



Point Blue Conservation Science (*formerly PRBO*)
3820 Cypress Drive Suite 11
Petaluma, CA 94954
707.781.2555 pointblue.org

Conservation Science for a healthy planet.

March 22, 2019

Robert Pauline
Permits, Conservation, and Education Division
National Marine Fisheries Service (NMFS)
Office of Protected Resources
1315 East-West Highway
Silver Spring, MD 20910-3226

Dear Robert,

Please find enclosed a summary report of pinniped takes from the Incidental Harassment Authorization (IHA) issued to Point Blue Conservation Science (*formerly PRBO*), Oikonos Ecosystem Knowledge, and Point Reyes National Seashore for the period of January 1, 2018 to December 31, 2018. This IHA supports central California seabird research and related operations on Southeast Farallon Island, Año Nuevo Island, and Point Reyes National Seashore.

Marine mammal species that were impacted by these activities include the California stocks of northern elephant seal (*Mirounga angustirostris*), harbor seal (*Phoca vitulina richardii*), Steller sea lion (*Eumetopias jubatus*), and California sea lion (*Zalophus californianus*). All sites reported less than requested take, and no stampede takes were reported at any site. Table 1 summarizes total take numbers for Southeast Farallon Island; Table 2 and 3 show similar results for Año Nuevo Island and Point Reyes National Seashore. Table 4 shows the total take for all sites covered by this IHA as well as the authorized take for comparison. Additional directed take to prevent damage to critical infrastructure and ensure human safety was conducted in accordance with sections 101(a)(4) or 109(h) of the MMPA, but those numbers are not reported here.

Appendix 1 lists all take for Southeast Farallon Island, by date, location, species, type and number of takes, and activity during which the take was recorded. Appendix 2 and 3 are similar summaries for Año Nuevo Island and Point Reyes National Seashore. No takes were reported from Point Reyes National Seashore.

Thank you for reviewing this report, we look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, appearing to read "Pete Warzybok".

Pete Warzybok
Senior Marine Ecologist/Farallon Program Leader
Point Blue Conservation Science
pwarzybok@pointblue.org

Table 1. Summary of total IHA take numbers by species from Point Blue on Southeast Farallon Island 1/1/2018 to 12/31/2018.

Species	Total Takes
Northern Elephant Seal (ES)	13
Harbor Seal (HS)	204
Steller Sea Lion (SSL)	37
California Sea Lion (CSL)	16,885

Table 2. Summary of total IHA take numbers by species from Oikonos on Año Nuevo Island 1/1/2018 to 12/31/2018.

Species	Total Takes
Northern Elephant Seal (ES)	72
Harbor Seal (HS)	5
Steller Sea Lion (SSL)	0
California Sea Lion (CSL)	602

Table 3. Summary of total IHA take numbers by species from National Parks Service at Point Reyes National Seashore 1/1/2018 to 12/31/2018.

Species	Total Takes
Northern Elephant Seal (ES)	0
Harbor Seal (HS)	20
Steller Sea Lion (SSL)	0
California Sea Lion (CSL)	0

Table 4. Grand totals for all permitted take allowed under this Incidental Harassment Authorization from 1/1/2018 to 12/31/2018.

Species	Total Takes	Authorized Take
Northern Elephant Seal (ES)	85	239
Harbor Seal (HS)	229	304
Steller Sea Lion (SSL)	37	43
California Sea Lion (CSL)	17,487	32,623

Appendix 1. All Point Blue IHA take by date, species, location, type of take, and activity from Southeast Farallon Island 1/1/2018 to 12/31/2018.

Date	Species	Location	Level 3 take (flushed)	Level 2 take (move >1 m)	Activity
1/3/2018	CSL	Pinniped Colony	1		Daily Operations
1/6/2018	CSL	Pinniped Colony	2		Daily Operations
1/9/2018	CSL	Pinniped Colony		1	Daily Operations
1/17/2018	CSL	Pinniped Colony	1		Daily Operations
1/28/2018	CSL	Pinniped Colony	1		Daily Operations
1/29/2018	CSL	Pinniped Colony		1	Daily Operations
2/2/2018	CSL	Pinniped Colony		1	Daily Operations
2/4/2018	CSL	Pinniped Colony	1		Daily Operations
2/13/2018	CSL	Pinniped Colony	1		Daily Operations
2/13/2018	CSL	Pinniped Colony	1		Daily Operations
2/15/2018	CSL	Pinniped Colony		2	Daily Operations
2/17/2018	CSL	Pinniped Colony	1		Daily Operations
2/17/2018	CSL	Pinniped Colony	1		Daily Operations
2/21/2018	CSL	Pinniped Colony	1		Daily Operations
2/24/2018	CSL	Pinniped Colony	1		Daily Operations
2/25/2018	CSL	Pinniped Colony		1	Daily Operations
2/26/2018	CSL	Pinniped Colony		1	Daily Operations
2/27/2018	CSL	Pinniped Colony	364		Daily Operations
2/28/2018	CSL	Pinniped Colony	216		Daily Operations
3/2/2018	CSL	Pinniped Colony	3		Daily Operations
3/4/2018	CSL	Pinniped Colony		5	Daily Operations
3/11/2018	CSL	Pinniped Colony	1		Daily Operations
3/13/2018	CSL	Pinniped Colony	75		Daily Operations
3/16/2018	CSL	Pinniped Colony	1		Daily Operations
5/19/2018	CSL	Pinniped Colony	6		Daily Operations
5/27/2018	CSL	Pinniped Colony	2	3	Daily Operations
5/29/2018	CSL	Pinniped Colony	30		Daily Operations
5/30/2018	CSL	North Landing		30	Daily Operations
5/31/2018	CSL	North Landing	10		Daily Operations
6/1/2018	CSL	Pinniped Colony	11		Daily Operations
6/1/2018	CSL	North Landing	8		Daily Operations
6/2/2018	CSL	Pinniped Colony	25		Daily Operations
6/2/2018	CSL	Pinniped Colony	5		Daily Operations
6/5/2018	CSL	Pinniped Colony	15		Daily Operations



Point Blue Conservation Science (formerly PRBO)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

6/6/2018	CSL	Pinniped Colony	50		Daily Operations
6/8/2018	CSL	Pinniped Colony	35		Daily Operations
6/10/2018	CSL	Pinniped Colony		25	Daily Operations
6/11/2018	CSL	Pinniped Colony	12		Daily Operations
6/11/2018	CSL	North Landing	3		Daily Operations
6/11/2018	CSL	Pinniped Colony		5	Daily Operations
6/11/2018	CSL	North Landing		7	Daily Operations
6/12/2018	CSL	Pinniped Colony	30		Daily Operations
6/13/2018	CSL	Pinniped Colony		3	Daily Operations
6/13/2018	CSL	North Landing	10		Daily Operations
6/13/2018	CSL	Pinniped Colony	6	10	Daily Operations
6/16/2018	CSL	Pinniped Colony	9		Daily Operations
6/16/2018	CSL	Pinniped Colony	10	10	Daily Operations
6/16/2018	CSL	North Landing		10	Daily Operations
6/17/2018	CSL	Pinniped Colony	11		Daily Operations
6/17/2018	CSL	Pinniped Colony	30		Daily Operations
6/17/2018	CSL	North Landing		1	Daily Operations
6/18/2018	CSL	Pinniped Colony	30		Daily Operations
6/18/2018	CSL	Pinniped Colony		1	Daily Operations
6/19/2018	CSL	East Landing	4		Daily Operations
6/20/2018	CSL	North Landing		9	Daily Operations
6/20/2018	CSL	Pinniped Colony	14		Daily Operations
6/21/2018	CSL	East Landing	2		Daily Operations
6/21/2018	CSL	Pinniped Colony	10	5	Daily Operations
6/21/2018	CSL	Pinniped Colony	14		Daily Operations
6/22/2018	CSL	Pinniped Colony	4		Daily Operations
6/23/2018	CSL	Pinniped Colony	25		Daily Operations
6/23/2018	CSL	Pinniped Colony		5	Daily Operations
6/25/2018	CSL	Pinniped Colony		3	Daily Operations
6/26/2018	CSL	Pinniped Colony	30		Daily Operations
6/26/2018	CSL	East Landing	10		Daily Operations
6/27/2018	CSL	East Landing	25		Daily Operations
6/27/2018	CSL	Pinniped Colony		30	Daily Operations
6/27/2018	CSL	Pinniped Colony		15	Daily Operations
6/27/2018	CSL	Sea Lion Cove		12	Daily Operations
6/28/2018	CSL	Pinniped Colony	10		Daily Operations
6/29/2018	CSL	Pinniped Colony	20		Daily Operations
6/30/2018	CSL	Pinniped Colony	25		Daily Operations



Point Blue Conservation Science (formerly PRBO)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

6/30/2018	CSL	Pinniped Colony	5		Daily Operations
7/1/2018	CSL	Pinniped Colony	40		Daily Operations
7/3/2018	CSL	Pinniped Colony		7	Daily Operations
7/5/2018	CSL	Pinniped Colony	16		Daily Operations
7/5/2018	CSL	North Landing		22	Daily Operations
7/6/2018	CSL	Pinniped Colony		25	Daily Operations
7/6/2018	CSL	Sea Lion Cove		2	Daily Operations
7/7/2018	CSL	East Landing	3		Daily Operations
7/7/2018	CSL	North Landing		8	Daily Operations
7/7/2018	CSL	Pinniped Colony	15		Daily Operations
7/10/2018	CSL	North Landing		4	Daily Operations
7/11/2018	CSL	Pinniped Colony	14		Daily Operations
7/11/2018	CSL	North Landing	1	16	Daily Operations
7/11/2018	CSL	Pinniped Colony		8	Daily Operations
7/11/2018	CSL	Pinniped Colony		10	Daily Operations
7/12/2018	CSL	Pinniped Colony	15		Daily Operations
7/13/2018	CSL	North Landing	50		Daily Operations
7/14/2018	CSL	North Landing	2		Daily Operations
7/15/2018	CSL	Pinniped Colony	2		Daily Operations
7/15/2018	CSL	Pinniped Colony	3		Daily Operations
7/16/2018	CSL	Pinniped Colony	9		Daily Operations
7/18/2018	CSL	Sea Lion Cove		60	Daily Operations
7/18/2018	CSL	Pinniped Colony	15		Daily Operations
7/19/2018	CSL	North Landing		25	Daily Operations
7/19/2018	CSL	Pinniped Colony	4		Daily Operations
7/19/2018	CSL	Pinniped Colony	6		Daily Operations
7/20/2018	CSL	Pinniped Colony		50	Daily Operations
7/20/2018	CSL	Pinniped Colony		1	Daily Operations
7/21/2018	CSL	Pinniped Colony	1	3	Daily Operations
7/22/2018	CSL	Pinniped Colony		35	Daily Operations
7/22/2018	CSL	Pinniped Colony		6	Daily Operations
7/23/2018	CSL	Pinniped Colony	80		Daily Operations
7/23/2018	CSL	Pinniped Colony	3	30	Daily Operations
7/23/2018	CSL	Pinniped Colony	65		Daily Operations
7/24/2018	CSL	North Landing		5	Daily Operations
7/24/2018	CSL	Pinniped Colony		20	Daily Operations
7/24/2018	CSL	Pinniped Colony	10		Daily Operations
7/24/2018	CSL	Pinniped Colony		40	Daily Operations



Point Blue Conservation Science (formerly PRBO)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

7/25/2018	CSL	Pinniped Colony		40	Daily Operations
7/25/2018	CSL	Pinniped Colony		50	Daily Operations
7/26/2018	CSL	Pinniped Colony		30	Daily Operations
7/26/2018	CSL	Pinniped Colony		50	Daily Operations
7/27/2018	CSL	Pinniped Colony		70	Daily Operations
7/27/2018	CSL	Pinniped Colony	20		Daily Operations
7/28/2018	CSL	Pinniped Colony		90	Daily Operations
7/28/2018	CSL	Pinniped Colony		5	Daily Operations
7/29/2018	CSL	Pinniped Colony		80	Daily Operations
7/29/2018	CSL	Pinniped Colony		7	Daily Operations
7/30/2018	CSL	Pinniped Colony		110	Daily Operations
7/30/2018	CSL	East Landing	19		Daily Operations
7/30/2018	CSL	Pinniped Colony	20		Daily Operations
8/1/2018	CSL	Pinniped Colony		30	Daily Operations
8/1/2018	CSL	Pinniped Colony	1	6	Daily Operations
8/2/2018	CSL	Pinniped Colony		60	Daily Operations
8/2/2018	CSL	Pinniped Colony	2	8	Daily Operations
8/3/2018	CSL	Pinniped Colony		200	Daily Operations
8/3/2018	CSL	Pinniped Colony		6	Daily Operations
8/3/2018	CSL	Pinniped Colony		30	Daily Operations
8/4/2018	CSL	Pinniped Colony		20	Daily Operations
8/4/2018	CSL	Pinniped Colony	30		Daily Operations
8/5/2018	CSL	Pinniped Colony		300	Daily Operations
8/5/2018	CSL	Pinniped Colony		30	Daily Operations
8/5/2018	CSL	Pinniped Colony	12	4	Daily Operations
8/5/2018	CSL	Pinniped Colony		15	Daily Operations
8/6/2018	CSL	Pinniped Colony	7	12	Daily Operations
8/6/2018	CSL	Pinniped Colony		80	Daily Operations
8/6/2018	CSL	Pinniped Colony		600	Daily Operations
8/7/2018	CSL	Pinniped Colony		100	Daily Operations
8/7/2018	CSL	Pinniped Colony		17	Daily Operations
8/8/2018	CSL	Pinniped Colony		40	Daily Operations
8/8/2018	CSL	Pinniped Colony		12	Daily Operations
8/8/2018	CSL	Pinniped Colony	17		Daily Operations
8/8/2018	CSL	Pinniped Colony		3	Daily Operations
8/9/2018	CSL	Pinniped Colony		50	Daily Operations
8/10/2018	CSL	Pinniped Colony	15	20	Daily Operations
8/10/2018	CSL	Pinniped Colony	40		Daily Operations



Point Blue Conservation Science (formerly PRBO)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

8/10/2018	CSL	Pinniped Colony		100	Daily Operations
8/10/2018	CSL	Pinniped Colony		20	Daily Operations
8/11/2018	CSL	Pinniped Colony		120	Daily Operations
8/11/2018	CSL	Pinniped Colony	2	7	Daily Operations
8/11/2018	CSL	Pinniped Colony		50	Daily Operations
8/12/2018	CSL	Pinniped Colony		200	Daily Operations
8/13/2018	CSL	Pinniped Colony		25	Daily Operations
8/14/2018	CSL	Pinniped Colony		120	Daily Operations
8/14/2018	CSL	Pinniped Colony		50	Daily Operations
8/14/2018	CSL	Pinniped Colony		200	Daily Operations
8/15/2018	CSL	Pinniped Colony		40	Daily Operations
8/15/2018	CSL	Pinniped Colony		250	Daily Operations
8/16/2018	CSL	Pinniped Colony		60	Daily Operations
8/17/2018	CSL	Pinniped Colony		150	Daily Operations
8/17/2018	CSL	Pinniped Colony		30	Daily Operations
8/17/2018	CSL	Pinniped Colony		25	Daily Operations
8/18/2018	CSL	Pinniped Colony		60	Daily Operations
8/18/2018	CSL	Pinniped Colony		50	Daily Operations
8/18/2018	CSL	Pinniped Colony		1400	Daily Operations
8/19/2018	CSL	Pinniped Colony	7		Daily Operations
8/19/2018	CSL	Pinniped Colony		30	Daily Operations
8/19/2018	CSL	North Landing		12	Daily Operations
8/19/2018	CSL	Pinniped Colony		400	Daily Operations
8/20/2018	CSL	Pinniped Colony		600	Daily Operations
8/20/2018	CSL	North Landing		12	Daily Operations
8/20/2018	CSL	Pinniped Colony	10	30	Daily Operations
8/20/2018	CSL	Pinniped Colony	2		Daily Operations
8/21/2018	CSL	Pinniped Colony		100	Daily Operations
8/22/2018	CSL	Pinniped Colony		11	Daily Operations
8/22/2018	CSL	Pinniped Colony		200	Daily Operations
8/22/2018	CSL	Sea Lion Cove		100	Daily Operations
8/23/2018	CSL	Pinniped Colony		11	Daily Operations
8/23/2018	CSL	Pinniped Colony		2	Daily Operations
8/23/2018	CSL	Pinniped Colony		80	Daily Operations
8/24/2018	CSL	Pinniped Colony		100	Daily Operations
8/24/2018	CSL	Pinniped Colony		600	Daily Operations
8/25/2018	CSL	Pinniped Colony	200		Daily Operations
8/25/2018	CSL	Pinniped Colony	500		Daily Operations



Point Blue Conservation Science (formerly PRBO)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

8/25/2018	CSL	Pinniped Colony	26		Daily Operations
8/26/2018	CSL	Pinniped Colony		200	Daily Operations
8/26/2018	CSL	Pinniped Colony		400	Daily Operations
8/27/2018	CSL	East Landing	6		Daily Operations
8/27/2018	CSL	Pinniped Colony		50	Daily Operations
8/27/2018	CSL	Pinniped Colony		1200	Daily Operations
8/28/2018	CSL	Pinniped Colony	3	10	Daily Operations
8/28/2018	CSL	Pinniped Colony	20		Daily Operations
8/28/2018	CSL	Pinniped Colony		100	Daily Operations
8/29/2018	CSL	Pinniped Colony		6	Daily Operations
8/29/2018	CSL	Pinniped Colony		2	Daily Operations
8/29/2018	CSL	North Landing		3	Daily Operations
8/30/2018	CSL	Pinniped Colony	8	4	Daily Operations
8/31/2018	CSL	Pinniped Colony	10		Daily Operations
9/1/2018	CSL	Pinniped Colony	12		Daily Operations
9/2/2018	CSL	Pinniped Colony	12		Daily Operations
9/2/2018	CSL	Pinniped Colony		700	Daily Operations
9/3/2018	CSL	Pinniped Colony	5		Daily Operations
9/4/2018	CSL	Pinniped Colony	5		Daily Operations
9/4/2018	CSL	North Landing	20		Daily Operations
9/4/2018	CSL	Pinniped Colony	3		Daily Operations
9/6/2018	CSL	Pinniped Colony		50	Daily Operations
9/7/2018	CSL	Pinniped Colony		400	Daily Operations
9/9/2018	CSL	Pinniped Colony		100	Daily Operations
9/9/2018	CSL	Pinniped Colony	6		Daily Operations
9/11/2018	CSL	Pinniped Colony		100	Daily Operations
9/11/2018	CSL	Pinniped Colony		100	Daily Operations
9/12/2018	CSL	Pinniped Colony	1		Daily Operations
9/12/2018	CSL	Sea Lion Cove		100	Daily Operations
9/12/2018	CSL	Pinniped Colony		50	Daily Operations
9/12/2018	CSL	Sea Lion Cove		50	Daily Operations
9/13/2018	CSL	Pinniped Colony		100	Daily Operations
9/13/2018	CSL	Pinniped Colony		50	Daily Operations
9/14/2018	CSL	Pinniped Colony		5	Daily Operations
9/14/2018	CSL	Pinniped Colony		30	Daily Operations
9/15/2018	CSL	Pinniped Colony		5	Daily Operations
9/16/2018	CSL	Pinniped Colony		75	Daily Operations
9/17/2018	CSL	Pinniped Colony		100	Daily Operations



Point Blue Conservation Science (formerly PRBO)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

9/17/2018	CSL	Pinniped Colony		150	Daily Operations
9/18/2018	CSL	Pinniped Colony		70	Daily Operations
9/19/2018	CSL	North Landing		2	Daily Operations
9/19/2018	CSL	Pinniped Colony		100	Daily Operations
9/22/2018	CSL	Pinniped Colony		200	Daily Operations
9/23/2018	CSL	North Landing	3		Daily Operations
9/23/2018	CSL	Pinniped Colony		90	Daily Operations
9/23/2018	CSL	Pinniped Colony		12	Daily Operations
9/25/2018	CSL	Pinniped Colony		9	Daily Operations
9/26/2018	CSL	Pinniped Colony		25	Daily Operations
9/27/2018	CSL	Pinniped Colony		400	Daily Operations
9/29/2018	CSL	Pinniped Colony		8	Daily Operations
9/30/2018	CSL	Pinniped Colony		40	Daily Operations
10/3/2018	CSL	Sea Lion Cove		10	Daily Operations
10/3/2018	CSL	Pinniped Colony		25	Daily Operations
10/3/2018	CSL	Pinniped Colony	15		Daily Operations
10/5/2018	CSL	Pinniped Colony		15	Daily Operations
10/6/2018	CSL	Pinniped Colony		20	Daily Operations
10/7/2018	CSL	Pinniped Colony		20	Daily Operations
10/9/2018	CSL	Pinniped Colony		70	Daily Operations
10/11/2018	CSL	Pinniped Colony		5	Daily Operations
10/13/2018	CSL	Pinniped Colony		50	Daily Operations
10/14/2018	CSL	Pinniped Colony	3	20	Daily Operations
10/14/2018	CSL	Pinniped Colony		1	Daily Operations
10/15/2018	CSL	Pinniped Colony	2	13	Daily Operations
10/16/2018	CSL	Pinniped Colony		70	Daily Operations
10/17/2018	CSL	Pinniped Colony		30	Daily Operations
10/18/2018	CSL	Pinniped Colony		1	Daily Operations
10/18/2018	CSL	Pinniped Colony		30	Daily Operations
10/20/2018	CSL	Pinniped Colony		30	Daily Operations
10/20/2018	CSL	Pinniped Colony	5	10	Daily Operations
10/22/2018	CSL	North Landing	1		Daily Operations
10/22/2018	CSL	Pinniped Colony	1		Daily Operations
10/22/2018	CSL	Pinniped Colony	10		Daily Operations
10/22/2018	CSL	Pinniped Colony		20	Daily Operations
10/22/2018	CSL	Pinniped Colony	1		Daily Operations
10/24/2018	CSL	Pinniped Colony		5	Daily Operations
10/26/2018	CSL	Pinniped Colony	2		Daily Operations



Point Blue Conservation Science (formerly PRBO)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

10/26/2018	CSL	Pinniped Colony	2		Daily Operations
10/27/2018	CSL	Pinniped Colony		5	Daily Operations
10/28/2018	CSL	Pinniped Colony		30	Daily Operations
10/29/2018	CSL	Pinniped Colony		10	Daily Operations
10/29/2018	CSL	Pinniped Colony		15	Daily Operations
10/30/2018	CSL	North Landing		28	Daily Operations
10/30/2018	CSL	North Landing	2		Daily Operations
10/30/2018	CSL	Pinniped Colony		4	Daily Operations
10/30/2018	CSL	North Landing		1	Daily Operations
10/30/2018	CSL	Pinniped Colony		1	Daily Operations
11/1/2018	CSL	North Landing	1		Daily Operations
11/1/2018	CSL	Pinniped Colony	5		Daily Operations
11/1/2018	CSL	Pinniped Colony		25	Daily Operations
11/2/2018	CSL	Pinniped Colony		10	Daily Operations
11/3/2018	CSL	Pinniped Colony	2		Daily Operations
11/4/2018	CSL	Pinniped Colony		1	Daily Operations
11/4/2018	CSL	Pinniped Colony		15	Daily Operations
11/5/2018	CSL	Pinniped Colony	1		Daily Operations
11/6/2018	CSL	Pinniped Colony	1		Daily Operations
11/6/2018	CSL	Pinniped Colony	1	23	Daily Operations
11/7/2018	CSL	North Landing	1		Daily Operations
11/8/2018	CSL	Pinniped Colony	10	20	Daily Operations
11/8/2018	CSL	Pinniped Colony	20		Daily Operations
11/9/2018	CSL	Pinniped Colony	10	15	Daily Operations
11/9/2018	CSL	Pinniped Colony		5	Daily Operations
11/9/2018	CSL	Pinniped Colony	1	1	Daily Operations
11/13/2018	CSL	Pinniped Colony	5	20	Daily Operations
11/14/2018	CSL	Sea Lion Cove	15		Daily Operations
11/15/2018	CSL	Pinniped Colony	20		Daily Operations
11/16/2018	CSL	Sea Lion Cove	7	5	Daily Operations
11/16/2018	CSL	North Landing	1		Daily Operations
11/18/2018	CSL	Sea Lion Cove	3		Daily Operations
11/20/2018	CSL	Sea Lion Cove	5	10	Daily Operations
11/20/2018	CSL	Pinniped Colony	2		Daily Operations
11/21/2018	CSL	North Landing	2		Daily Operations
11/22/2018	CSL	Pinniped Colony	1		Daily Operations
11/22/2018	CSL	Pinniped Colony		1	Daily Operations
11/23/2018	CSL	North Landing	20		Daily Operations



Point Blue Conservation Science (formerly PRBO)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

11/23/2018	CSL	Pinniped Colony	5		Daily Operations
11/24/2018	CSL	Pinniped Colony		30	Daily Operations
11/24/2018	CSL	Pinniped Colony	1		Daily Operations
11/25/2018	CSL	Pinniped Colony	10		Daily Operations
11/28/2018	CSL	Pinniped Colony	2	1	Daily Operations
11/30/2018	CSL	Pinniped Colony		5	Daily Operations
11/30/2018	CSL	North Landing	7	5	Daily Operations
12/1/2018	CSL	Pinniped Colony		30	Daily Operations
12/3/2018	CSL	Pinniped Colony	1		Daily Operations
12/3/2018	CSL	Pinniped Colony	20	20	Daily Operations
12/3/2018	CSL	Pinniped Colony		10	Daily Operations
12/5/2018	CSL	Sea Lion Cove		2	Daily Operations
12/5/2018	CSL	Pinniped Colony		10	Daily Operations
12/11/2018	CSL	North Landing		1	Daily Operations
12/17/2018	CSL	Pinniped Colony	2	5	Daily Operations
12/17/2018	CSL	Sea Lion Cove		5	Daily Operations
12/17/2018	CSL	Pinniped Colony		30	Daily Operations
12/17/2018	CSL	Pinniped Colony		4	Daily Operations
12/18/2018	CSL	Pinniped Colony		50	Daily Operations
12/18/2018	CSL	Pinniped Colony	3		Daily Operations
12/18/2018	CSL	Pinniped Colony	3		Daily Operations
12/19/2018	CSL	Pinniped Colony	1		Daily Operations
12/19/2018	CSL	Pinniped Colony	5	10	Daily Operations
12/19/2018	CSL	Pinniped Colony	12		Daily Operations
12/24/2018	CSL	Pinniped Colony		20	Daily Operations
12/29/2018	CSL	Pinniped Colony		2	Daily Operations
2/27/2018	SSL	Pinniped Colony	16		Daily Operations
2/28/2018	SSL	Pinniped Colony	14		Daily Operations
7/13/2018	SSL	North Landing	1		Daily Operations
7/25/2018	SSL	Pinniped Colony		1	Daily Operations
9/4/2018	SSL	North Landing	2		Daily Operations
10/22/2018	SSL	Pinniped Colony	2		Daily Operations
11/1/2018	SSL	North Landing	1		Daily Operations
1/2/2018	HS	Pinniped Colony	1		Daily Operations
1/8/2018	HS	Pinniped Colony	1		Daily Operations
1/10/2018	HS	Pinniped Colony	2		Daily Operations
1/17/2018	HS	Pinniped Colony	2		Daily Operations
1/22/2018	HS	Pinniped Colony	2		Daily Operations



Point Blue Conservation Science (formerly PRBO)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

1/25/2018	HS	Pinniped Colony	1		Daily Operations
1/25/2018	HS	Pinniped Colony	1		Daily Operations
1/28/2018	HS	Pinniped Colony	2		Daily Operations
1/29/2018	HS	Pinniped Colony	4		Daily Operations
1/29/2018	HS	Pinniped Colony	2		Daily Operations
1/29/2018	HS	Pinniped Colony	1		Daily Operations
2/2/2018	HS	Pinniped Colony	4		Daily Operations
2/4/2018	HS	Pinniped Colony	1		Daily Operations
2/9/2018	HS	Pinniped Colony	4		Daily Operations
2/18/2018	HS	Pinniped Colony		2	Daily Operations
2/20/2018	HS	Pinniped Colony	1		Daily Operations
2/23/2018	HS	Pinniped Colony	4		Daily Operations
2/24/2018	HS	Pinniped Colony	2	2	Daily Operations
2/25/2018	HS	Pinniped Colony	1		Daily Operations
2/26/2018	HS	Pinniped Colony	12		Daily Operations
2/27/2018	HS	Pinniped Colony	4		Daily Operations
2/28/2018	HS	Pinniped Colony	7		Daily Operations
2/28/2018	HS	Pinniped Colony	4		Daily Operations
3/1/2018	HS	Pinniped Colony	48		Daily Operations
3/6/2018	HS	Pinniped Colony	1	1	Daily Operations
3/6/2018	HS	Pinniped Colony	1		Daily Operations
3/11/2018	HS	Pinniped Colony	3		Daily Operations
3/11/2018	HS	Pinniped Colony	1		Daily Operations
3/27/2018	HS	Pinniped Colony	1		Daily Operations
4/1/2018	HS	Pinniped Colony	6		Daily Operations
4/2/2018	HS	Pinniped Colony	5		Daily Operations
4/4/2018	HS	Pinniped Colony	1		Daily Operations
4/5/2018	HS	Pinniped Colony	1		Daily Operations
4/16/2018	HS	Pinniped Colony	2		Daily Operations
4/24/2018	HS	Pinniped Colony	4		Daily Operations
4/25/2018	HS	Pinniped Colony	5		Daily Operations
5/3/2018	HS	Pinniped Colony	1		Daily Operations
5/19/2018	HS	Pinniped Colony	6		Daily Operations
5/21/2018	HS	Pinniped Colony	1		Daily Operations
5/22/2018	HS	Pinniped Colony	2	4	Daily Operations
6/26/2018	HS	North Landing	2		Daily Operations
6/29/2018	HS	North Landing	1		Daily Operations
7/1/2018	HS	North Landing	1		Daily Operations



Point Blue Conservation Science (*formerly PRBO*)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

7/11/2018	HS	Pinniped Colony	1		Daily Operations
7/13/2018	HS	North Landing	2		Daily Operations
7/19/2018	HS	North Landing	5		Daily Operations
7/19/2018	HS	Pinniped Colony	1		Daily Operations
8/15/2018	HS	Pinniped Colony	1		Daily Operations
8/15/2018	HS	Pinniped Colony	1		Daily Operations
9/27/2018	HS	Pinniped Colony		2	Daily Operations
11/5/2018	HS	Pinniped Colony	2	2	Daily Operations
11/5/2018	HS	Pinniped Colony	1		Daily Operations
11/7/2018	HS	Pinniped Colony	5		Daily Operations
11/13/2018	HS	Pinniped Colony	7		Daily Operations
11/17/2018	HS	Pinniped Colony	1		Daily Operations
12/1/2018	HS	Pinniped Colony	1		Daily Operations
12/4/2018	HS	Pinniped Colony	1		Daily Operations
12/8/2018	HS	Pinniped Colony		1	Daily Operations
12/15/2018	HS	Pinniped Colony		3	Daily Operations
12/27/2018	HS	Pinniped Colony	1		Daily Operations
12/31/2018	HS	Pinniped Colony	1		Daily Operations
2/28/2018	ES	Pinniped Colony		1	Daily Operations
4/8/2018	ES	Pinniped Colony	1		Daily Operations
9/28/2018	ES	Pinniped Colony	1		Daily Operations
12/4/2018	ES	Pinniped Colony	1		Daily Operations
12/5/2018	ES	Pinniped Colony		1	Daily Operations
12/12/2018	ES	Pinniped Colony	8		Daily Operations

Appendix 2. All Oikonos take by date, species, location, type of take, and activity from Año Nuevo Island 1/1/2018 to 12/31/2018.

Date	Species	Location	Level 3 take (flushed)	Level 2 take (move >1m)	Activity
4/19/2018	CSL	Landing Cove	2	0	seabird monitoring
4/26/2018	CSL	Landing Cove	30	0	seabird monitoring
5/2/2018	CSL	Landing Cove	1	0	seabird monitoring
5/10/2018	CSL	Landing Cove	1	0	seabird monitoring
5/24/2018	CSL	Landing Cove	10	0	seabird monitoring
6/7/2018	CSL	Landing Cove	20	0	seabird monitoring
6/14/2018	CSL	Landing Cove	5	0	seabird monitoring
6/21/2018	CSL	Landing Cove	100	0	seabird monitoring
6/29/2018	CSL	Landing Cove	2	0	seabird monitoring
7/5/2018	CSL	Island Main Beach	30	0	seabird monitoring
7/12/2018	CSL	Landing Cove	15	0	seabird monitoring
7/19/2018	CSL	Landing Cove	10	0	seabird monitoring
7/26/2018	CSL	Landing Cove	50	0	seabird monitoring
8/2/2018	CSL	Landing Cove	6	0	seabird monitoring
8/9/2018	CSL	Landing Cove	10	0	seabird monitoring
8/14/2018	CSL	Landing Cove	150	0	seabird monitoring
8/16/2018	CSL	Landing Cove	100	0	seabird monitoring
9/27/2018	CSL	Landing Cove	25	0	seabird monitoring
10/12/2018	CSL	Landing Cove	35	0	seabird monitoring
3/7/2018	ES	Landing Cove	1	0	seabird monitoring
3/22/2018	ES	Landing Cove	4	0	seabird monitoring
4/3/2018	ES	Landing Cove	3	0	seabird monitoring
4/5/2018	ES	Landing Cove	1	0	seabird monitoring
4/5/2018	ES	Mainland Beach	5	0	seabird monitoring
4/10/2018	ES	Landing Cove	1	0	seabird monitoring
4/10/2018	ES	Mainland Beach	3	17	seabird monitoring
4/19/2018	ES	Mainland Beach	0	5	seabird monitoring
5/2/2018	ES	Landing Cove	2	0	seabird monitoring
5/10/2018	ES	Landing Cove	2	0	seabird monitoring
5/17/2018	ES	Landing Cove	3	9	seabird monitoring
5/24/2018	ES	Landing Cove	5	0	seabird monitoring
6/21/2018	ES	Landing Cove	2	0	seabird monitoring
7/5/2018	ES	Landing Cove	3	0	seabird monitoring
7/26/2018	ES	Landing Cove	2	0	seabird monitoring



Point Blue Conservation Science (*formerly PRBO*)
 3820 Cypress Drive Suite 11
 Petaluma, CA 94954
 707.781.2555 pointblue.org

Conservation Science for a healthy planet.

8/2/2018	ES	Landing Cove	4	0	seabird monitoring
4/20/2018	HS	Landing Cove	4	0	seabird monitoring
5/17/2018	HS	Landing Cove	1	0	seabird monitoring

Appendix 3. All National Parks Service IHA take by date, species, location, type of take, and activity from Point Reyes National Seashore 1/1/2018 to 12/31/2018.

Date	Species	Location	Level 3 take (flushed)	Level 2 take (move >1 m)	Activity
8/29/2018	HS	Bird Rock	20	0	Seabird Survey