 15:54:00 PDT | Body |  |
|  | 22:54-GMT | Position: $234^{\circ} / 489 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  | 15:58:00 PDT | Blow |  |
|  | 22:58-GMT | Position: 274 / 539 m Direction: West; Behavior: Slow travel |  |
|  | 15:59:00 PDT |  | Inside |
|  | 22:59-GMT | Position: $284^{\circ}$ / 489 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | Good - 1 | Total $2-1$ Calf at sighting |  |
| Images: 3729-3787 | 16:50:00 PDT | - / Blow |  |
|  | 23:50-GMT | Position: $99^{\circ} / 3088 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  | 16:55:00 PDT | Blow |  |
|  | 23:55-GMT | Position: 102 / 3088 m Direction: West; Behavior: Slow travel |  |
|  | 16:58:00 PDT | Blow |  |
|  | 23:58-GMT | Position: 104 / 3088 m Direction: West; Behavior: Slow travel |  |
|  | 17:01:00 PDT | Blow |  |
|  | 0:01; 4/23/2013-GMT | Position: 106 / 2749 m Direction: West; Behavior: Slow travel |  |
|  | 17:08:00 PDT | Blow |  |
|  | 0:08; 4/23/2013-GMT | Position: 104 / 2260 m Direction: West; Behavior: Slow travel |  |
|  | 17:12:00 PDT | Blow |  |
|  | 0:12; 4/23/2013-GMT | Position: 107 $/ 1922$ m Direction: West; Behavior: Slow travel |  |
|  | 17:16:00 PDT | Blow |  |
|  | 0:16; 4/23/2013-GMT | Position: 110 / 1922 m Direction: West; Behavior: Slow travel |  |
|  | 17:18:00 PDT | Blow |  |
|  | 0:18;4/23/2013-GMT | Position: 110 $/ 1403 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  | 17:23:00 PDT | Blow |  |
|  | 0:23; 4/23/2013-GMT | Position: 112 / 913 m Direction: West; Behavior: Slow travel |  |
|  | 17:27:00 PDT | Blow |  |
|  | 0:27; 4/23/2013-GMT | Position: 121 / 913 m Direction: West; Behavior: Slow travel |  |
|  | 17:31:00 PDT | Blow |  |
|  | 0:31; 4/23/2013-GMT | Position: 154 / 412 m Direction: West; Behavior: Slow travel |  |
|  | 17:34:00 PDT | Blow |  |
|  | 0:34; 4/23/2013-GMT | Position: $197^{\circ} / 366$ m Direction: West; Behavior: Slow travel |  |




2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Route Past Holly |
|  |  | 11:29:00 PDT | Body |  |
|  |  | 18:29-GMT | Position: 157 $/ 574$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:32:00 PDT | Body |  |
|  |  | 18:32-GMT | Position: $179^{\circ} / 574$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:33:00 PDT | Body |  |
|  |  | 18:33-GMT | Position: $193^{\circ} / 574$ m Direction: West; Behavior: Slow travel |  |
|  |  | 11:38:00 PDT | Body | Inside |
|  |  | 18:38-GMT | Position: $249^{\circ}$ / 600 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 16 | Fair - 1 | Total 1 - 0 Calves at sighting |  |
|  |  | 11:43:00 PDT | - / Blow |  |
|  |  | 18:43-GMT | Position: $106^{\circ} / 2749 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 11:56:00 PDT | Blow |  |
|  |  | 18:56-GMT | Position: $108^{\circ} / 2260$ m Direction: West; Behavior: Slow travel |  |
|  |  | 12:01:00 PDT | Blow |  |
|  |  | 19:01-GMT | Position: $113^{\circ} / 2260 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:05:00 PDT | Blow |  |
|  |  | 19:05-GMT | Position: $120^{\circ}$ / 1403 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:13:00 PDT | Blow |  |
|  |  | 19:13-GMT | Position: $146^{\circ}$ / 883 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:19:00 PDT | Blow | Inside |
|  |  | 19:19-GMT | Position: $228^{\circ}$ / 661 m Direction: West; Behavior: Slow travel |  |
| Sighting Number Images: none | 19 | Fair - 1 | Total 2 - 1 Calf at sighting |  |
|  |  | 12:37:00 PDT | - / Blow |  |
|  |  | 19:37-GMT | Position: 103 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:39:00 PDT | Blow |  |
|  |  | 19:39-GMT | Position: 103 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:46:00 PDT | Blow |  |
|  |  | 19:46-GMT | Position: 107 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:49:00 PDT | Blow |  |
|  |  | 19:49-GMT | Position: 107 / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:53:00 PDT | Blow |  |
|  |  | 19:53-GMT | Position: $110^{\circ} / 1674 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 20 | Fair - 1 | Total 2 - 1 Calf at sighting |  |
| Images: 4191-98, 4210-13 |  | 12:38:00 PDT | - / Body |  |
|  |  | 19:38-GMT | Position: 99\% / m Direction: West; Behavior: Slow travel |  |
|  |  | 12:45:00 PDT | Blow |  |
|  |  | 19:45-GMT | Position: $102^{\circ} / 2749 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:58:00 PDT | Blow |  |
|  |  | 19:58-GMT | Position: 114 / 1331 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:04:00 PDT | Body |  |
|  |  | 20:04-GMT | Position: $128^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 13:07:00 PDT | Blow |  |
|  |  | 20:07-GMT | Position: 144 / 600 m Direction: West; Behavior: Slow travel |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Time | CueTip / Saw | Route Past Holly |
|  |  | 13:09:00 PDT | Body |  |
|  |  | 20:09-GMT | Position: $160^{\circ} / 629 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 13:14:00 PDT | Body |  |
|  |  | 20:14-GMT | Position: 206 / 412 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:16:00 PDT | Blow |  |
|  |  | 20:16-GMT | Position: $229^{\circ} / 489 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 13:19:00 PDT | Body |  |
|  |  | 20:19-GMT | Position: $259^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 13:21:00 PDT | Body | Inside |
|  |  | 20:21-GMT | Position: $274{ }^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 21 | Fair - 1 | Total 4-2 Calves at sighting |  |
| Images: 4199-4209, 4215-34 |  | 13:08:00 PDT | - / Body |  |
|  |  | 20:08-GMT | Position: 124 / 629 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:10:00 PDT | Body |  |
|  |  | 20:10-GMT | Position: 131 / 629 m Direction: West; Behavior: Slow travel |  |
|  |  | through slip stream |  |  |
|  |  | 13:13:00 PDT | Body |  |
|  |  | 20:13-GMT | Position: $134^{\circ} / 508 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 13:20:00 PDT | Body |  |
|  |  | 20:20-GMT | Position: $229^{\circ} / 489 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 13:24:00 PDT | Blow |  |
|  |  | 20:24-GMT | Position: $273^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | inside stick |  |  |
|  |  | 13:26:00 PDT | Body | Inside |
|  |  | 20:26-GMT | Position: $280^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | with dolphins and | sealions |  |
| Sighting Number | 34 | Fair - 3 | Total 2-1 Calf at sighting |  |
| Images: 4258-4299 |  | 16:37:00 PDT | - / Blow |  |
|  |  | 23:37-GMT | Position: 108 / 253 m Direction: West; Behavior: Slow travel |  |
|  |  | 16:43:00 PDT | Body |  |
|  |  | 23:43-GMT | Position: $109^{\circ} / 1331$ m Direction: West; Behavior: Slow travel |  |
|  |  | 16:49:00 PDT | Blow |  |
|  |  | 23:49-GMT | Position: $126^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 16:56:00 PDT | Body |  |
|  |  | 23:56-GMT | Position: $159^{\circ} / 314 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 16:57:00 PDT | Blow |  |
|  |  | 23:57-GMT | Position: 184 / 356 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:02:00 PDT | Blow | Inside |
|  |  | 0:02; 4/26/2013-GMT | Position: 244 / 661 m Direction: West; Behavior: Slow travel |  |
| Sighting Number | 35 | Fair - 3 | Total 2-1 Calf at sighting |  |
| Images: 4301-30 |  | 16:51:00 PDT | - / Blow |  |
|  |  | 23:51-GMT | Position: 104 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:02:00 PDT | Blow |  |
|  |  | 0:02; 4/26/2013-GMT | Position: $108^{\circ} / 1331$ m Direction: West; Behavior: Slow travel |  |



| Daily Totals | Quality-Beaufort |  |
| :---: | :---: | :---: |
|  | Time | CueTip / Saw Route Past Holly |
|  | 9:46:00 PDT | Blow |
|  | 16:46-GMT | Position: $108^{\circ} / 1208 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
|  | 9:49:00 PDT | Blow |
|  | 16:49-GMT | Position: 110 / 946 m Direction: West; Behavior: Slow travel |
|  | 9:54:00 PDT | Blow |
|  | 16:54-GMT | Position: $124^{\circ} / 678 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
|  | 9:58:00 PDT | Blow |
|  | 16:58-GMT | Position: 144 / 412 m Direction: West; Behavior: Slow travel |
|  | 10:00:00 PDT | Blow |
|  | 17:00-GMT | Position: $185^{\circ}$ / 356 m Direction: West; Behavior: Slow travel |
|  | 10:02:00 PDT | Blow |
|  | 17:02-GMT | Position: $221^{\circ}$ / 382 m Direction: West; Behavior: Slow travel |
|  | 10:07:00 PDT | Body |
|  | 17:07-GMT | Position: 248 / 661 m Direction: West; Behavior: Slow travel |
|  | 10:10:00 PDT | Body |
|  | 17:10-GMT | Position: $278{ }^{\circ}$ / 778 m Direction: West; Behavior: Slow travel |
|  | 10:15:00 PDT | Blow Inside |
|  | 17:15-GMT | Position: $292^{\circ}$ / 1208 m Direction: West; Behavior: Slow travel |
| Sighting NumberImages: 4404-6 | Good-0 | Total 2-1 Calf at sighting |
|  | 10:38:00 PDT | - / Body |
|  | 17:38-GMT | Position: $146^{\circ} / 678 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
|  | saw outside the kelp outside of slip stream traveling slowly - mother's big blow followed by her back and the calf's head then blow and back. This pair was difficult to track and was not seen again for a while - did not spend much time surfacing. Saw make a turn around Sands kelp-traveled toward Ellwood inside the stick |  |
|  | 10:47:00 PDT | Body Inside |
|  | 17:47-GMT | Position: $144^{\circ} / 661 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
| Sighting Number | Good - 0 | Total 2-1 Calf at sighting |
| Images: 4421-4443 | 11:09:00 PDT | - / Blow |
|  | 18:09-GMT | Position: $102^{\circ} / 3088 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
|  | first seen outside IV kelp - they surfaced a few times, then we did not see them again until they were in front of us. We last saw them a little past Holly - didn't show much when they surfaced. |  |
|  | 11:14:00 PDT | Blow |
|  | 18:14-GMT | Position: 104 / 3088 m Direction: West; Behavior: Slow travel |
|  | 11:21:00 PDT | Blow |
|  | 18:21-GMT | Position: $107^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |
|  | 11:24:00 PDT | Blow |
|  | 18:24-GMT | Position: $111^{\circ} / 1674 \mathrm{~m}$ Direction: West; Behavior: Slow travel |
|  | 11:32:00 PDT | Blow |
|  | 18:32-GMT | Position: 110 / 1483 m Direction: West; Behavior: Slow travel |
|  | 11:41:00 PDT | Blow |
|  | 18:41-GMT | Position: 159 / 661 m Direction: West; Behavior: Slow travel |
|  | 11:46:00 PDT | Blow |
|  | 18:46-GMT | Position: 214 / 550 m Direction: West; Behavior: Slow travel |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



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2013 Gray Whales (northbound) Sighting + Tracking, On-Effort


2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  | Route Past Holly |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Time | CueTip / Saw |  |
|  |  | 12:42:00 PDT | Body |  |
|  |  | 19:42-GMT | Position: $224^{\circ}$ / 447 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:46:00 PDT | Blow | Inside |
|  |  | 19:46-GMT | Position: $264^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | Inside of the stick |  |  |
| Sighting Number | 10 | Poor - 1 | Total 2 - 1 Calf at sighting |  |
| Images: 4873-4911 |  | 11:55:00 PDT | - / Blow |  |
|  |  | 18:55-GMT | Position: $100^{\circ} / 3088 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:10:00 PDT | Body |  |
|  |  | 19:10-GMT | Position: 104 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | outside of kelp |  |  |
|  |  | 12:15:00 PDT | Blow |  |
|  |  | 19:15-GMT | Position: 109 / 2260 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:22:00 PDT | Blow |  |
|  |  | 19:22-GMT | Position: $111^{\circ} / 1674 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:24:00 PDT | Blow |  |
|  |  | 19:24-GMT | Position: $115^{\circ} / 1483 \mathrm{~m}$ Direction: West; Behavior: Slow travel $\bullet$ Rolling |  |
|  |  | 12:29:00 PDT | Blow |  |
|  |  | 19:29-GMT | Position: $120^{\circ}$ / 1331 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:34:00 PDT | Blow |  |
|  |  | 19:34-GMT | Position: $126^{\circ}$ / 913 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:38:00 PDT | Blow |  |
|  |  | 19:38-GMT | Position: $140^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:41:00 PDT | Blow |  |
|  |  | 19:41-GMT | Position: $161^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:43:00 PDT | Blow |  |
|  |  | 19:43-GMT | Position: $179^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:45:00 PDT | Blow |  |
|  |  | 19:45-GMT | Position: 194 / 600 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:51:00 PDT | Body |  |
|  |  | 19:51-GMT | Position: $233^{\circ}$ / 539 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:54:00 PDT | Body |  |
|  |  | 19:54-GMT | Position: $248^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 12:56:00 PDT | Blow | Inside |
|  |  | 19:56-GMT | Position: $265^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 17 | Poor-1 | Total 4-2 Calves at sighting |  |
| Images: 4941-5008 |  | 15:04:00 PDT | - / Blow |  |
|  |  | 22:04-GMT | Position: $100^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:08:00 PDT | Blow |  |
|  |  | 22:08-GMT | Position: 100 / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 15:13:00 PDT | Blow |  |
|  |  | 22:13-GMT | Position: $102^{\circ} / 3088 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 15:20:00 PDT | Blow |  |
|  |  | 22:20-GMT | Position: $102^{\circ} / 2749$ m Direction: West; Behavior: Slow travel |  |





2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Time | CueTip / Saw | Route Past Holly |
| Images: 5166-83, 5184-97 |  | $\begin{aligned} & \text { 16:25:00 PDT } \\ & \text { 23:25-GMT } \\ & \text { jet ski traveled thr } \end{aligned}$ | Body <br> Position: $273^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel ough kelp well within whales - no interaction. |  |
|  |  | $\begin{aligned} & \text { 16:28:00 PDT } \\ & 23: 28-G M T \end{aligned}$ | Blow <br> Position: $280^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel | Inside |
| Sighting Number | 16 | Poor-1 | Total 4-1 Calf at sighting |  |
| Images: 5233-5351 |  | $\begin{aligned} & \text { 16:50:00 PDT } \\ & \text { 23:50-GMT } \end{aligned}$ | Position: $100^{\circ} / 3088 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 16:59:00 PDT } \\ & \text { 23:59-GMT } \end{aligned}$ | Position: $103^{\circ}$ / 3088 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:01:00 PDT <br> 0:01; 4/30/2013-GMT | Position: $105^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:04:00 PDT | Blow |  |
|  |  | 0:04; 4/30/2013-GMT | Position: $105^{\circ} / 2749 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 17:09:00 PDT | Blow |  |
|  |  | 0:09; 4/30/2013-GMT | Position: $107^{\circ}$ / 1922 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:13:00 PDT | Blow |  |
|  |  | 0:13; 4/30/2013-GMT | Position: 108 / 1483 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:16:00 PDT | Blow |  |
|  |  | 0:16; 4/30/2013-GMT | Position: 109 / 1403 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:22:00 PDT | Blow |  |
|  |  | 0:22; 4/30/2013-GMT | Position: $119^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:24:00 PDT | Body |  |
|  |  | 0:24; 4/30/2013-GMT | Position: $131^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 17:25:00 PDT | Body |  |
|  |  | 0:25; 4/30/2013-GMT | Position: 136 / 600 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:27:00 PDT | Blow |  |
|  |  | 0:27; 4/30/2013-GMT | Position: 154 / 600 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:28:00 PDT | Body |  |
|  |  | 0:28; 4/30/2013-GMT | Position: $163^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 17:33:00 PDT | Body |  |
|  |  | 0:33; 4/30/2013-GMT | Position: $168^{\circ} / 600$ m Direction: West; Behavior: Slow travel |  |
|  |  | 17:43:00 PDT | Blow | Inside |
|  |  | 0:43; 4/30/2013-GMT | Position: $239^{\circ} / 489 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
| Sighting Number | 17 | Poor - 1 | Total 4-2 Calves at sighting |  |
| Images: 5199-5230 |  | 17:13:00 PDT | - / Body |  |
|  |  | 0:13; 4/30/2013-GMT | Position: $134^{\circ} / 778 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 17:16:00 PDT | Body |  |
|  |  | 0:16; 4/30/2013-GMT | Position: 158 / 600 m Direction: West; Behavior: Slow travel |  |
|  |  | 17:17:00 PDT | Body |  |
|  |  | 0:17; 4/30/2013-GMT | Position: $166^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | 17:19:00 PDT | Body |  |
|  |  | 0:19; 4/30/2013-GMT | Position: $182^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |

2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



## 2013 Gray Whales (northbound) Sighting + Tracking, On-Effort






2013 Gray Whales (northbound) Sighting + Tracking, On-Effort



2013 Gray Whales (northbound) Sighting + Tracking, On-Effort

|  | Quality-Beaufort <br> Daily Totals | CueTip $/$ Saw |
| :--- | :--- | :--- |$\quad$ Route Past Holly




May 13 Total 2 Calves $1 \quad$ Gray whale (northbound)

| Daily Totals |  | Quality-Beaufort |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Sighting NumberImages: 6588-96 | 13 | Fair - 3 | Total 2 - 1 Calf at sighting |  |
|  |  | Saw few times - along kelp at Campus Point - towards us surfaced twice - calf surfaced through slip stream - saw next at 237 in corner of Sands kelp - then inside stick and then they were gone. |  | ough slip <br> e. |
|  |  | $\begin{aligned} & \text { 12:45:00 PDT } \\ & \text { 19:45-GMT } \end{aligned}$ | Blow <br> Position: $102^{\circ}$ / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | 12:49:00 PDT <br> 19:49-GMT | Blow <br> Position: 104 / 2749 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 12:59:00 PDT } \\ & \text { 19:59-GMT } \end{aligned}$ | Blow <br> Position: $112^{\circ}$ / 1483 m Direction: West; Behavior: Slow travel |  |
|  |  | 13:03:00 PDT <br> 20:03-GMT | Blow <br> Position: $115^{\circ}$ / 913 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 13:07:00 PDT } \\ & \text { 20:07-GMT } \end{aligned}$ | Blow <br> Position: $126^{\circ}$ / 539 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 13:15:00 PDT } \\ & \text { 20:15-GMT } \end{aligned}$ | Blow <br> Position: $256^{\circ}$ / 696 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 13:18:00 PDT } \\ & \text { 20:18-GMT } \\ & \text { inside of stick } \end{aligned}$ | Body <br> Position: $279^{\circ}$ / 827 m Direction: West; Behavior: Slow travel | Inside |
| May 14 Total 2 Calves 1 |  | Gray whale (northbound) |  |  |
| Day 93 of 98 |  |  |  |  |
| Sighting Number | 04 | Fair - 3 | Total 2 - 1 Calf at sighting |  |
| Images: 6640-91 |  | Possible large white area on cow behind dorsal ridge on right side, observed underwater. @ 120 calf emerged head first. Thought we saw blow at Campus Point - UCSB research vessel \#3 traveled over path of animal, then we saw blow behind the vessel, followed by a fairly long downtime. The pair approached us, traveling along the kelp outside of slip stream - stopped for a bit where the calf surfaced quite a few times, possibly nursing. After IV kelp and slip stream kelp they traveled a bit outside of Sands kelp and just outside of the stick. |  |  |
|  |  | 10:00:00 PDT | Blow |  |
|  |  | 17:00-GMT |  |  |
|  |  | $\begin{aligned} & \text { 10:06:00 PDT } \\ & \text { 17:06-GMT } \end{aligned}$ | Blow <br> Position: $112^{\circ}$ / 1403 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 10:13:00 PDT } \\ & \text { 17:13-GMT } \\ & \text { calf head at } 120 \end{aligned}$ | Blow <br> Position: $129^{\circ}$ / 696 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 10:18:00 PDT } \\ & \text { 17:18-GMT } \end{aligned}$ | Blow <br> Position: $148^{\circ} / 600 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 10:33:00 PDT } \\ & \text { 17:33-GMT } \end{aligned}$ | Blow <br> Position: $267^{\circ}$ / 1106 m Direction: West; Behavior: Slow travel |  |
|  |  | $\begin{aligned} & \text { 10:37:00 PDT } \\ & \text { 17:37-GMT } \end{aligned}$ | Blow <br> Position: $276^{\circ}$ / 1403 m Direction: West; Behavior: Slow travel | Inside |

May 15 Total 2 Calves 1 Gray whale (northbound)
Day 94 of 98




18:11-GMT Position: $284^{\circ}$ / 778 m Direction: West; Behavior: Slow travel

| 11:13:00 PDT | Blow | Inside |
| :--- | :--- | :--- |
| 18:13-GMT | Position: $292^{\circ} / 913 \mathrm{~m}$ Direction: West; Behavior: Slow travel |  |

