Special Areas Management Report ADF&G/DWC/SAMR-2017-4

Walrus Islands State Game Sanctuary Annual Management Report 2016

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2017

Alaska Department of Fish and Game Division of Wildlife Conservation

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This publication was reviewed and approved for publication by Joe Meehan, Lands and Refuges Program Coordinator, Anchorage, Alaska. It was published and is provided in pdf format only.

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This document, published in pdf format only, should be cited as follows:

Weiss, E. W., and R. P. Morrill. 2017. Walrus Islands State Game Sanctuary annual management report 2016. Alaska Department of Fish and Game, Special Areas Management Report ADF&G/DWC/SAMR-2017-4, Juneau.

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Executive Summary

Established in 1960, the Walrus Islands State Game Sanctuary (WISGS); a group of 7 islands (Round Island, Summit Island, Crooked Island, High Island, Black Rock, and The Twins [North Twin and South Twin]) and their adjacent waters in northern Bristol Bay; protects one of the largest terrestrial haulout sites in North America for Pacific walrus (*Odobenus rosmarus divergens*). The sanctuary also protects important habitats for numerous species of seabirds, Steller sea lions (*Eumetopias jubatus*) and other marine and terrestrial birds and mammals. The Alaska Department of Fish and Game (ADF&G) staffs a camp at Round Island May through August to protect and monitor walruses, other terrestrial and marine wildlife, and to operate a visitor use program.

Walrus counts were conducted from 20 April through 15 August 2016. The number of Pacific walrus hauling out at Round Island is down significantly over the last 2 years. Peak haulout numbers hit their lowest point since monitoring began in 1975. The maximum in-season count was 1,072 on 11 June. A preseason high of 1,198 was achieved on 23 April. The daily mean for the eastside beaches was 176 walruses, appreciably lower than the 2006–2015 mean of 779. The daily mean count for all beaches combined was 184. Atypical haulout attendance was also observed again during winter 2015–2016 in that walrus left Round Island in late August 2015 and began hauling out again in late February 2016. A few walruses were also observed hauling out sporadically in November, January, and early February.

Steller sea lions were monitored at their East Cape haulout site 15 August 2015–19 April 2016 (remotely) and 20 April–13 August 2016 (field surveys). Steller sea lions were present at East Cape throughout the year with highest numbers occurring from mid-April to mid-May. At traditional viewpoints, the maximum count of individuals was 664 on 24 April, and the minimum count of 41 individuals occurred on 18 June. The mean number of sea lions visible on Round Island from traditional viewpoints during the 2016 season was 245, above the 2008–2015 mean of 182. Three hundred and twenty-one photos confirmed sightings of 36 branded individuals from 6 natal rookeries recorded during the 2016 field season. A solar powered, self-contained DSLR camera was setup at the East Cape haulout and captured high resolution photos of sea lions throughout fall–winter 2015–2016 and over fall–winter 2016–2017. This DSLR camera extends brand resight capabilities and was able to capture photos of additional marked individuals bringing the total unique brand count to 38.

Black-legged kittiwake (*Rissa tridactyla*), common murre (*Uria aalge*), and pelagic cormorant (*Phalacrocorax pelagicus*) phenology and productivity were monitored again in 2016. All 3 species exhibited a general lack of nesting and complete nesting failures, so surveys were truncated. The few pelagic cormorants that nested, abandoned nest sites shortly after beginning. Black-legged kittiwakes also started nest building and preparations as early as 20 April when staff arrived. However, they too largely abandoned nests by mid-June. Similarly, few common murres nested and all those were predated or abandoned.

Commercial transport from Togiak to Round Island was available throughout the summer, except the period from 8 July to 8 August when the transporter was replacing a blown engine. This in combination with several weather delays resulted in less visitation than expected. A total of 12 visitors to Round Island included visits by 5 persons involved in administrative duties. The

7 general public visitors were from 4 individual groups and were comprised of 7 overnight campers. Half of the visitors were Alaska residents the other half were nonresident visitors. There were 66 visitor use days and 263 staff use days between 20 April and 15 August.

ADF&G and Explore® (Explore.org; Explore Annenberg LLC) entered its second year of cooperatively providing live Internet streaming of walrus at Round Island. Preseason camera installations were completed by 1 April. Cameras, including some newer models, were again set up at West Main, Main Beach, Main Beach Cliff, and First Beach. The GCI satellite Internet service and routers were also updated to improve the live feed quality and broadcast reliability. Live feed was broadcasted via the Explore.org website 7 April–11 October. Interactive walrus viewing continued through assigned remote camera operators, daily technician interaction, biweekly blog entries, as well as live chats throughout the season. At end of season the Main Beach Cliff camera was left hooked up to the power system, and continued to transmit video through 10 October.

In addition, 4 game cameras were positioned at West Main, Main Beach, Cabin-Boat Cove, and First Beach for overwinter monitoring.

There were no documented violations of the 3-mile restricted zone around the island (Alaska State Regulation 5AAC 92.066) by vessels during 2016. There was one infraction of flight advisories involving a floatplane flying over Main Beach. Walrus were present on Main Beach at the time and a small dispersal occurred. The plane was identified and documentation was turned over to the U.S. Fish and Wildlife Service for action.

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Introduction

The Walrus Islands State Game Sanctuary (WISGS) was created in 1960 by the Alaska State Legislature. The sanctuary protects a group of 7 craggy islands and rock islets (Round Island, Summit Island, Crooked Island, High Island, Black Rock, and The Twins ["North Twin" and "South Twin"]) and their adjacent waters in northern Bristol Bay, approximately 65 miles southwest of Dillingham, Alaska (Fig. 1). The sanctuary was created to protect the last remaining terrestrial haulout for Pacific walruses (*Odobenus rosmarus divergens*) in North America (Alaska Statute 16.20.090–098). At the time all other haulouts had been abandoned due to anthropogenic disturbances, mostly related to commercial hunting.

Today the sanctuary continues to provide important habitat for walruses; Round Island being the primary active haulout of 4 sites within Bristol Bay. The sanctuary also protects important habitats for many species of seabirds, the endangered western stock of Steller sea lions (*Eumetopias jubatus*), and other marine and terrestrial wildlife species.

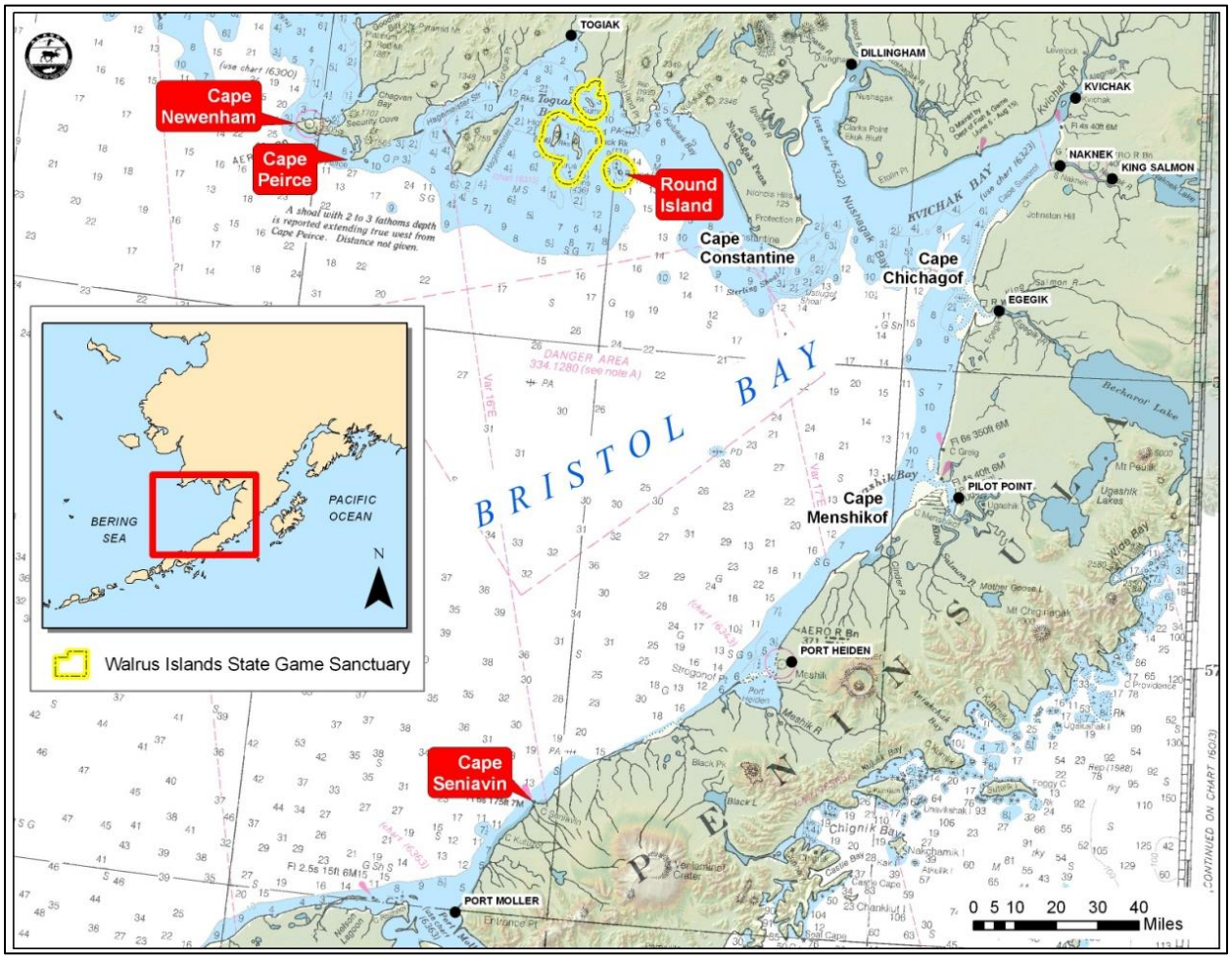


Figure 1. Map of Bristol Bay showing the locations of the Walrus Islands State Game Sanctuary, Round Island, Alaska, and the 4 major terrestrial Pacific walrus haulout sites in the United States.

The Alaska Department of Fish and Game (ADF&G) manages the sanctuary primarily to protect these habitats and wildlife species, and secondarily to provide for public use and enjoyment of these resources including the opportunity for scientific and educational study, viewing, and photography. All access to Round Island and its surrounding waters within a 3-mile radius requires an access permit issued by ADF&G-Division of Wildlife Conservation (DWC). In addition, restrictions have been placed on visitor numbers and their activities in order to preserve the important resources at Round Island (Alaska Administrative Code 5 AAC 92.066).

ADF&G staffs the Round Island field camp with 2 technicians through the spring and summer seasons. Staff duties consist primarily of the protection of sanctuary resources; enforcement of sanctuary laws, regulations and policies; monitoring the sanctuary wildlife including walruses, seabirds, Steller sea lions, and other species; managing visitor use and access; and maintaining trails and facilities.

Wildlife Research and Monitoring

WALRUS MONITORING SURVEYS

Walrus monitoring protocols used in collecting daily walrus observations on Round Island were established jointly by the U.S. Geological Survey-Biological Resources Division, U.S. Fish and Wildlife Service (USFWS), and ADF&G staff in 1997 and refined in 2002. Nine beaches are counted daily on the east side of the island: Second Prime (SP), Second Beach (SB), First Prime (FP), First Beach (FB), Campground (CG), Boat Cove (BC), Flat Rock (FR), North Boat Cove (NBC), and Main Beach (MB; Fig. 2). Ground surveys of the west side of the island regularly include West Main beach (WM) as trail conditions and weather allow. Counts of WM and MB are generated for pre- and post-season and nonsurvey days from photos from RECONYX® (RECONYX, Holmen, Wisconsin) game cameras. The remainder of the west side, south of West Cape, is only observable by boat and surveyed opportunistically as weather allows or via game cameras periodically set up on westside beaches to monitor any haulout attendance.

Weather data (max/min temperature, barometric pressure, wind speed and direction, and cloud cover) were collected at the time of all surveys using a Davis® (Davis Instruments, Hayward, California) weather station mounted on top of the cabin since 2009.

In addition to normal haulout census surveys, 5 boat counts of all westside beaches were conducted in 2016. Game cameras monitored West Beach North (WBN) during 22 June–3 August 2016; WM during 15 August 2015–15 August 2016; FB during 13 August 2015–19 April 2016; and MB during 13 August 2015–13 August 2016. Exceptions are no data at FB 13–25 March 2016 due to battery failure; and at MB 1 February–8 July 2016 due to camera shift and a lost image card.

As evidenced by the game cameras overlooking MB, FB and WM, Pacific walrus seasonal use at Round Island largely concluded by 22 August 2015 with less than 30 individuals being noted after that, primarily at the FB haulout. After 6 September 2015 only an occasional Pacific walrus was noted in November, January, and February. On 27 February 2016 Pacific walrus began hauling out in significant numbers again at WM. While ADF&G does not have data for all years, the lack of use in September and October 2015 and early arrivals in February seems atypical.

Based on the data available, Pacific walrus are usually present at the Round Island haulouts through the end of September and quite often through October.

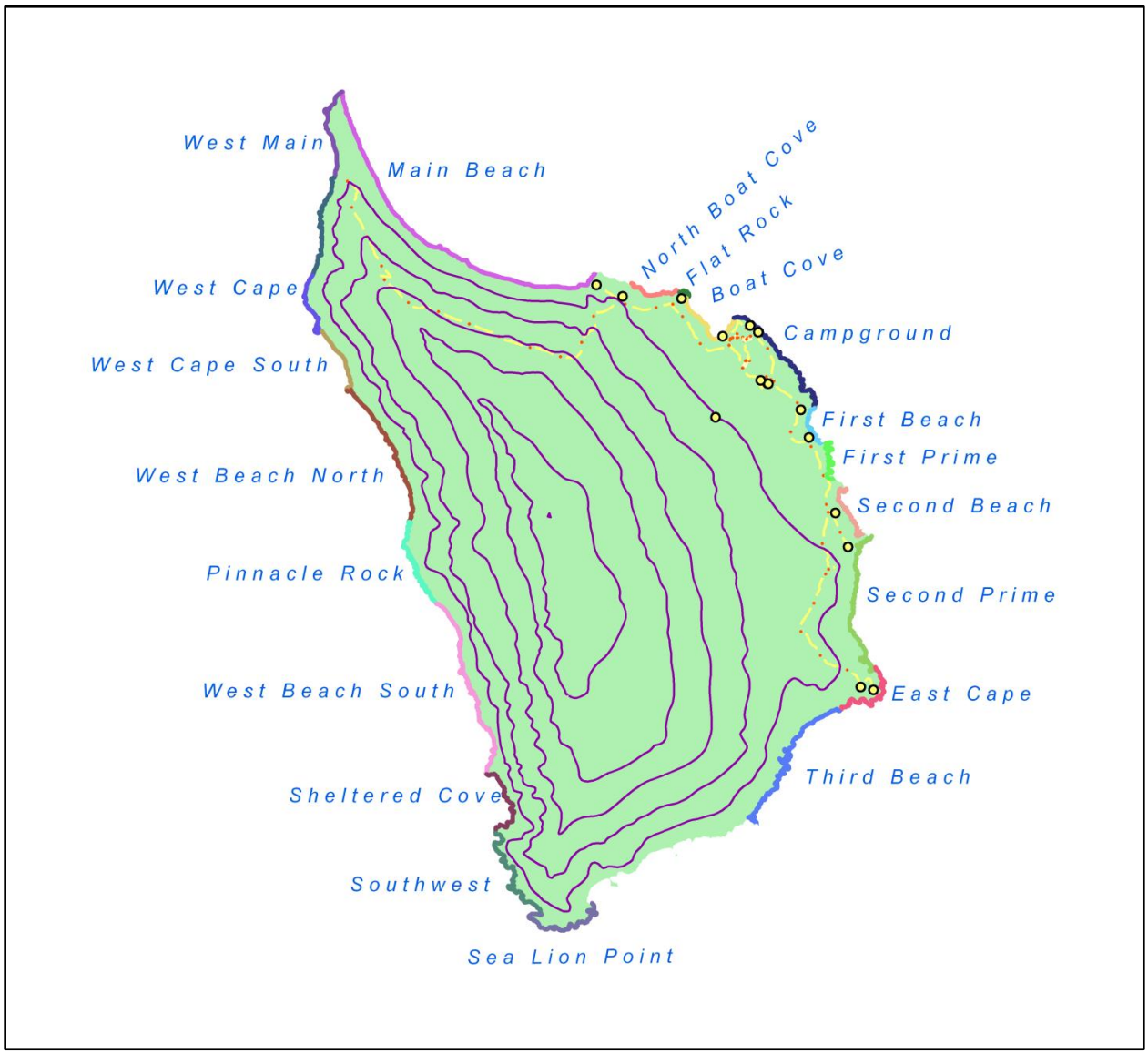


Figure 2. Round Island, Alaska, Pacific walrus, seabird and Steller sea lion monitoring locations.

Regular walrus survey counts for the 2016 field season began when staff arrived on the island 20 April and continued through 15 August. Eastside beaches were counted 118 out of the total 118 days that staff occupied the island. Daily counts are summarized in Figure 3 and Appendix A; and detailed in Appendix B. WM beach was physically surveyed 23 times during the season first beginning on 29 April. WM game camera photo data provided counts on 93 of the remaining days up until 13 August; for a total of 116 WM count days. The combined eastside and westside beaches, currently known to support haulouts, were surveyed a total of 116 of the 118 days staff were on the island. Additional WM, MB, and FB counts 13 August 2016–spring 2017 will be added after ADF&G game cameras are downloaded in spring 2017.

For the normal 2016 season period 1 May–15 August, the maximum walrus count of 1,072 occurred on 11 June; from combined counts of eastside and westside beaches. The actual maximum walrus count of 1,198 occurred on 23 April 2016; from combined counts of eastside and westside beaches. The 1,072 maximum is about a 29% decrease from the 2015 maximum count of 1,490 and about a 66% decrease from the 2006–2015 average high count of 3,161. Walrus were present on the island every day of the season, although in abnormally low numbers. Numbers were below 100 animals for 63 of the 118 survey days and the minimum number was 6 on 8 June. Pacific walrus use dwindled in July and August. The last large haulout event, 1,072 animals, occurred 11 June. Thereafter peak numbers were 400 animals or less and averages dropped from the June mean of 181 to around 75 animals for July and August. Peak haulout events were shorter in duration also; characterized by a large number of animals on a single day with significantly fewer animals before and after. In contrast to typical years where peak haulout events last multiple days with periods of fewer animals in between. Pacific walrus were absent from MB on 6 days through the normal season.

Both the pre-season eastside maximum (1,108) and in-season eastside maximum (1,072) occurred on the same days as the overall maximum counts. The in-season mean count for eastside beaches was 118 which represents about a 77.5% decrease from the 2015 eastside mean count of 427 and an 85% decrease from the 2006–2015 eastside mean of 779.

The maximum count on westside beaches of 296 occurred on 29 April; with the in-season maximum of 139 occurring on 1 May. The westside in-season mean count was 8; an 80% decrease from the 2015 WM mean of 42 and a 95% decrease from the 2006–2015 mean count of 146. As noted above, 5 boat trips to the west side were made this season; with no walrus being noted on the west side south of West Cape to Sea Lion Point. Pacific walrus used the WM beach haulout from arrival in February through 2 June; after which only 1 individual was noted on 26 July. Heaviest use was in April and Pacific walrus were not present on WM 91 of the 116 days it was counted. Cameras set up at WBN, 22 June–3 August, recorded no Pacific walrus use at that location.

The annual use of Round Island by Pacific walrus varies significantly between years (Fig. 4) with the highest count estimate documented as 15,000 during a 1978 aerial survey. It is unknown how Round Island counts correlate to fluctuations in Pacific walrus populations or variability in movements of walrus within Bristol Bay and the Bering Sea. Fluctuations in yearly peak counts may be attributed to the movement of walruses between the United States and Russia and more locally between several Bristol Bay haulouts. Historically, major walrus haulout sites within Bristol Bay included Amak Island, Port Moller, Cape Seniavin (located between Port Moller and Port Heiden), Cape Peirce, Cape Newenham, and 2 islands within the WISGS (Round and Big Twin) (Frost et al. 1982). The southwestern shoreline of Hagemeister Island has also reemerged as a significant walrus haulout in this region (MacDonald and Winfree 2008). Between feeding bouts, walruses in Bristol Bay repeatedly utilize only these few specific sites to rest. During the mid-1900s, with the exception of Round Island, all terrestrial haulouts were abandoned. This abandonment was presumably caused by commercial hunting pressure as well as other disturbances (Fay 1982). The parameters that define a specific haulout site for walruses versus all available coastal locations within Bristol Bay are not well understood but may be influenced by prey abundance and distribution, walrus densities, physical terrain, or remoteness from disturbances.

USFWS-Togiak National Wildlife Refuge conducts aerial surveys of walrus haulouts annually at Hagemeister Island, Cape Peirce, and Cape Newenham and remote camera counts of individual beaches at Cape Peirce and Hagemeister Island (Collins and Winfree 2015). Additionally, the Alaska SeaLife Center collected photo data during 2012–2015 for counts at Cape Seniavin, Round Island, and Cape Peirce connected with their Pacific walrus haulout monitoring and disturbance project. Preliminary results from both these sources were unavailable at the time of this writing for comparison with Round Island data.

Prior to 2016, the lowest annual peak count at Round Island was 1,746 in 1998 (Raymond and Stroka 1998). Coincidently, both these low number years followed very strong El Niño events.

Staff also collected 4 duplicate samples (8 total) of Pacific walrus scat on 2 different dates and forwarded these to John Maniscalco at the Seward Sealife Center to be archived for future walrus diet studies.

Observer Variability Counts

Variability counts, to check and calibrate observer variability during walrus surveys, are typically only conducted for MB from the Observation Point (OP) viewpoint. The half-mile distance and view aspect between the observer and the walrus makes the counting of individual animals difficult. However, variability counts at other beaches and viewpoints do occur during training and orientation of new staff. During variability counts, visual counts are conducted by each staff member at the same time from the same viewpoint and are also cross referenced with photos taken during the same period. Photo counts are then conducted later using GIS software.

During 2016, sanctuary manager Ryan P. Morrill and technician Margaret K. Archibald conducted 23 variability counts throughout the season from 24 April through 12 August. These counts were made at MB and involved approximately 21–854 walrus. Ground photos were taken from the OP viewpoint, Traverse Trail approach, and along the Traverse Trail looking down on MB. The photos from the Traverse Trail offered the best view of individual walrus and were used to check observer's walrus count estimates. Variability results are presented in Appendix C.

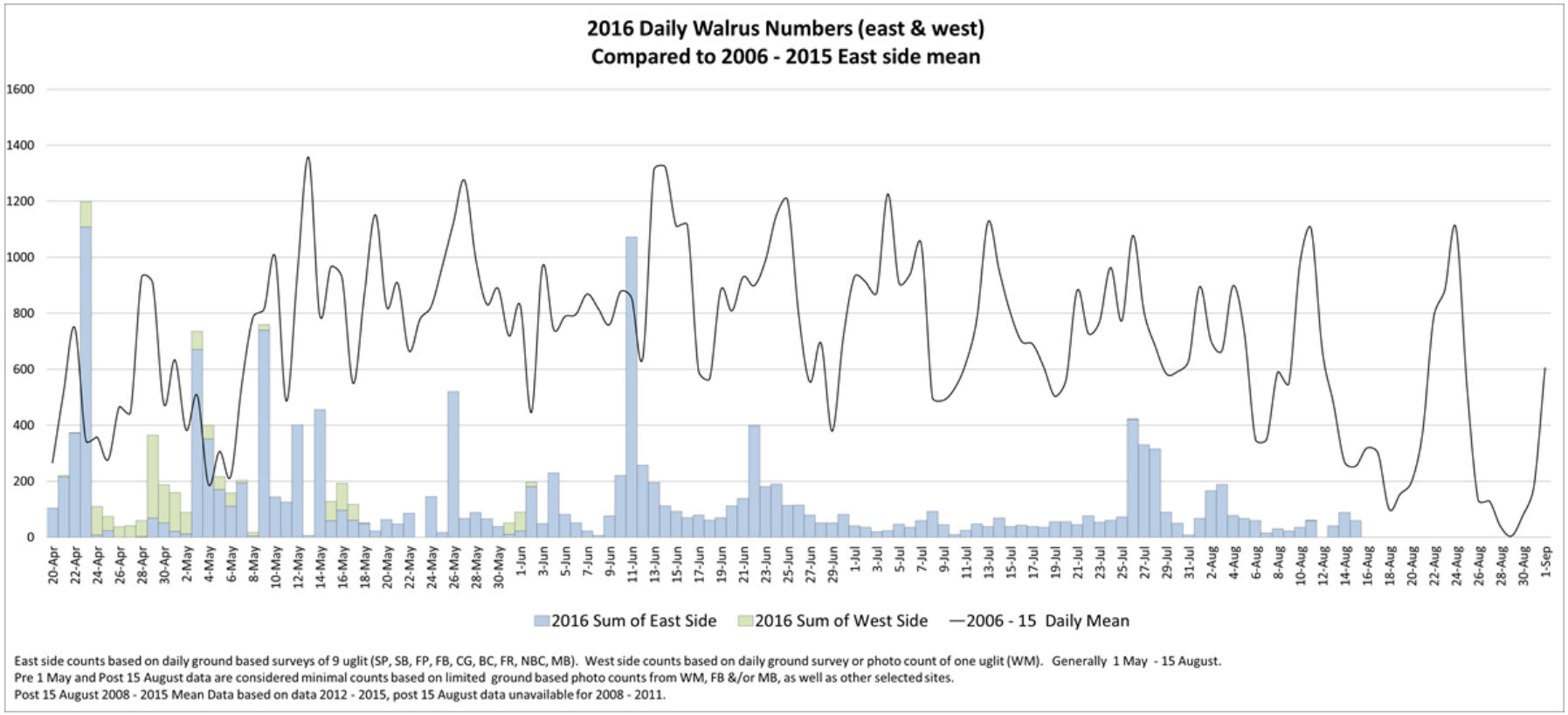


Figure 3. Pacific walrus hauled out daily in 2016 at Round Island, Alaska, compared to 2006–2015 mean.

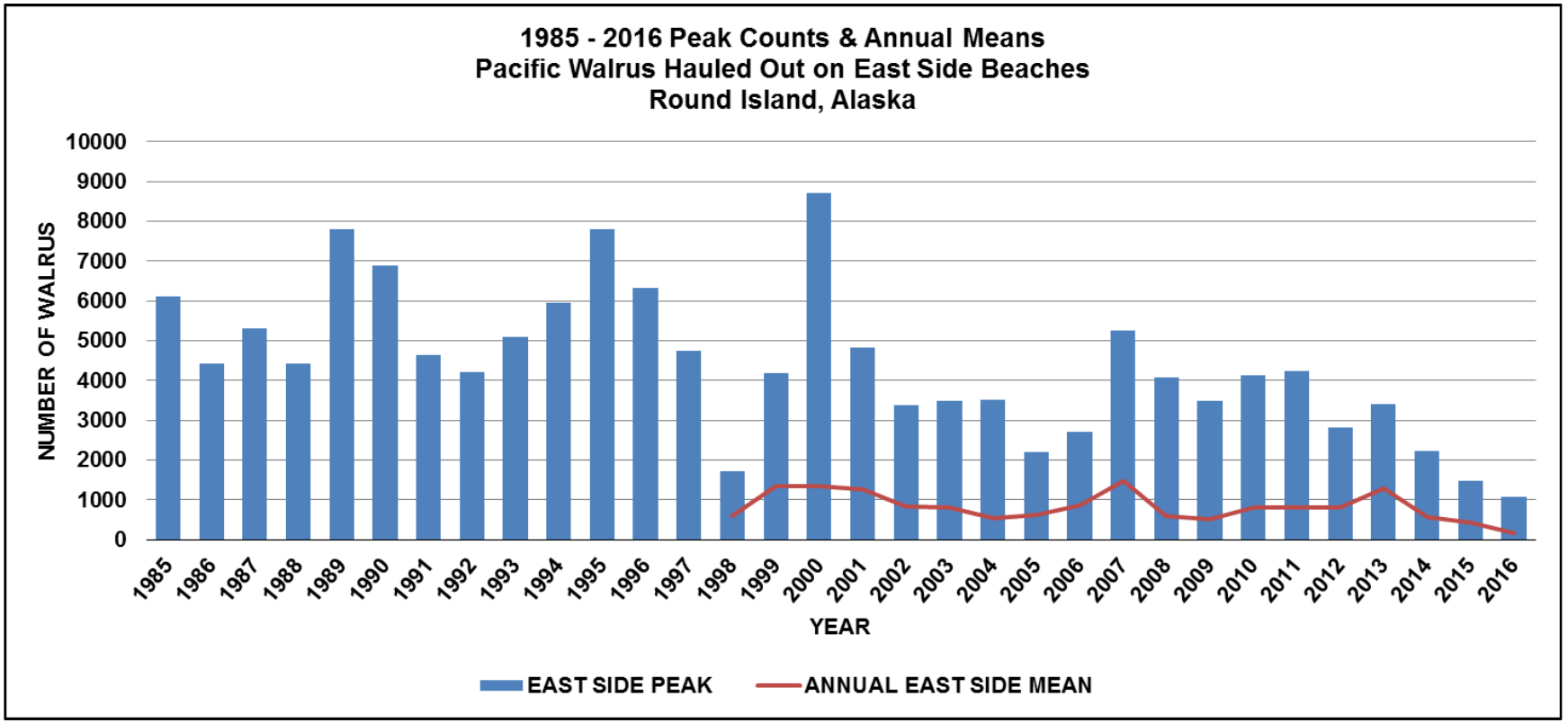


Figure 4. Peak and annual mean Pacific walrus counts, Round Island, Alaska, eastside beaches, 1985–2016.

WALRUS DISTURBANCE MONITORING

ADF&G staff also monitor and document the response of walruses to both authorized and unauthorized access and other anthropogenic activities around the island. Potential sources of anthropogenic events may include ingress, egress, and transits of vessels and planes; staff maintenance and monitoring work; visitor wildlife viewing; etc. When in sight of observers, the number of affected walrus at locations closest to the event and the degree of their response, to the event, was recorded using 3 distinct behaviors (head raising, reorienting, and dispersing) as measures of quantifying the levels of disturbance (Salter 1979; Kruse 1997). Responses by walrus at other beaches are unknown. Observations and responses at FB and MB are also supplemented with data from the Explore® (Explore.org; Explore Annenberg LLC) online video feed. Detail of observations vary and generally range between well-documented observations during access or violation events and more opportunistic observations of audible or visible events observed during normal duties or occurring outside 3 nautical miles. Activities, such as boat arrivals and departures, which had a time greater than an hour apart were counted and documented as 2 separate events. In addition to ground based radar and automated identification system (AIS); publically available flight and vessel tracking websites are also utilized in order to gain information on vessel and airplane names, types, headings, and locations.

Except the period 8 July–8 August, when the transporters boat engine was blown and replaced, commercial access was available in 2016. Access by authorized private vessels was also available, however, no private vessels visited.

During the 2016 season, staff made an effort to record all anthropogenic events they visually or audibly observed at Round Island. One hundred and twenty-eight separate anthropogenic events were documented. Seventy-one events were inside the 3 nautical mile restricted area, the remaining 57 events were outside 3 nautical miles. Dispersal type disturbances occurred during 9 of the 128 events. Anthropogenic events and walrus response records are included in Appendix D.

Early season set up of the Internet cameras on WM, MB, and MB Cliff cam was conducted 23 March–1 April to avoid walrus presence at Round Island. Walrus, however, had shown up early at Round Island and were sporatically present on both MB and WM during this period. Numbers were relatively low (n = 9–372, median = 74). A JetRanger III helicopter (Bell Helicopter Textron, Mirabel, Quebec, Canada) made 21 movements (or events) for access, transport, and hauling loads. For the most part, operations avoided walrus spacially or temporally. Six events took place prior to 26 March when Pacific walrus numbers were highest and resulted in no disturbances. However, 5 of 13 events from 26–31 March did result in dispersal events. During this period there were generally less than 56 animals on MB or WM; except on 26 and 29 March when 92–120 hauled out at MB. On 3 occasions on 26 and 29 March, 30, 90, and 92 animals dispersed from MB. On 31 March, 10 walrus were dispersed from MB and 20 and 46 from WM during 2 events.

During the normal season, 23 of the anthropogenic events recorded involved 12 authorized visitor and staff transport boats or helicopters approaching and departing the island. These management and visitor operations caused dispersals on 3 occasions; 12 from WM and 24 from FB during 2 separate staff transports with a Robinson R44 helicopter (Robinson Helicopter

Company, Torrance, California), and a single dispersal of 6 walrus from FR during offloading of visitors from commercial charter boat in BC. The FB disturbance occurred during a midseason helicopter crew change which was required because vessel transport was unavailable. The inbound flight was spacially separated and only resulted in a few head raises for about a minute. However, due to heavy fog, low ceilings, and local downdrafts over the island, flight safety resulted in flying over FB on the outbound trip. Sixty-eight walrus were present on FB, and the overflight resulted in dispersal of 24 individuals and 44 others reorienting towards the water. The disturbance was brief lasting about 30 seconds, with walrus settling back into place within 2 minutes of the disturbance.

An additional small dispersal, from an unknown source, of 4 Pacific walrus from MB during heavy rain and winds may have been caused by the weather or possibly a resulting rock fall.

Thirty-three events involved commercial or small plane overflights of or near Round Island. While high altitude jet noise has been observed to cause dispersals on occasion in the past, none of the 29 high altitude jet events observed caused dispersal in 2016. On 2 occasions high altitude (>20,000 ft) propeller commuter planes (Beechcraft, Cessna) caused 100–200 Pacific walrus to reorient and disperse towards the sea; with 59 and 10 dispersing into the sea. A third unknown high altitude propeller plane faintly audible on video caused no disturbance at MB.

One air-related disturbance was an infraction of requested flight advisories at Round Island. On 7 July, visitors heard, saw, and photographed a float plane at roughly 1,000 feet flying over MB. This was further documented via the Explore video feed. A Beaver floatplane (de Havilland Canada, Toronto) was observed flying east to west across the north tip of Round Island at about 750–1,000 feet above ground level, then disappearing off camera. Still audible, a moment later it reappeared heading west to east a little farther north, but still within 3 miles of Round Island. A small number of Pacific walrus were on MB at the time and about 6–8 dispersed into the water. Three Pacific walrus on FR also dispersed. Photographs, video, and notes were forwarded to USFWS for resolution.

Twenty-five of the 57 events observed outside the 3 nautical mile perimeter were from larger vessels (tenders, processors, tug/barge combos). The remaining 32 were from the aircraft discussed above. Walrus observations at select beaches were available for each of the 25 large vessel events, and no disturbances were noted.

WALRUS DISEASE AND MORTALITY

Observations of injured, diseased, or dead walrus noted during other monitoring surveys are also recorded annually. These observations are further improved by observations from the Explore Walrus cam viewing community. Injury observations are usually limited to injuries more substantial than the normal poke and jab associated sores. In 2016, 3 Pacific walrus injuries were reported. On 19 May, 1 Pacific walrus with a large gash above the left front flipper was observed. In late May and into June another was observed with a large infected wound or cyst on its left side. And on 30 May a very emaciated Pacific walrus was noted at MB by the Explore Walrus cam viewing community. The Pacific walrus layed there all day, apparently struggling to move but was gone the next morning.

Multiple observations of presumably a single, dead Pacific walrus floating by were noted on 16 July. An additional mortality was initially noted at MB on 14 July, but review of MB still images shows that this animal hauled out on 10 July and probably died the following day, for unknown reasons. As noted under the ivory collection section below, both tusks from this animal were retrieved on 18 July.

An unknown seal in advanced decomposition was also found at MB on 18 May.

STELLER SEA LION MONITORING

Steller sea lions typically haul out at East Cape (EC), located on the eastern tip of Round Island. In addition, Steller sea lions haul out along the adjacent beach known as Third Beach (TB; Fig. 2) during winter and spring, when the EC rocks and ledges are iced up or Steller sea lions numbers are at their highest. Steller sea lion numbers are recorded, visible brands photographed and injuries, entanglements, suckling behavior, and any unusual conditions are photographed and noted. Data are compiled with other ADF&G-DWC Marine Mammal program data and forwarded to the National Marine Fisheries Service-National Marine Mammal Laboratory.

Beginning in 2008, 4 standardized count locations were established for Steller sea lion counts (viewpoints V1, V2, V3 and V4) following protocols established by the ADF&G-DWC Marine Mammal Program. During early season (~mid-April) surveys in 2014–2016 (supported by a Coastal Impact Assistance Program grant), it was noted that when large numbers of Steller sea lions haul out at TB, the view of some animals was obstructed when counts were conducted from the traditional viewpoint for this area (V1), especially during high tides. Additionally, not all Steller sea lions using ledges directly below the V3 viewpoint are visible from the traditional viewpoints.

Consequently, Steller sea lion viewpoints were revised and additional viewpoints were added starting in 2014 and continue to be used in order to achieve more complete counts and brand resights (Fig. 5). These revised and additional viewpoints allow for better unobstructed views of TB, V1 ledges, and previously hidden V5 ledges. Viewpoint revisions include:

- V1 counts are conducted from traditional V1 view the entire season, and additionally from April to 30 May, V1 is also broken down into and counted from 3 sub-views:
    - V1W - west end of V1 view = Third Beach,
    - V1L - central rock ledges between TB and east rock shelf,
    - V1E - the east rock shelf.
- V2 is the same as it has been since established in 2005.
- The traditional V3 and V4 viewpoints were replaced by the revised V3-V4 viewpoint, established above the traditional V4 and below the traditional V3 viewpoints. The new viewpoint reduces the likelihood of Steller sea lion disturbances from the V4 viewpoint and provides equivalent views of Steller sea lions traditionally viewed from the V3 and V4 viewpoints.
- A new V5 viewpoint was established to capture congregations of Steller sea lions on the ledges directly below the east side of the traditional V3 viewpoint. This viewpoint had been used in some earlier counts and basically rediscovered and put in use again beginning in 2015.

Counts from these revised viewpoints yielded an average 22% (2015) and 19% (2016) more Steller sea lions in daily counts over the traditional viewpoints at the EC haulout during the April–May period. To allow comparisons with previous years, counts were conducted from both the traditional viewpoint V1 as well as V1 sub-areas.

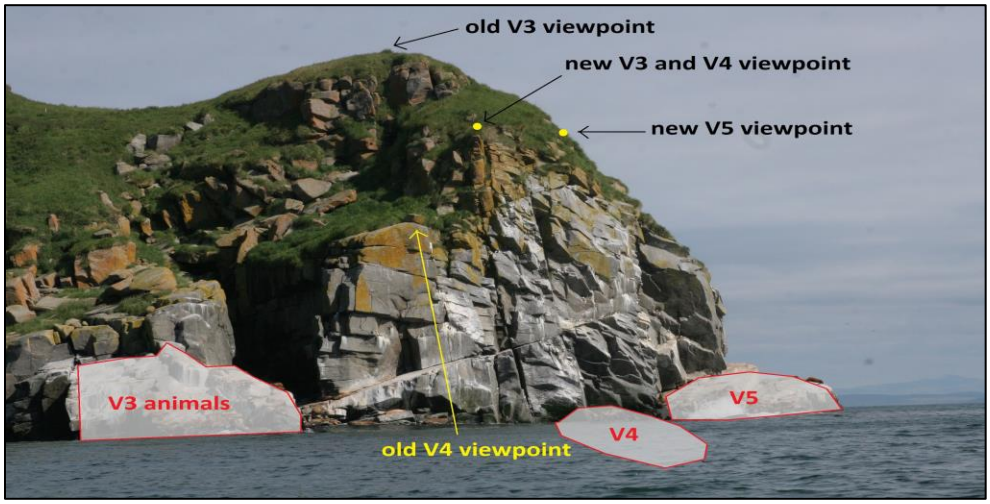


Figure 5. East Cape Steller sea lion viewpoints (V3, V4, and V5), Round Island, Alaska.

In cooperation with ADF&G-DWC Marine Mammal program, a new camera set-up was also introduced in 2015 to capture high resolution images of Steller sea lions at EC in order to obtain brand resights during the offseason and non-survey hours. A Canon DSLR camera was placed in a customized pelican case along with a 12V battery connected to a solar panel. The camera is wired into a light sensor and timer, so that it is able to take photographs every 5 minutes during daylight hours. This camera was deployed from August 2015 through March 2016 at V3 and recorded 30,999 images (Fig. 6). Staff reviewed 100% of these images for brand resights and a total of 10 unique brands were documented at that one viewpoint. Five of these were resighted on multiple occasions (range 3–38 dates). The remaining 5 were observed on single dates. When technicians began land-based surveys in mid-April, the time-lapse camera was tested at different viewpoints and with different camera settings to find the best location and settings in preparation for the 2016–2017 winter deployment. The DSLR camera was deployed at V1W (24 April–23 May) and V1L (23 May–15 August) during this period and an additional 8,178 images were recorded (Figs. 7 and 8). Staff reviewed 100% of these images for brands resulting in 2 additional brands not seen during daily field observations.

For the third year in a row, staff deployed to Round Island in mid-April to take advantage of higher Steller sea lion use during the early spring. Steller sea lions are moving around more and there is increased use at the East Cape haulout during April–May, likely associated with spawning herring and other food resources within Togiak Bay. In addition to twice daily Steller sea lion haulout counts and brand resights, age and gender composition counts were also conducted twice during the 20 April–30 May period. For the remainder of the season once daily haulout counts and brand resight surveys were conducted.

Figure 6. Self-contained DSLR camera system overlooking V3 fall-winter 2015–2016 and positioned above V1 Ledge fall-winter 2016–2017, Round Island, Alaska.

Figure 7. Image from self-contained DSLR camera system overlooking V1 West, Round Island, Alaska.

Figure 8. Image from self-contained DSLR camera system overlooking V1 Ledge, Round Island, Alaska.

Land based haulout censuses were conducted every day from 20 April through 13 August, save 14 June, with a total of 135 land counts conducted on 115 out of 116 days. The mean number of Steller sea lions present on Round Island at traditional viewpoints was 248; the maximum count of 664 individuals was on 24 April and the minimum count of 41 individuals occurred on 18 June. Using the expanded viewpoints, the mean number of Steller sea lions present was 314 and the maximum of 699 individuals occurring on 2 May. The minimum remained the same at 41 on 18 June. The 2016 mean is about a 38% increase from the 2015 mean of 166 and above the 8-year (2008–2015) mean of the annual means of 182. Figure 9 shows the daily number of Steller sea lions present at the EC haulout during 2016 compared to the 2008–2015 daily mean. Figure 10 shows the annual mean number of Steller sea lions present on Round Island between 1999 and 2016. Viewpoint changes discussed above and implemented towards the end of 2008 have resulted in consistent counts over the past 8 years. These viewpoints have also increased the number of Steller sea lions visible to observers compared to most, though not all, previous years of data collection. ADF&G-DWC Marine Mammal staff have compiled historical counts and are in the process of estimating trend in count data from the 1980s through 2016, using count location as a covariate in the analysis.

During 2016, field surveys captured 321 photo-confirmed sightings of branded Steller sea lions at EC, representing 36 individuals. In addition, 2 more branded individuals were identified using a self-contained DSLR camera which was aimed on V1 West. Bringing the total number of branded individuals sighted to 38. Branded individuals originated from 6 natal rookeries where branding occurred, as compared to 4 branding locations during the 2015 season.

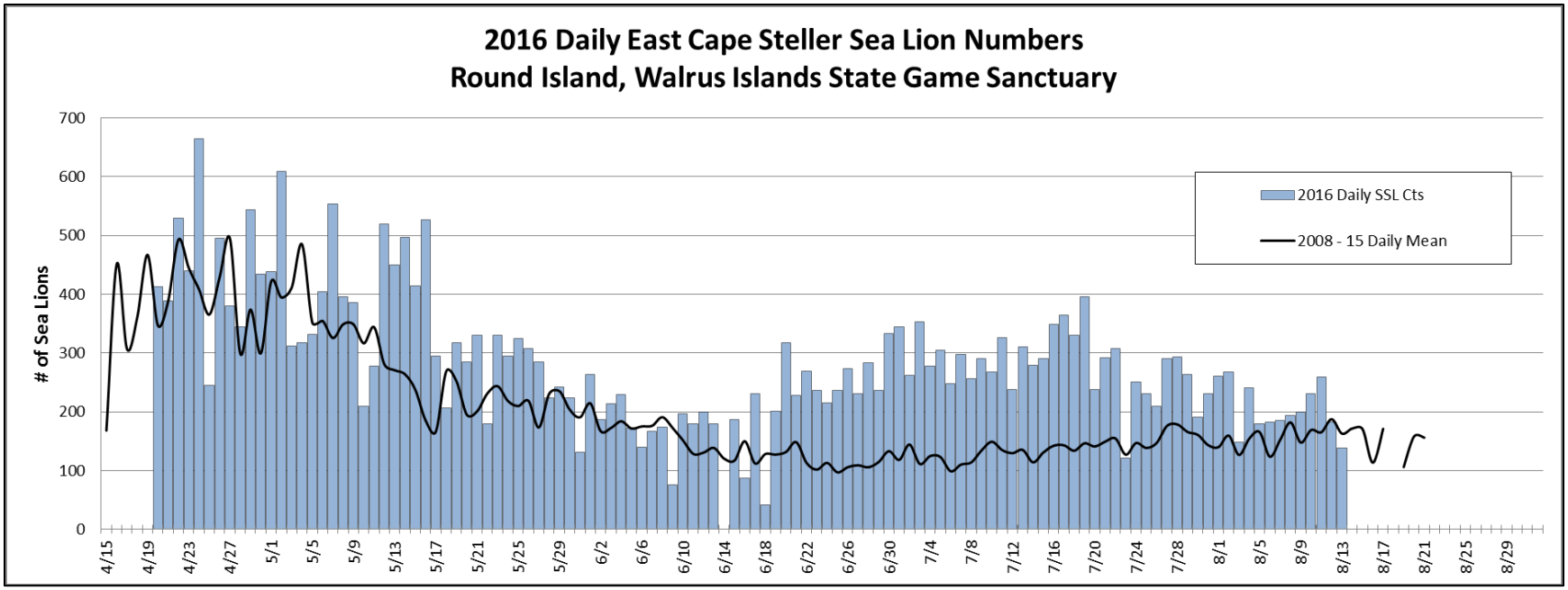


Figure 9. Steller sea lions hauled out at East Cape, Round Island, Alaska, 2016; daily numbers compared to 2008–2015 daily mean.

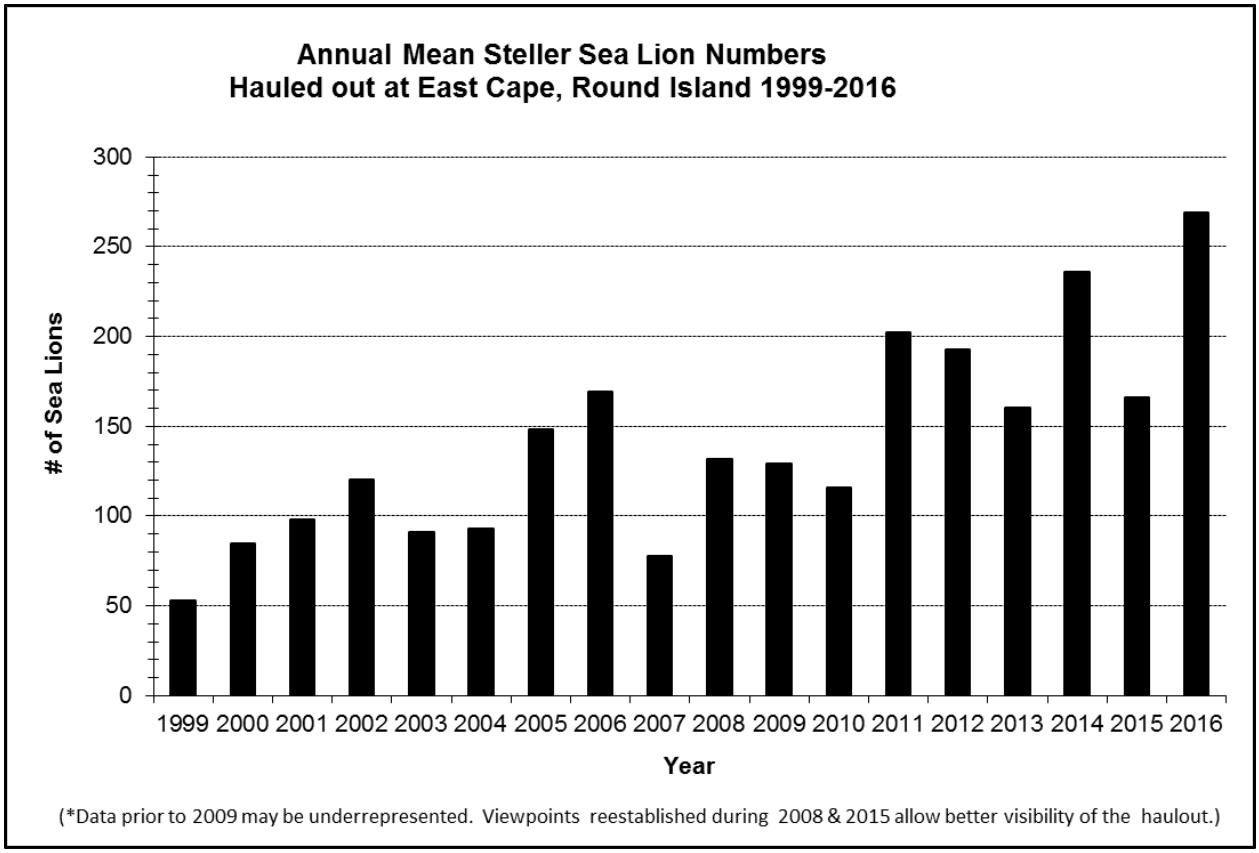


Figure 10. Mean number of Steller sea lions hauled out at East Cape, Round Island, Alaska, 1999–2016.

The majority of branded Steller sea lions observed at Round Island originate from the Ugamak Island rookery. However, Steller sea lions branded at rookeries in Southeast and Southcentral Alaska, as well as, Russia are regularly observed. In 2016, 29 of the branded individuals originated from Ugamak Island in the eastern Aleutians (A brands), 3 from Sugarloaf Island in the Barren Islands near Kodiak, Alaska (X brand) and 3 from Marmot Island near Kodiak, Alaska (T brand). One individual was observed from each of Chiswell Islands near Seward (E brand), Medny Island in Russia (M Brand), and Yamskiye Islands in Russia (Я Brand). This differs from prior 2 years, in that, no brands from Russia were observed in 2014 or 2015. The majority of the branded animals (25) were subadult males (4–8 years old). The remaining animals were adult females (9) and adult males (4). Three of the 9 adult females were observed nursing a juvenile.

Count data compared to historic means are presented in Figure 9 and Appendix E. Count and brand resight details with comparison to counts at expanded viewpoints are contained in Appendix E.

One female Steller sea lion successfully gave birth to a pup on Round Island this spring (Fig. 11). The pup was first seen by itself on 1 June calling out to its mother, who may have been off feeding. The next day the 2 were photographed interacting and nursing. The self-contained DSLR camera also captured photographs of the pup, as well as, evidence of birthing at V1L on

24 May. The last time the pup was sighted was 16 June, together with its mother via DSLR photographs. While small pups and aborted fetuses have been observed on numerous occasions at Round Island since 1990, it is considered unusual for an adult female Steller sea lion to have a pup on a haulout like Round Island, rather than at a natal rookery. It appears from the large size of the female that she is not a first time mother.

No animal entanglements were witnessed this year based on daily field observations and DSLR camera photo data analysis.

Figure 11. Adult female Steller sea lion interacting with her pup, 5 June 2016, Round Island, Alaska.

SEABIRD MONITORING

Although seabird productivity monitoring was not planned to be conducted this year due to budget constraints, large seabird die offs in the region during 2015–2016 along with unexpected staff availability enabled us to attempt normal monitoring. Three species of colonial nesting seabirds were monitored at the 5 historical plots on Round Island. Nesting chronology and nest productivity data were collected for black-legged kittiwakes (*Rissa tridactyla*; BLKI) on plots 2 and 3 at OP; and common murres (*Uria aalge*; COMU) on plots 1, 2, and 4 at OP. Data collection was attempted on pelagic cormorants (*Phalacrocorax pelagicus*; PECO); however, PECO's did not nest at any of the traditional spots and the few that started nesting at OP plot 3, failed after a few days monitoring. Population index counts for all 3 species were conducted on plots 1–5 at OP. Seabird population and productivity monitoring data are provided to Don Dragoo at the USFWS Maritime National Wildlife Refuge for inclusion in USFWS's statewide seabird-monitoring program.

As noted below in the remote camera observations, the majority of the nesting seabirds (BLKI, COMU, and PECO) appeared to have left Round Island by 1 September 2015. Returning about 12 April 2016.

Overall BLKI, COMU, and PECO experienced a complete nesting failure on the Round Island plots during 2016. As noted in previous years, the OP plots may not be representative of the nesting islandwide due to the plots being on the fringe of the colonies. However, we do not generally see as complete of failures as we did this year. This combined with staff observations elsewhere on the island likely point to an abnormally bad year for production at Round Island.

Details on productivity, phenology, and population counts for each species are provided below. Phenology and productivity data for all 3 species for years 2011–2016 are summarized in Table 1.

Pelagic Cormorant Productivity Monitoring

PECO were present on Round Island when staff members visited the island on 27 March. Although PECO productivity monitoring was initiated this year, it was truncated due to abandonment and lack of nesting. While PECO's in near normal numbers appeared to be present on the island, none of the traditionally monitored (First Prime North, First Prime South, First Beach North, and First Beach South) nesting colonies had any PECO nesting activity, nor any PECOs present. Thus productivity monitoring was unsuccessful. Adults had begun establishing nests at a site below the cabin prior to staff arrival on 20 April. However, the cabin nesting site was abandoned by 22 May. Some PECOs also began nesting at OP on plot 3 in early May with the first PECO egg observed on 7 May. A total of 13 nests were constructed and 2 eggs were observed before complete abandonment of the site by 23 May. Some successful nesting must have occurred at nesting sites elsewhere on Round Island, as a couple fledged PECO chicks were observed at FR and Sea Lion Point on 27 July and 13 July, respectively. Productivity observations for PECO plot(s) are presented in Appendix F.

Black-legged Kittiwake Productivity Monitoring

BLKI were first noted at Round Island as early as 10 April, as evidenced by the game camera data. When staff arrived on 20 April hundreds were present on the cliffs along MB and the OP plots. BLKI productivity monitoring was conducted from 13 June through 10 August on plots 2, 3, and 4 at OP. A number of BLKI were present and some appeared to be attempting nesting. Large groups of BLKI and COMU could be observed offshore, but overall there was a lack of successful egg laying and fewer BLKI present on the rookeries than normal. Only 9 nests with 1 egg each were located throughout all plots; 1 on OP2, 1 on OP3, and 7 on OP4. The first day that eggs were observed was 13 June at OP2 and OP4 and 29 June at OP3. This compares to normal first egg dates generally observed in late May to early June. Predation from ravens and fox also prevented any of the eggs from being successfully incubated; none lasting more than a week. At one point on 23 June, a Peregrine falcon had landed on plot 4, further disturbing the nesting area. And by the first week of July there were no birds nesting or resting on any of the plots. Complete productivity observations for BLKI plot(s) are presented in Appendix G.

Common Murre Productivity Monitoring

According to USFWS, COMU experienced complete reproductive failure at nearly all monitored colonies in the Gulf of Alaska and Bering Sea in 2016. This followed widespread mortality events during 2015–2016. At many colonies, zero to few murres attended nesting cliffs during

the typical breeding period, and breeding was later at colonies where murres attempted to breed (Renner et al. 2016). As noted above this reproductive failure was also evident at Round Island.

At Round Island, COMU productivity monitoring was conducted from 13 June through 10 August on plots 1, 2, 4, and 5 at OP. The date of first egg sightings was 13 June at OP1 and OP4 and 19 June at OP. This is slightly later than the normal early to mid-June first egg dates of prior year's data. There also was a general absence of nesting birds. Even though there were plenty of COMU around in the areas waters and visiting the cliffs, only 7 nesting pairs were located amid 3 of the 5 plots. There were no eggs observed on OP2 or OP3. Of the 7 nests started, predation and a lack of birds present on the plots prevented any successful hatching of chicks. All 7 nests failed within a few days of being started. COMU were present at Round Island, but generally not on the nesting cliffs. They were often seen in huge rafts in front of MB, staying on the ocean rather than the nesting sites. For 2 days in early July, staff noticed that there were no birds present on any of colonies along MB, between OP and the Spit. Local egg hunters reported similar conditions at Black Rock where it was reported that no COMU were nesting and there were no eggs on Black Rock even though there were many COMU in the seas around it. This was partly attributed to a fox being present; however, it seems unlikely that the presence of a fox would have resulted in a lack of nesting. It is likely, similar to Round Island, that it exacerbated nesting failures. Complete productivity observations for COMU plots are presented in Appendix H.

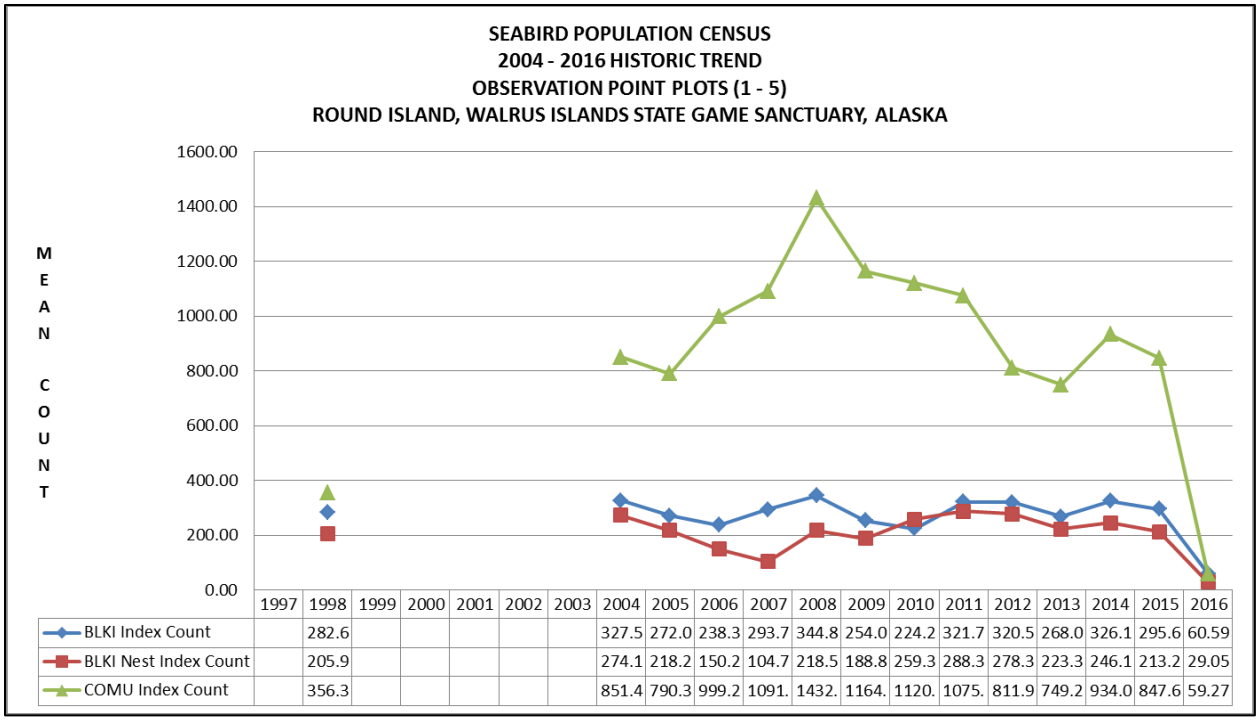
Population Counts

Population index counts of the 5 OP plots, for BLKI, COMU, and PECO commenced once it appeared that nesting was going to be late or unsuccessful. Population counts of PECO on traditional PECO nesting plots were not conducted as PECO did not nest at these sites this year. More frequent counts were done due to the lack of birds on many days, in the hopes of catching some birds on the plots. In all, 21 population index counts were conducted between 7 May and 10 August as weather permitted. Ten of the 21 surveys, spaced evenly (approximately 1/week) across the period were chosen for analysis. While some of the earlier counts had up to a few hundred birds; on average there were only 61 BLKI, 29 BLKI nests, and 59 COMU across all plots (standard deviation; 95, 47, and 129 respectively). Complete population count data are presented in Appendix I and plotted with historic data in Figure 12.

Table 1. Seabird phenology and productivity summary, Round Island, Alaska, 2011–2016.

		2016	2015	2014	2013	2012	2011
BLACK-LEGGED KITTIWAKES	**BLKI**	#	#	#	#	#	#
	Nests or pairs	9	50	50	50	54	53
	Eggs laid	9	93	90	95	78	89
	Chicks hatched	0	52	51	41	30	51
	# Nests that fledged chicks	0	8	17	9	5	15
	Chicks fledged	0	8	17	9	5	15
	Productivity (chicks/nests)	0.00	0.16	0.34	0.18	0.09	0.28
	Mean clutch size[a]	N/A	1.9	1.8	1.9	1.4	1.7
		%	%	%	%	%	%
	Hatching success[b]	0	56	57	43	38	57
	Fledging success[c]	N/A	15	33	22	17	29
	Reproductive success[d]	0	9	19	9	6	17
	Nesting success[e]	0	16	34	18	9	28
	Date of 1st egg	6/21	5/30	5/27	6/4	6/2	5/30
	Date of 1st chick	N/A	6/22	6/16	6/29	6/29	6/27
	Max chick count	N/A	44	39	32	30	51
	Date of max chick count	N/A	6/29	6/27	7/4	7/7	7/2
	Date of 1st fledge	N/A	7/29	7/25	8/12		
COMMON MURRES	**COMU**	#	#	#	#	#	#
	Nests or pairs	7	57	70	70	30	67
	Eggs laid	6	51	70	70	30	67
	Chicks hatched	0	21	12?	22	3	14
	# Nests that fledged chicks	0	9	?	19	3	7
	Chicks fledged	0	9	?	19	3	7
	Productivity (chicks/nests)	0.00	0.16	--	0.27	0.10	0.10
	Mean clutch size[a]	N/A	0.9	1.0	1.0	1.0	1.0
		%	%	%	%	%	%
	Hatching success[b]	0	41	--	31	10	21
	Fledging success[c]	N/A	43	--	86	100	50
	Reproductive success[d]	0	18	--	27	10	10
	Nesting success[e]	0	16	--	27	10	10
	Date of 1st egg	6/26	6/19	6/14	6/14	6/16	6/8
	Date of 1st chick	N/A	7/12	7/20	7/16	7/20	7/16
	Max chick count	N/A	17	10	15	3	14
	Date of max chick count	N/A	7/25	7/31	7/27	7/20	7/20
	Date of 1st fledge	N/A	8/6	-	8/10		
PELAGIC CORMORANT	**PECO**	#	#	#	#	#	#
	Nests or pairs	2	N/A	84	42	15	16
	Eggs laid	2	N/A	327	121	42	45
	Chicks hatched	0	N/A	241	56	31	18
	# Nests that fledged chicks	0	N/A	75	22	13	3
	Chicks fledged	0	N/A	195	56	29	8
	Productivity (chicks/nests)	0.00	N/A	2.32	1.33	1.93	0.50
	Mean clutch size[a]	N/A	N/A	3.9	2.9	2.8	2.8
		%	%	%	%	%	%
	Hatching success[b]	0	N/A	74	46	74	40
	Fledging success[c]	0	N/A	81	100	94	44
	Reproductive success[d]	0	N/A	60	46	69	18
	Nesting success[e]	0	N/A	89	52	87	19
	Date of 1st egg	5/7	N/A	5/12	5/17	5/24	5/25
	Date of 1st chick	N/A	N/A	6/6	6/13	6/26	6/24
	Max chick count	N/A	N/A	78	56	31	18
	Date of max chick count	N/A	N/A	7/6	7/19	7/17	7/10
	Date of 1st fledge	N/A	N/A	7/25	8/3		

[a] Mean clutch size = eggs/nests with eggs.
[b] Hatching success = % eggs laid that hatch.
[c] Fledging success = % chicks hatched that fledge.
[d] Reproductive success= % eggs laid that fledge.
[e] Nesting success = % nests where ≥1 chick fledges.



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BLKI Index Count		282.6						327.5	272.0	238.3	293.7	344.8	254.0	224.2	321.7	320.5	268.0	326.1	295.6	60.59
BLKI Nest Index Count		205.9						274.1	218.2	150.2	104.7	218.5	188.8	259.3	288.3	278.3	223.3	246.1	213.2	29.05
COMU Index Count		356.3						851.4	790.3	999.2	1091.	1432.	1164.	1120.	1075.	811.9	749.2	934.0	847.6	59.27

Figure 12. Historic common murre (COMU) and black-legged kittiwake (BLKI) index counts, Round Island, Alaska, 2004–2015.

OTHER OBSERVATIONS

During the monitoring season ADF&G staff also record a number of incidental or opportunistic observations on other plants, animals, weather, environmental or operational information. These data do not typically record or reflect species or conditions that may be seen on a daily basis on Round Island nor include every observation of a particular species or condition that occurred during the season. These data have primarily recorded more noteworthy observations such as first plant blooms, first sightings of birds, dates of first egg laying, tagged animal notations, offshore marine mammal sightings or migrations, nesting notes on species not under direct study, and dates of operational significance such as date of arrival, snow conditions, when water flow from spring occurred, etc. All daily observations for the 2016 season, along with observations from off season game camera data are summarized in Appendix J. Some of the more noteworthy observations are detailed below.

Marine Mammals

Gray whales (*Eschrichtius robustus*) are typically observed along the eastern shores of Round Island in April through May, and sometimes into mid-June. In 2016 they were observed passing the island on their migration north earlier than usual with gray whales being seen 23 March through 26 May. For a few days, gray whales fed quite close to shore in front of the cabin and MB. On 2 occasions they were observed interacting with groups of Steller sea lions at EC in early May. Humpback whales (*Megaptera novaeangliae*) were observed close to the island in

May and then again in August. One Humpback whale put on a breaching, lobtailing, and fin slapping display close to shore (Fig. 13).

Harbor seal (*Phoca vitulina richardsi*) were observed regularly around the island throughout the field season. Photographs were taken of seals in March, May, July, and August. Most of these seals were seen in and around BC and MB.

Figure 13. Humpback whale breaching in front of the cabin on 8 August 2016, Alaska.

Terrestrial Mammals

Red fox (*Vulpes vulpes*) groups were identified at the cabin, EC, summit, and MB with a conservative estimate of 20 individuals. The den at the staff cabin experienced minimum use, and a new fox den was found higher up in the rocks near the cistern. This den was successful in producing 4 different kits. Fox kits were observed throughout the island including the summit and EC. Fox were viewed preying on both birds and bird eggs near the cabin and MB.

Staff indicated a lower number of shrews and voles were observed this summer compared to the recent past.

Plants

A *Saxifraga bracteata*, initially identified as *S. Rivularis*, was collected on 4 June and brought into the University of Alaska, Anchorage Center for Conservation Sciences to be identified. Once identified by Justin Fulkerson, M.S., the specimen was mounted and available for viewing at the Consortium of Pacific Northwest Herbaria, http://www.pnwherbaria.org/index.php. While this species was not included in the 1995 National Park Service (NPS) Hasselbach and Neitlich Botanical Survey, it had been previously collected and archived at University of Alaska Fairbanks (UAF), Museum of the North herbarium by Taggart and Zabel in 1977.

Dandelion specimens have previously been identified and collected at Round Island. Initially reported as the first occurrence, dandelion observations in 2004–2006 along the Traverse Trail caused invasive species concerns. In 2006 a sample was collected and identified as *Taraxacum ceratophorum* by UAF herbarium staff and determined to be native to Alaska, but possibly not native to Round Island. This was apparently based on the fact that they were not included in the 1995 NPS Hasselbach and Neitlich Botanical Survey and staff belief that they had not been observed on Round Island before. However, review of records shows that dandelions have been sporadically observed at Round Island since at least 1977. Since 2004, observations have been regular with specimens being observed in most years, presumably because staff have been more conscious of the invasive issue and alert to their presence. Post 2004, observations have primarily been along the Traverse Trail, but they have also been observed at SP (1996), FR (2012), and EC (2016). In the case of the 1977 collection by Taggart and Zabel they were identified as *Taraxacum kamtschaticum*, also an Alaska indigenous species, and are archived at UAF.

Birds

First observance or notable daily observations of bird species are summarized in Appendix J. A list of less common birds observed on Round Island during the 2016 season included a sandhill crane (*Grus canadensis*) and a hoary redpoll (*Acanthis hornemanni*) on 12 May and a white-winged scoter on 14 May. The remains of a dead short-tailed shearwater (*Puffinus tenuirostris*) was found on the trail, possibly brought up by a red fox. A belted kingfisher (*Megaceryle alcyon)* was observed for the second year in a row perched on the boat cable in BC on 10 August.

A number of Pacific wren (*Troglodytes pacificus*) observations were also made May through July this year. Most observations were of individual birds at EC, but an individual was also observed at the cabin and BC area on several days in late June; so multiple individuals may have been present. The last time a Pacific wren was noted at Round Island was 2004.

Invertebrates

In mid-July numerous aquatic invertebrates similar to planaria or small leeches infested the camp in spring. Staff collected samples and forwarded these to UAF Museum of the North staff for identifcation and cataloging.

Remote Camera Observations

RECONYX game cameras are used at select sites across Round Island, both inseason and during winters. Review of photos from these cameras provides a wealth of information that complements and fills out normal ADF&G wildlife monitoring and law enforcement. These remote monitoring devices allow ADF&G staff to acquire walrus numbers for WM on days where weather or other duties prohibits travel to that side of the island, allowing for complete coverage of eastside beaches and WM through the season. Additionally, they provide data on species presence and timing, weather, sea and sea ice conditions, and violations. Photos are also reviewed for disturbances that are correlated with known anthropogenic events recorded by staff.

Photos are downloaded and archived and data associated with the photos are imported into a database for retrieval and useage.

Cameras were stationed at WM, FB, MB, and EC August 2015 through April 2016. The FB camera lost power and data 14–24 March 2016. The MB camera shifted losing view of the beach, effectively losing data 1 February–22 March. Addionally, camera data for MB 22 March–8 July is currently missing following download; it may have been left on island.

In addition to pertinent observations noted in other sections of this report a few other relevant observations include:

- The majority of the nesting seabirds (BLKI, COMU, and PECO) appeared to have left Round Island by 1 September 2015, returning about 12 April 2016.
- Pacific walrus use at Round Island largely ended by 7 September for the 2015 season. However, a few individuals were observed via camera in November, January, and early February. By 28 February around 100 Pacific walrus were using WM. This use continued through staff arrival 20 April with an average of 61 Pacific walrus (range 0–372) present at camera monitored beaches (MB, WM, FB) during this period.
- Sea ice was not very prevalent around the island during winter 2015–2016; only being noted from the cameras on 18 and 26 December 2015.
- Steller sea lions were present at East Cape throughout winter 2015–2016. Steller sea lion use during the winter appears to primarily be at TB; but also the V1 ledges. This appears to be related to shore ice conditions with use shifting to TB when the rocks and ledges are ice up.
- Cameras were placed at several sites around the island for 2016–2017 winter monitoring.

Other Portions of Walrus Islands State Game Sanctuary

No staff visits were made to the other islands within the sanctuary this season. Reports regarding COMU and a fox at Black Rock are detailed above in the common murre section. A report of a brown bear swimming in between Summit Island and Crooked Island was received in June. An anecdotal report of fewer walrus being seen swimming throughout the bay was also received. No other reports were received regarding activities elsewhere in the sanctuary.

Weather

A Davis weather station and data logger at the cabin are used to capture basic weather data (temperature min/max, precipitation, wind speed and direction, barometric pressure) at 10-minute intervals. Daily weather data, and additional environmental conditions such as tides, storms, wind and wave state, are also recorded daily with walrus monitoring surveys. Intended for use in correlating walrus numbers to this data, it also serves to provide a summary of daily weather conditions on Round Island. Daily minimum and maximum temperatures, precipitation, winds, barometer and cloud cover recorded manually in conjunction with Pacific walrus and Steller sea lion surveys, as well as electronic data from the Davis weather station are archived into the WISGS database. Additional temperature data from game cameras placed at various

locations around the island are also archived with RECONYX image data within the WISGS database.

The Davis weather station did not collect data 14 August 2015–6 February 2016. An additional period of lost electronic data was experienced 27 May–16 July. Missing temperature data during the 2015–2016 winter were captured from remote camera data and used to complete data sets. However, barometer data are missing during this period. Much of the missing inseason information was manually recorded during daily surveys and manually input.

A summary of temperatures, wind speeds, days with precipitation and cloud cover for the period August 2015–August 2015 is provided in Table 2 below. Complete daily weather data as recorded for monitoring surveys for 2016 are presented in Appendix K.

Table 2. Weather summary, Round Island, Alaska, 2015–2016.

Year/	Temperatures °F		Wind speed (kph)		% Days with	% Days <25%	% Days >50%
Month	Average high	Range	Average	Range	precipitation	overcast	overcast
2015							
Aug[a]	61	40–74			8.57	76.47	0
Sep	51	31–68			25.71	70.00	13.33
Oct	45	26–51			20.00	77.42	9.68
Nov	34	14–45			40.00	80.00	0
Dec	28	10–37			5.71	83.87	9.68
2016							
Jan	32	15–38			10.00	80.65	3.23
Feb	36	23–41	21	3–44		78.57	7.14
Mar	35	12–40	15	0–50	14.00	54.84	29.03
Apr	45	32–52	22	5–73	18.00	66.67	33.33
May	51	36–65	14	0–42	18.00	67.74	25.81
Jun	63	45–80	17	0–35	12.00	40.00	40.00
Jul	64	49–83	18	0–46	12.00	74.19	16.13
Aug[b]	58	50–65	17	5–39	16.00	80.00	6.67

[a] 16–31 August 2015.
[b] 1–15 August 2016.

Public Use and Land Management

To protect sanctuary wildlife and other resources, access to Round Island and the waters within 3 geographical miles of the island are restricted. The 3-mile restriction has been in place since 1989, varying only slightly in the use of nautical versus geographical miles. Three geographical miles is about 10 meters more than 3 nautical miles. Prior to 1989 restrictions applied to Round Island and waters within 2 miles (5 AAC 83.250, 1985). Visitors and transporters must possess authorization from ADF&G in the form of a sanctuary access permit for the day(s) they plan to visit Round Island (Alaska State Regulation – 5AAC 92.066). All vessels approaching the island must contact ADF&G Round Island staff via marine radio (MVHF Ch. 7) prior to 9:00 AM on the day of their visit and again prior to entering the restricted 3-mile area. Once in the area they are required to maintain a course through a designated access corridor to BC on the northeast side of the island (Fig. 14). Since low-flying aircraft can cause major disturbances at walrus haulouts

(Fay 1982), all aircraft access to the island is prohibited unless authorized by ADF&G. ADF&G policy requests that all pilots avoid overflights below 5,000 ft above ground level within 3 miles of the island. Notices regarding these access restrictions are published as a flight advisory on Federal Aviation Administration charts and as an advisory on the National Oceanic and Atmospheric Administration nautical charts. Although ADF&G does not have the authority to regulate airspace, pilots who cause a disturbance can be prosecuted by USFWS under the Marine Mammals Protection Act for harassment of walrus. All vessel or plane traffic observed within the restricted area is documented and those without authorization are hailed through VHF marine radio or by avionics radio and notified of restrictions and advisories. Violations are reported to appropriate authorities for investigation and prosecution.

VISITOR USE

Campers arrive on Round Island after obtaining a permit through the ADF&G website or from the ADF&G Dillingham office. Day visitors are issued permits for $10.00 per person upon arrival on the island after obtaining access authorization from staff through morning VHF radio contact.

One of the primary goals of the sanctuary staff in managing the visitor program is to balance the quality of the experience for the visitors while protecting wildlife and other resources. When visitors arrive on Round Island, they are given an orientation that includes the visitation regulations and policies, a brief history of the sanctuary, a safety briefing and a demonstration on how to approach walrus viewpoints without disturbing the animals. All visitors are required to remain on established trails with the exception of going to the summit from EC. To avoid disturbance, visitors are not permitted on the beaches except for staff monitored arrivals and departures from BC or CG. As part of the safety briefing the precipitous and slippery nature of the trails is stressed and visitors are required to sign an Assumption of Risk form. Visitors are also requested to provide emergency contact information in the case of an accident. Staff duties associated with the visitor program include monitoring the VHF marine radio, authorizing access to sanctuary waters, issuing permits, collecting user fees, reviewing sanctuary rules and safety procedures, answering visitor questions, maintaining campground facilities, collecting visitor use data, and providing assistance to visitors when needed.

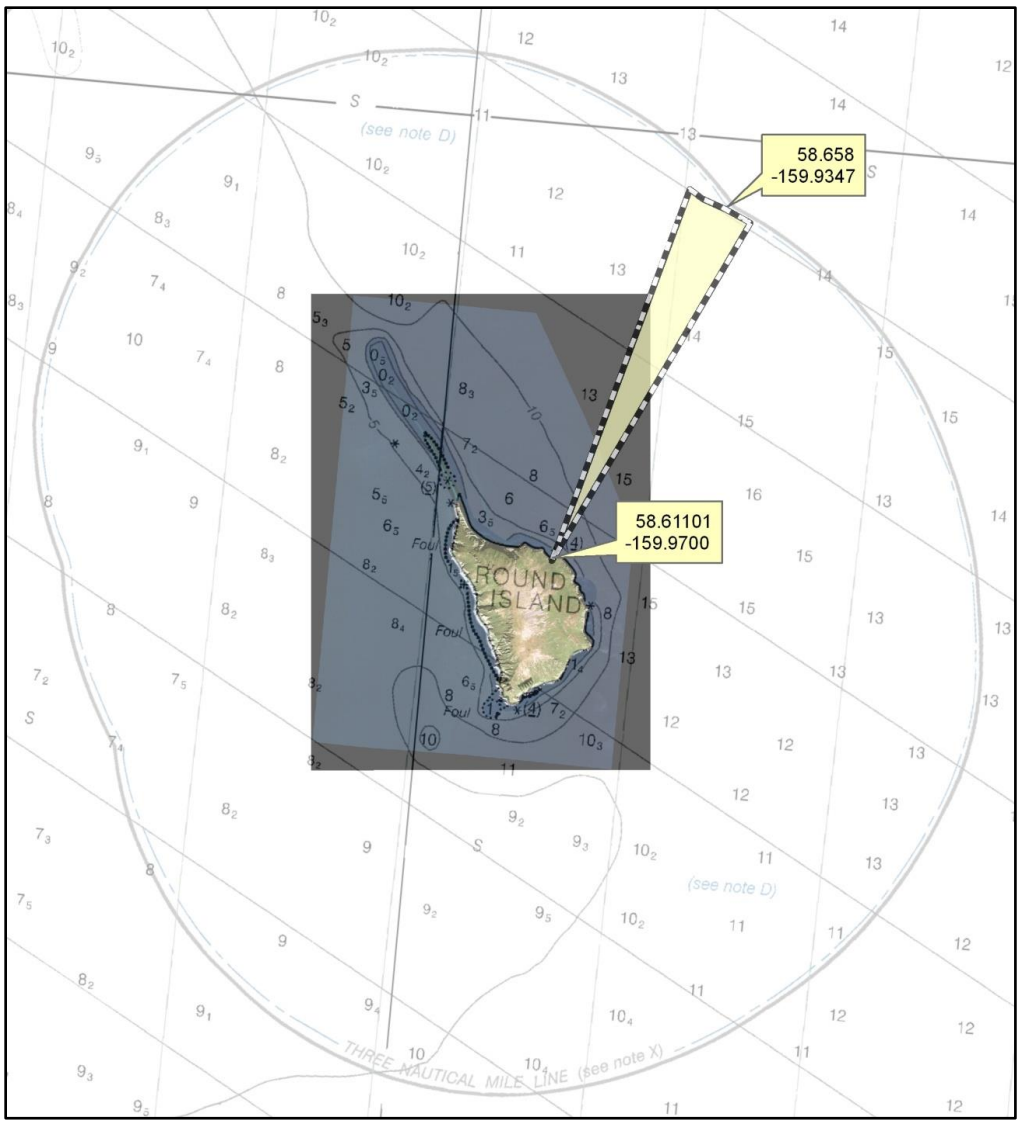


Figure 14. Round Island, Walrus Islands State Game Sanctuary, Alaska, showing 3 nautical miles restricted waters and access corridor.

Visitor use data for the 2016 season are summarized in Table 3. Togiak Outfitters provided commercial transport for the 2016 season which generally provided the opportunity for visitors. Preseason permit sales totaled 25 permits between 17 applicants for a potential 250 user days. Actual public visitation was considerably less, 7 unguided overnight campers totaling 40 user days. A motor failure and bad weather events during the peak July season prevented visitation by a group of 6 planning to spend 10 days and another group of 2 planning to spend 5 days. Two other permitted visitors were unable to visit the island due to Alaska Airlines initially losing their luggage upon arrival in Dillingham and weather days hindering air travel to Togiak and then boat travel to Round Island. A third group of 2, who had not yet secured visitation permits, arrived in Dillingham during the transportation outage believing they had transport and had no way to get to Round Island.

There were 40 visitor use days and 263 staff use days between 20 April and 15 August. Public visitor use days were all camper use days as there were no day visitors. The average length of stay for the campers was 5.7 days. Public visitors represented 4 individual groups with a mean group size of 1.75 (range: 1–2). Four visitors were Alaska residents, the remainder hailed from Colorado, Hawaii, and Texas. There were an additional 5 visitors involved in administrative management duties (Explore.org camera installs) which were on the island outside the normal season for an additional 34 user days.

Historically, visitation to Round Island has been variable (Fig. 15). Fluctuations in visitation are generally attributed to a number of social and economic factors including the availability of transportation to the island, national and international economic conditions, periods of opportunistic day visitation, and national and international publicity.

A record number of visitors (303) to Round Island occurred in 1977. However, the inflated visitation that year was due to the approximately 250 day visitors from a small cruise ship. In the 1980s and early 1990s, many members of the herring fishing fleet visited Round Island opportunistically during breaks in the fishery. Also during this time, there was national and international publicity of the sanctuary through television programs and magazine articles (Rice 2002). In 1987 a record number of 131 campers visited the island and the number of campers to the island remained high during the late 1980s and early 1990s. After the decline of the fishery in Bristol Bay, a drop in visitation was noted. Visitation generally declined between 1990 (110 campers, 58 day use) and 2004 (19 campers, 55 day use). Between 2005 and 2007, visitation to Round Island rose slightly, and then dipped again from 2008 to 2011 due to complications with commercial transport charters.

Table 3. Visitor use summary, Round Island, Walrus Islands State Game Sanctuary, Alaska, 2016.

	Visitor numbers				User days			
State	Admin	Campers	Day use	Total	Admin	Campers	Day use	Total
Alaska	5	4	0	9	263	40	0	303
Colorado		1	0	1			0	0
Hawaii		1	0	1			0	0
Texas		1	0	1			0	0
Grand total	5	7	0	12	263	40	0	303

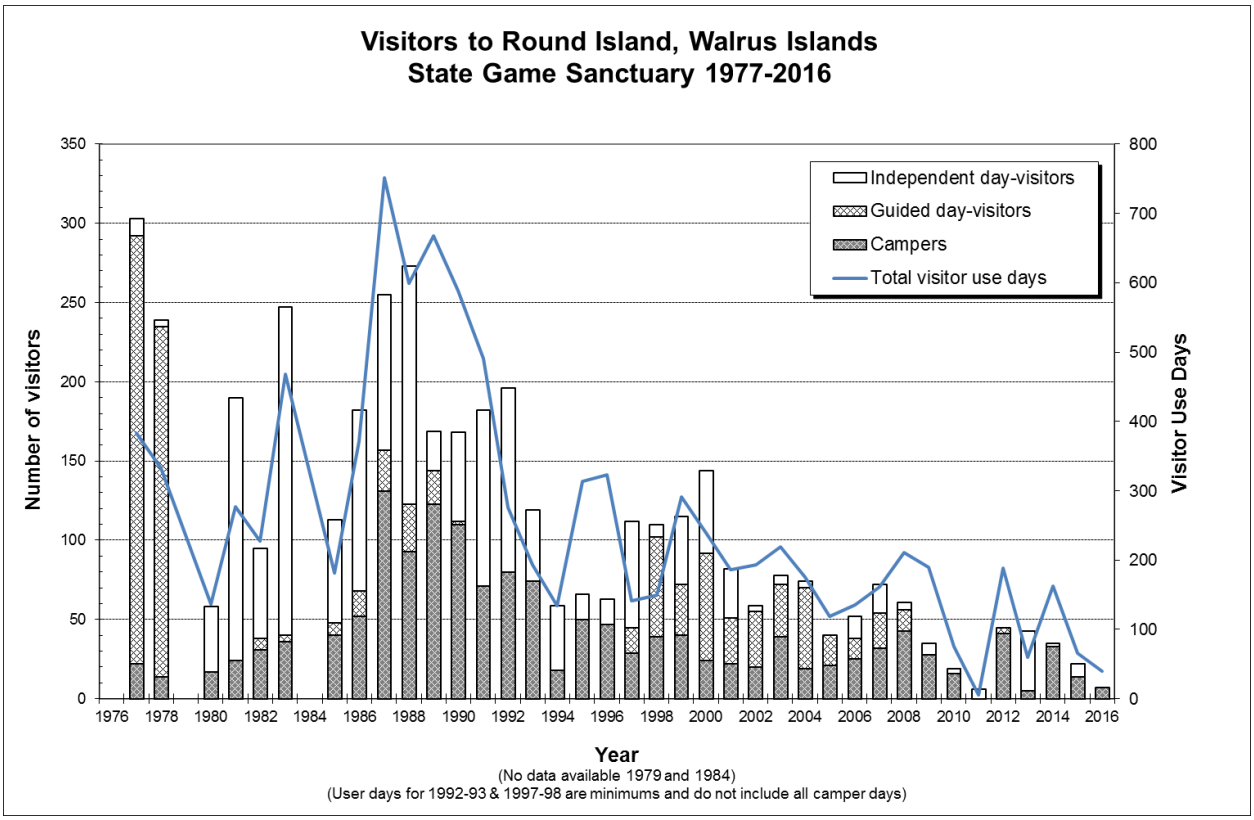


Figure 15. Visitor use at Round Island, Alaska, 1977–2016.

WALRUS INTERNET CAM

In January 2015, ADF&G began discussions with the Annenberg Foundation and Explore regarding the potential for placement of a video camera system at Round Island to stream live video of the walrus haulouts over the Explore.org Internet site. The project would allow Explore to expand its coverage of live Internet cameras and provide funding for ADF&G to staff the camp at Round Island in order to continue the department's mission there and support the Explore.org camera project. Through these efforts a plan was developed and implementation began in March 2015. Grant funding for ADF&G participation in the project was provided by the Annenberg Foundation, Grant #15-186. The grant provided $100,000 over 2 years ($50,000 in 2015 and $50,000 in 2016) for ADF&G's participation in the project.

The objective of the project was to implement a live feed video webcam system which would stream live video of the Pacific walrus at Round Island; and to allow staff to be present on Round Island to participate in and support the project, as well as their normal duties. Project components included ADF&G support and assistance in the installation of a system of remote video cameras and power stands, satellite Internet connections, and live streaming of the video. And then, ADF&G staff being present on Round Island to maintain infrastructure, security,

participate in camera operations, online community discussions and educational content, and conduct normal sanctuary duties.

2016 Summary

ADF&G staff worked with Explore contractors, GCI and HDonTap, at Round Island to assess the conditions of the cameras, powerstands, and satellite uplink infrastructure. Equipment handled the winter well, with the only malfunction being faulty batteries in the MB relay powerstand. HDonTap staff had prefabricated a solar panel array for the MB relay powerstand that was wired into the system. Staff deployment, equipment delivery and placement were handled by Mat Rowley of Egli Air Haul in King Salmon, Alaska. Egli's JetRanger helicopter returned to Dillingham each evening, except for the night of 27 March.

On 23 March, WISGS manager, Ryan Morrill, flew to Round Island accompanied by GCI staff, Joe Miller and HDonTap staff, Timothy Sears. During that day, the cabin was opened up and GCI technician readjusted the satellite dish and installed a new block up converter and an additional modem, increasing upload bandwidth 2–3 mbps to 6 mbps. The helicopter transported the group back to Dillingham that evening and was unable to fly the next day due to bad weather. On 25 March a second day trip was made with Ryan Morrill, Timothy Sears, and HDonTap staff, Andrew Olson. Pilot Mat Rowley returned to Dillingham to pick up and sling-load crated equipment and methanol fuel jugs to the island. The cabin and FB powerstand were reconnected and the FB camera was swapped out with a newer model SONY PTZ (point, tilt, zoom) camera. The crew returned on 26 March and ran 3 separate sling loads; methanol fuel jugs to the MB powerstand and MB relay powerstand, and solar panel to the MB relay powerstand. Over the next 5 days the island experienced a number of bad weather days, including receiving ash from the erupting Pavlof Volcano on 28 March. Despite this poor weather, camera powerstands were reconnected and refueled, while new SONY PTZ cameras were positioned and connected at FB and MB, http://explore.org/live-cams/player/walrus-cam-round-island. An AXIS PTZ camera was positioned and connected on the MB relay powerstand and was introduced on Explore.org as the Round Island Cliff cam (Fig. 16), http://explore.org/live-cams/player/cliff-cam-round-island. This new camera allows viewers to observe the entirety of MB while capturing the daily sunrise and sunsets throughout the summer. All point of view cameras from last year were not put into service for 2016. In an attempt to combat the large number of fly detritus left on the MB camera dome, an exterior pressure sprayer was installed. However, manual cleaning was still required throughout the summer. This initial work was completed by late evening on 31 March and the HDonTap crew departed Round Island that evening. ADF&G staff returned briefly the next morning to secure camp and finish hauling the final load of equipment and trash off of the island.

Figure 16. View from the Cliff cam and camera positioned on Main Beach relay powerstand, Round Island, Alaska.

ADF&G staff arrived at Round Island for the field season opening on 20 April. All powerstands were refueled and inspected with technical assistance from Tim Sears in the California offices of HDonTap. The MB camera had been relaunched via the Explore.org website on 7 April and the Cliff cam came online on 30 April. An attempt to connect the WM PTZ camera on 29 April was unsuccessful due to missing parts. Parts and additional cameras were sent out to the island with campers on 10 June, and the WM PTZ camera was successfully connected on 11 June. The limited number of walrus using WM in 2016 resulted in the camera not being broadcasted on the Explore.org website.

Staff members began monitoring and participating in the web community postings daily starting on 21 April. Typical daily postings included local tides, weather, photo of interest and any interesting observations from the day prior. During the 2016 season, staff also contributed to online daily Q&A discussion boards, 6 biweekly blogs, and 3 live video chat sessions. In addition to the tremendous high-definition views of walrus streaming live from Round Island, the Explore.org Walrus cam site has generated a tremendous online dialog of over 40,000 comments providing a wealth of information to viewers regarding Round Island, Pacific walrus, and WISGS.

ADF&G staff completed all in-season maintenance of Round Island based components of the Walrus cam system. The WM to MB safety lines were inspected and cleaned and then the anchors were tested for load bearing. Specific maintenance issues that came up included a point of view camera problem, multiple T-Box issues, IP remote problems, fly dung on lens covers obscuring view at MB camera, performance issues with the MB camera. Numerous diagnostic tests and maintenance visits were unable to determine the cause of the MB camera issues, and the camera was pulled on 11 August. The T-Boxes were also pulled at the end of the season and returned to HDonTap for inspection and maintenance.

While some technical difficulties were encountered, Explore.org was able to provide a consistent Internet view of walrus hauled out at Round Island by alternating between the cameras at MB and FB haulouts, as well as the new Cliff cam view. The MB camera broadcasted from 7 April

through 15 June, then again from 21 June to 26 June (Fig. 17). The FB camera broadcasted from 15 June to 21 June and from 26 June until the camera was taken down on 14 August (Fig. 18). At seasons end all cameras were taken down for the winter except for the Cliff cam which was left powered on to broadcast into the fall and winter season. The Cliff cam broadcast 30 April through about 11 October when shorter daylight hours prevented storing enough power to operate reliably.

Figure 17. View from the Main Beach walrus camera and camera positioned on Main Beach rock face, Round Island, Alaska.

Figure 18. View from the First Beach walrus camera and camera positioned on First Beach east rock wall, Round Island, Alaska.

Live feed video was available via the Explore.org website as well as through several other social media sites. During the live operating season the Round Island Walrus cam drew over 1.3 million views on video sites, over 900,000 page views to the Explore.org Walrus cam pages and generated over 40,000 comments on the Explore community chat board. Additional viewing and participation continued into the fall and winter viewing the real time Cliff cam and highlights from the 2016 season.

Under the grant, ADF&G Round Island staff spent over 265 hours directly participating in the Walrus cam activities, 20 April through 15 August 2016. A total of 675 staff hours were attributed to all aspects of the project, including time spent on wildlife monitoring surveys, camp maintenance, and data entry duties. An additionall estimated 250 hours were spent by other ADF&G staff participating in planning, management, and the Walrus cam online community.

It is intended to have the online cameras in operation again next season, beginning in late March. Staff presence on the island will begin around 1 May.

ACCESS VIOLATIONS

As noted above, staff documented 1 infraction of ADF&G aircraft access policy and FAA flight advisories. On 7 July, a low flying floatplane was seen and photographed by campers flying over MB and then turning towards Togiak. Small numbers of Pacific walrus were hauled out at MB (15), FR (3), FB (14), and none at WM. About half the Pacific walrus at MB dispersed to the water and the 3 at FR also dispersed as a result of the overflight. Several attempts to raise the aircraft by radio were unsuccessful. Photographic and video evidence were gathered and forwarded to USFWS for action.

ADF&G installed a Garmin® (Garmin International, Inc., Olathe, Kansas) GMR18HD radar and GPSMAP 740 series chart plotter system in June of the 2011 season to aid staff in giving proactive warnings to vessels approaching the 3-mile limit and to gather and present sound evidence when violations do occur. An automatic identification system (AIS) unit was added in 2015 and continues to be a valuable asset working in concert with the radar system. AIS displays vessel name, type, heading, and direction for AIS-enabled vessels. The radar and AIS system were active for the entire season and are proving to be a useful enforcement tool as well as improving accuracy of data collection on anthropogenic disturbance events.

SUBSISTENCE HUNT

Historically, Pacific walrus have thrived in the Bering and Chukchi seas (Fay 1982). In the 17th century there was an increased demand for walrus ivory, oil, and hides, which corresponded to the arrival of the Europeans. Walruses were hunted extensively until the end of the 19th century when only a fraction of the population remained (Fay 1957).

Round (Qayassiq) Island was a traditional walrus hunting ground for Alaska Natives and in the early 1990s hunters, mainly from the village of Togiak, petitioned the Alaska Board of Game for access to the island for subsistence hunting. This resulted in the formation of the Qayassiq Walrus Commission (QWC) in 1995, which helped to reestablish the Round Island subsistence hunt. The Board of Game agreed to allow island access between 1 October and 31 October for the hunt. The harvest limit was set at 10 (including struck and lost animals) by the cooperative agreement (ADF&G, Eskimo Walrus Commission, QWC, and USFWS). Since this time the dates and harvest numbers have changed and in 2003, the board extended the dates which are now set from 10 September through 20 October with a limit of 20 walrus. (Subsistence Walrus Hunting on Round Island, Bristol Bay, Alaska Cooperative Agreement). The fall hunt has been intermittently monitored by USFWS and ADF&G staff over the years. State and federal agencies monitored the hunt during 1995–1998 and 2003–2006 but at the present time no agency

monitoring is required. Currently agencies rely on self-monitoring and reporting by hunt captains and QWC.

Round Island hunt access permit forms were distributed for the 2016 Qayassiq subsistence hunt at the 5 September QWC 20-year reunion prehunt meeting in Togiak, Alaska. Eight permits were distributed to hunt captains of Togiak, Manokotak, Twin Hills, and Dillingham. One village reported hunting at Qayassiq this year. Manokotak's crew of 17 successfully harvested 3 walrus at MB on 27 September. They had one that was struck and lost, having been shot on the beach and escaping into the water. Due to increased wind and swell outside the lee of the island, the hunters anchored in BC before departing the next morning. The remaining communities did not complete the permit process, nor notify ADF&G that they would be hunting at Round Island and none filed posthunt reports indicating they had hunted at Round Island. Togiak's crew of 6 hunted at Hagemeister Island this year, harvesting 3 with 0 struck and lost.

Sanctuary Administration and Management

STAFFING

ADF&G staff were present on Round Island from 20 April through 15 August 2016. Camp supplies were initially to be transported from Seward, Alaska to Round Island via the fishing vessel Barwell, but the vessel had to turn around due to a hull breach. Gear and supplies were brought back to Anchorage and flown as freight to Dillingham, where they were sling-loaded directly to the island on 22 April. Three brailer bags of supplies (1,800 lb total) were slung over a 4-hour period. Sanctuary manager Ryan P. Morrill and Dillingham area biologist Neil Barten flew out to the island on 20 April via a Robinson R44 helicopter from Pollux Aviation under contract with Icicle Seafoods. The pilot, Sean Charlton, returned to the island to swap out Neil Barten with new technician Margaret K. Archibald on 26 April.

Former technician, Benjamin Histand, and volunteer Diana Johnson were present 27 June–20 July 2016 for Ryan Morrill who was on assisting with sea lion work in Southeast, Alaska. Staff transports on these dates were by Paul Markoff of Togiak Outfitters, Inc. Due to engine trouble, Pollux Aviation transported Ryan Morrill to Round Island on 20 July and delivered Benjamin Histand and Diana Johnson directly to Dillingham. Demobilization of camp and transport of staff off island occurred on 15 August and was also done by Paul Markoff.

FACILITIES

Round Island staff perform a number of maintenance, repair, or construction projects annually in support of the Round Island facility and visitor safety. This work often includes such things as building and camp maintenance and trail improvements. Heavy winter winds flattened the staff outhouse, and the debris was spread far and near. Neil Barten and Ryan Morrill were able to relocate the pieces and rebuild a new outhouse using a salvaged HDonTap storage container.

Staff made extensive improvements on the Round Island trail system. During the 2016 season, the trails from NBC, FR, BC, CG, FB, FP, SB, EC pass, and EC areas were improved at 87 locations. Improvements included straightening, widening, and levelling paths; replacing foot bridges; adding geoblock, stone steps, wooden planks; and filling holes. A new length of tubing

was introduced at the campers' spring for ease of filling water supplies. The tool shed, cabin, and campground outhouse guy wires were also tightened and leveled to correct for settling into the ground.

OTHER MANAGEMENT ACTIONS

After several years of coordination on archaeological information and site characteristic information, the NPS nomination to designate the Walrus Islands State Game Sanctuary as a National Historic Landmark (NHL) moved to completion in 2016. After a final public review in fall 2016 the designation was signed 23 December 2016. And on 11 January 2017, Department of the Interior Secretary Sally Jewel announced the designation of the Walrus Islands Archeological District as the newest of Alaska's NHLs. The NHL program recognizes WISGS's exceptional "historic" value to the nation and provides the State of Alaska with the opportunity for technical assistance, recognition and funding to help preserve the history and archaeology of the area, and create recreational opportunities. Established in 1960, WISGS was also previously designated as a National Natural Landmark (NNL) in 1968. The NNL designation recognizes the national importance of the sanctuary's natural history and resources (especially as a haulout for Pacific walruses). Since that time the NPS-NNL program has provided funding, technical advice and assistance to ADF&G for the department's operations on Round Island. NNL assistance was instrumental in keeping Round Island open for visitation in 2016, and will be again in 2017. This is Alaska's 50th NHL site designation. And the dual NNL and NHL designation only exists at 10 other sites throughout the nation.

In 2016, ADF&G staff also worked cooperatively with USFWS providing information and comments on the Pacific Walrus Haulout Database (Fischbach et al. 2016), revision of FAA advisories and supplement inserts for walrus haulouts, and on revising commercial fishing boundaries at an emerging haulout at Cape Greig in order to minimize disturbances.

PROJECT FUNDING

Funding for field staff and camp operations at Round Island were graciously provided by a number of private and federal grantors. Generous grants from Explore.org, Alaska SeaLife Center – Seward, Alaska; Georgia Aquarium – Atlanta, Georgia; Oceans of Fun - Milwaukee Wisconsin; Pittsburgh Zoo and PPG Aquarium – Pittsburgh, Pennsylvania; Point Defiance Zoo and Aquarium – Tacoma, Washington; and the National Park Service-National Natural Landmark program allowed ADF&G to continue it's presence on the island and responsibilities with walrus, seabird, and sea lion monitoring; webcam support; visitor services; enforcement; and facilities maintenance. A Coastal Impact Assistance Program grant from National Marine Fisheries Service through the ADF&G-DWC Marine Mammal program allowed for continued Steller sea lion census and brand resight work through 30 June.

IVORY COLLECTION

Four complete tusks and 3 pieces of broken ivory were recovered during the 2016 season. These pieces were collected from 1 walrus carcass and beach cast ivory found along SP, MB, and Sea Lion Point beach. Observed mortalities and ivory collected are summarized in Table 4.

Collected ivory was transferred to the ADF&G area biologist in Dillingham for tagging by the USFWS. The walrus ivory collected from Round Island is auctioned off, through the Eskimo Walrus Commission, at local events such as the Beaver Roundup Festival. Proceeds are then deposited into the Pacific Walrus Conservation Fund to further walrus conservation and research projects.

Table 4. Summary of observed walrus mortalities and recovered ivory, Round Island, Alaska, 2016.

Date	Location[a]	Mortalities observed	# of Tusks ivory present	Beach cast ivory	Amount collected	Comments
5/18	MB	0	0	1	1	Found while doing MB camera maintenance.
5/30	MB	0	0	1	1	Found while doing MB camera maintenance.
6/4	SP	0	0	1	1	Found while picking up debris on SP.
7/14	MB	1	2	0	2	Carcass seen on MB from OP[b], died about 7/11. Retrieved ivory on 7/18.
7/16	CG, EC	1	2	0	0	Three observations of carcass floating past EC, CG and cabin. Probably same one.
7/31	MB	0	0	1	1	Found while doing MB camera maintenance
8/3	Sea Lion Point Beach	0	0	1	1	Stopped to search beach with Achilles.

[a] MB = Main Beach; SP = Second Prime; CG = Campground; EC = East Cape.
[b] OP = Observation Point.

Acknowledgments

A very special thanks are extended to Explore.org; Alaska SeaLife Center; Georgia Aquarium – Atlanta, Georgia; Oceans of Fun – Milwaukee, Wisconsin; Pittsburgh Zoo and PPG Aquarium – Pittsburgh, Pennsylvania; and Point Defiance Zoo and Aquarium – Tacoma, Washington for their gracious financial support and remarkable interest in Pacific walrus and the Walrus Islands State Game Sanctuary. Thanks to Lauri Jemison, with the ADF&G-DWC Marine Mammal program for supporting earlier deployment and Steller sea lion efforts at Round Island. Thanks to HDonTap staff Tim Sears and Andrew Olson for webcam set-up and continued technical support. Thanks to Neil Barten and Eunice Dyasuk with ADF&G-DWC in Dillingham for their continued support and participation in the Round Island program. Thanks also to Pete Abraham, Keemuel Kenrud, and others at the U.S. Fish and Wildlife-Togiak National Wildlife Refuge for welcoming staff and volunteers at the bunkhouse in Togiak. Thanks to the staff and crews at Egli Air Haul and Pollux Aviation for their continued transport support. Thanks to Warner Lew and staff at Icicle Seafoods for their continued coordination and assistance in deploying gear to camp. Laura McCarthy (ADF&G-DWC) provided final formatting and editing changes and processed this document for publishing.

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Appendix A. Pacific walrus daily count summary, Round Island, Alaska, 2015–2016.

Date	Eastside total	Westside total	Total # walrus
8/15/2015	7	0	7
8/16/2015	26	0	26
8/17/2015	18	0	18
8/18/2015	3	0	3
8/19/2015	30	0	30
8/20/2015	179	0	179
8/21/2015	101	0	101
8/22/2015	25	0	25
8/23/2015	13	0	13
8/24/2015	25	0	25
8/25/2015	18	0	18
8/26/2015	14	0	14
8/27/2015	1	0	1
8/28/2015	11	0	11
8/29/2015	34	0	34
8/30/2015	28	0	28
8/31/2015	16	0	16
9/1/2015	24	0	24
9/2/2015	0	1	1
9/3/2015	0	0	0
9/4/2015	13	0	13
9/5/2015	11	0	11
9/6/2015	14	0	14
9/7/2015	0	0	0
9/8/2015	2	0	2
9/9/2015	0	0	0
9/10/2015	0	0	0
9/11/2015	0	0	0
9/12/2015	0	0	0
9/13/2015	0	0	0
9/14/2015	0	0	0
9/15/2015	0	0	0
9/16/2015	0	0	0
9/17/2015	1	0	1
9/18/2015	0	0	0
9/19/2015	0	0	0
9/20/2015	0	0	0
9/21/2015	0	0	0
9/22/2015	1	0	1
9/23/2015	0	0	0
9/24/2015	0	0	0
9/25/2015	0	0	0
9/26/2015	0	0	0
9/27/2015	0	0	0
9/28/2015	0	0	0
9/29/2015	0	0	0
9/30/2015	0	0	0
10/1/2015	0	0	0
10/2/2015	0	0	0
10/3/2015	0	0	0
10/4/2015	0	0	0
10/5/2015	0	0	0
10/6/2015	0	0	0
10/7/2015	0	0	0

Date	Eastside total	Westside total	Total # walrus
10/8/2015	0	0	0
10/9/2015	0	0	0
10/10/2015	0	0	0
10/11/2015	0	0	0
10/12/2015	0	0	0
10/13/2015	0	0	0
10/14/2015	0	0	0
10/15/2015	0	0	0
10/16/2015	0	0	0
10/17/2015	0	0	0
10/18/2015	0	0	0
10/19/2015	0	0	0
10/20/2015	0	0	0
10/21/2015	0	0	0
10/22/2015	0	0	0
10/23/2015	0	0	0
10/24/2015	0	0	0
10/25/2015	0	0	0
10/26/2015	0	0	0
10/27/2015	0	0	0
10/28/2015	0	0	0
10/29/2015	0	0	0
10/30/2015	0	0	0
10/31/2015	0	0	0
11/1/2015	0	0	0
11/2/2015	0	0	0
11/3/2015	0	0	0
11/4/2015	0	0	0
11/5/2015	0	0	0
11/6/2015	0	0	0
11/7/2015	0	0	0
11/8/2015	0	0	0
11/9/2015	0	0	0
11/10/2015	0	0	0
11/11/2015	0	0	0
11/12/2015	0	0	0
11/13/2015	0	0	0
11/14/2015	0	0	0
11/15/2015	0	1	1
11/16/2015	0	1	1
11/17/2015	0	0	0
11/18/2015	0	0	0
11/19/2015	0	0	0
11/20/2015	0	0	0
11/21/2015	0	0	0
11/22/2015	0	0	0
11/23/2015	0	0	0
11/24/2015	0	0	0
11/25/2015	0	0	0
11/26/2015	0	0	0
11/27/2015	0	0	0
11/28/2015	0	0	0
11/29/2015	0	0	0
11/30/2015	0	0	0
12/1/2015	0	0	0

Date	Eastside total	Westside total	Total # walrus
12/2/2015	0	0	0
12/3/2015	0	0	0
12/4/2015	0	0	0
12/5/2015	0	0	0
12/6/2015	0	0	0
12/7/2015	0	0	0
12/8/2015	0	0	0
12/9/2015	0	0	0
12/10/2015	0	0	0
12/11/2015	0	0	0
12/12/2015	0	0	0
12/13/2015	0	0	0
12/14/2015	0	0	0
12/15/2015	0	0	0
12/16/2015	0	0	0
12/17/2015	0	0	0
12/18/2015	0	0	0
12/19/2015	0	0	0
12/20/2015	0	0	0
12/21/2015	0	0	0
12/22/2015	0	0	0
12/23/2015	0	0	0
12/24/2015	0	0	0
12/25/2015	0	0	0
12/26/2015	0	0	0
12/27/2015	0	0	0
12/28/2015	0	0	0
12/29/2015	0	0	0
12/30/2015	0	0	0
12/31/2015	0	0	0
1/1/2016	0	0	0
1/2/2016	0	0	0
1/3/2016	0	0	0
1/4/2016	0	0	0
1/5/2016	0	0	0
1/6/2016	0	0	0
1/7/2016	0	0	0
1/8/2016	0	0	0
1/9/2016	0	0	0
1/10/2016	0	0	0
1/11/2016	0	0	0
1/12/2016	0	0	0
1/13/2016	0	0	0
1/14/2016	0	0	0
1/15/2016	0	0	0
1/16/2016	0	0	0
1/17/2016	0	0	0
1/18/2016	1	0	1
1/19/2016	0	0	0
1/20/2016	0	0	0
1/21/2016	0	0	0
1/22/2016	0	0	0
1/23/2016	0	0	0
1/24/2016	0	0	0
1/25/2016	0	0	0

Date	Eastside total	Westside total	Total # walrus
1/26/2016	0	0	0
1/27/2016	0	0	0
1/28/2016	0	0	0
1/29/2016	0	0	0
1/30/2016	0	0	0
1/31/2016	0	0	0
2/1/2016	0	0	0
2/2/2016	0	1	1
2/3/2016	0	0	0
2/4/2016	0	0	0
2/5/2016	0	0	0
2/6/2016	0	0	0
2/7/2016	0	0	0
2/8/2016	0	0	0
2/9/2016	0	0	0
2/10/2016	0	1	1
2/11/2016	0	0	0
2/12/2016	0	0	0
2/13/2016	0	0	0
2/14/2016	0	3	3
2/15/2016	0	1	1
2/16/2016	0	0	0
2/17/2016	0	0	0
2/18/2016	0	0	0
2/19/2016	0	0	0
2/20/2016	0	0	0
2/21/2016	0	0	0
2/22/2016	1	1	2
2/23/2016	0	0	0
2/24/2016	0	0	0
2/25/2016	0	0	0
2/26/2016	0	0	0
2/27/2016	0	67	67
2/28/2016	0	110	110
2/29/2016	0	25	25
3/1/2016	0	27	27
3/2/2016	0	45	45
3/3/2016	0	78	78
3/4/2016	0	65	65
3/5/2016	0	31	31
3/6/2016	0	12	12
3/7/2016	0	28	28
3/8/2016	0	110	110
3/9/2016	0	139	139
3/10/2016	0	106	106
3/11/2016	0	57	57
3/12/2016	0	55	55
3/13/2016	0	62	62
3/14/2016	0	39	39
3/15/2016	0	22	22
3/16/2016	0	45	45
3/17/2016	0	10	10
3/18/2016	0	0	0
3/19/2016	0	2	2
3/20/2016	0	1	1

Date	Eastside total	Westside total	Total # walrus
3/21/2016	0	0	0
3/22/2016	0	1	1
3/23/2016	252	32	284
3/24/2016		0	0
3/25/2016	290	82	372
3/26/2016	124	20	144
3/27/2016	9	0	9
3/28/2016	11	2	13
3/29/2016	92	0	92
3/30/2016	0	20	20
3/31/2016	10	46	56
4/1/2016	0	109	109
4/2/2016	0	60	60
4/3/2016	0	61	61
4/4/2016	0	46	46
4/5/2016	0	66	66
4/6/2016	0	176	176
4/7/2016	1	185	186
4/8/2016	0	33	33
4/9/2016	0	6	6
4/10/2016	0	3	3
4/11/2016	0	36	36
4/12/2016	0	79	79
4/13/2016	0	105	105
4/14/2016	0	101	101
4/15/2016	0	34	34
4/16/2016	1	1	2
4/17/2016	0	1	1
4/18/2016	0	8	8
4/19/2016	0	5	5
4/20/2016	104	0	104
4/21/2016	215	6	221
4/22/2016	373	1	374
4/23/2016	1,108	90	1,198
4/24/2016	695	102	797
4/25/2016	24	50	74
4/26/2016	0	37	37
4/27/2016	0	41	41
4/28/2016	3	56	59
4/29/2016	69	296	365
4/30/2016	52	135	187
5/1/2016	574	139	713
5/2/2016	707	77	784
5/3/2016	671	65	736
5/4/2016	351	49	400
5/5/2016	170	46	216
5/6/2016	111	48	159
5/7/2016	194	10	204
5/8/2016	793	12	805
5/9/2016	740	19	759
5/10/2016	144	0	144
5/11/2016	126	0	126
5/12/2016	401	0	401
5/13/2016	505	0	505
5/14/2016	456	0	456

Date	Eastside total	Westside total	Total # walrus
5/15/2016	906	69	975
5/16/2016	958	96	1,054
5/17/2016	498	57	555
5/18/2016	49	2	51
5/19/2016	22	0	22
5/20/2016	64	0	64
5/21/2016	47	0	47
5/22/2016	86	0	86
5/23/2016	110	0	110
5/24/2016	145	0	145
5/25/2016	426	0	426
5/26/2016	520	0	520
5/27/2016	68	0	68
5/28/2016	89	0	89
5/29/2016	66	0	66
5/30/2016	38	0	38
5/31/2016	10	42	52
6/1/2016	23	67	90
6/2/2016	181	16	197
6/3/2016	477	0	477
6/4/2016	230	0	230
6/5/2016	82	0	82
6/6/2016	51	0	51
6/7/2016	23	0	23
6/8/2016	6	0	6
6/9/2016	76	0	76
6/10/2016	221	0	221
6/11/2016	1,072	0	1,072
6/12/2016	724	0	724
6/13/2016	195	0	195
6/14/2016	112	0	112
6/15/2016	93	0	93
6/16/2016	70	0	70
6/17/2016	79	0	79
6/18/2016	61	0	61
6/19/2016	70	0	70
6/20/2016	112	0	112
6/21/2016	139	0	139
6/22/2016	399	0	399
6/23/2016	181	0	181
6/24/2016	190	0	190
6/25/2016	114	0	114
6/26/2016	115	0	115
6/27/2016	79	0	79
6/28/2016	51	0	51
6/29/2016	51	0	51
6/30/2016	82	0	82
7/1/2016	41	0	41
7/2/2016	35	0	35
7/3/2016	20	0	20
7/4/2016	24	0	24
7/5/2016	46	0	46
7/6/2016	35	0	35
7/7/2016	59	0	59
7/8/2016	93	0	93

Date	Eastside total	Westside total	Total # walrus
7/9/2016	45	0	45
7/10/2016	9	0	9
7/11/2016	25	0	25
7/12/2016	47	0	47
7/13/2016	38	0	38
7/14/2016	69	0	69
7/15/2016	38	0	38
7/16/2016	44	0	44
7/17/2016	38	0	38
7/18/2016	36	0	36
7/19/2016	56	0	56
7/20/2016	55	0	55
7/21/2016	45	0	45
7/22/2016	76	0	76
7/23/2016	54	0	54
7/24/2016	61	0	61
7/25/2016	72	0	72
7/26/2016	421	1	422
7/27/2016	330	0	330
7/28/2016	315	0	315
7/29/2016	90	0	90
7/30/2016	50	0	50
7/31/2016	8	0	8
8/1/2016	67	0	67
8/2/2016	167	0	167
8/3/2016	189	0	189
8/4/2016	78	0	78
8/5/2016	68	0	68
8/6/2016	59	0	59
8/7/2016	16	0	16
8/8/2016	31	0	31
8/9/2016	22	0	22
8/10/2016	36	0	36
8/11/2016	60	1	61
8/12/2016	112	0	112
8/13/2016	41	0	41
8/14/2016	88		88
8/15/2016	60		60

Appendix B. Pacific walrus detailed count data, Round Island, Alaska, 2015–2016.

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
8/15/15	9:00	EWW	FB	GP	9:00	1	1	C	0	0	E	One PAWA hauls out after 1800
8/15/15	9:00	EWW	MB	GP	9:00	1	2	C	5	2	F	Large PAWA herd moves off overnight leaving smaller bunch that grows throughout day. ~7 visible @ count but others may be behind outcrop.
8/15/15	9:00	EWW	WM	GP	9:00	1	2	C	0	0	E	
8/16/15	9:00	EWW	FB	GP	9:00	1	1	C	0	0	E	One in water 1300
8/16/15	9:00	EWW	MB	GP	9:00	1	1	C	21	5	F	PAWA group size grows throughout day. ~26 visible @ count but others may be behind outcrop.
8/16/15	9:00	EWW	WM	GP	9:00	1	3	C	0	0	E	
8/17/15	9:00	EWW	FB	GP	9:00	1	2	C	0	0	E	
8/17/15	9:00	EWW	MB	GP	9:00	1	1	P	17	1	F	~17 visible @ count but others may be behind outcrop.
8/17/15	9:00	EWW	WM	GP	9:00	1	2	C	0	0	E	
8/18/15	17:00	EWW	FB	GP	17:00	2	1	C	0	0	E	PAWA in water at 1800, 1830, & 2130
8/18/15	17:00	EWW	MB	GP	17:00	2	2	C	3	0	F	~3 visible @ count but others may be behind outcrop.
8/18/15	17:00	EWW	WM	GP	17:00	2	3	C	0	0	E	
8/19/15	14:00	EWW	FB	GP	14:00	1	1	C	30	0	E	PAWA in water at 0730, numerous begin to haul out @ 0930.
8/19/15	14:00	EWW	MB	GP	14:00	1	1	C	0	0	F	None visible
8/19/15	14:00	EWW	WM	GP	14:00	1	2	C	0	0	E	
8/20/15	14:00	EWW	FB	GP	14:00	1	1	C	179	0	E	
8/20/15	14:00	EWW	MB	GP	14:00	1	2	C	0	0	F	None visible
8/20/15	14:00	EWW	WM	GP	14:00	1	1	C	0	0	E	
8/21/15	17:00	EWW	FB	GP	17:00	3	1	C	101	0	E	
8/21/15	17:00	EWW	MB	GP	17:00	3	2	C	0	0	G	
8/21/15	17:00	EWW	WM	GP	17:00	3	3	C	0	0	E	
8/22/15	17:00	EWW	FB	GP	17:00	3	1	C	2	23	E	
8/22/15	17:00	EWW	MB	GP	17:00	3	2	C	0	0	G	
8/22/15	17:00	EWW	WM	GP	17:00	3	3	C	0	0	E	
8/23/15	14:00	EWW	FB	GP	14:00	3	1	C	8	5	E	
8/23/15	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	
8/23/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
8/24/15	14:00	EWW	FB	GP	14:00	2	1	C	24	1	E	
8/24/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
8/24/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
8/25/15	9:00	EWW	FB	GP	9:00	2	1	C	18	0	E	
8/25/15	9:00	EWW	MB	GP	9:00	2	1	C	0	0	G	
8/25/15	9:00	EWW	WM	GP	9:00	2	3	P	0	0	G	A little wind and rain blur
8/26/15	14:00	EWW	FB	GP	14:00	fog	2	C	14	0	E	
8/26/15	14:00	EWW	MB	GP	14:00	fog	2	C	0	0	G	Windy;
8/26/15	14:00	EWW	WM	GP	14:00	fog	3	P	0	0	G	STORM DAY, A little wind and rain blur
8/27/15	17:00	EWW	FB	GP	17:00	3	2	C	1	0	E	
8/27/15	17:00	EWW	MB	GP	17:00	3	3	C	0	0	G	Windy;
8/27/15	17:00	EWW	WM	GP	17:00	3	3	C	0	0	E	
8/28/15	14:00	EWW	FB	GP	14:00	3	2	C	8	3	E	
8/28/15	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	Windy;
8/28/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
8/29/15	17:00	EWW	FB	GP	17:00	2	3	C	22	0	E	
8/29/15	17:00	EWW	MB	GP	17:00	2	3	C	8	4	F	Others out of sight in alcove.
8/29/15	17:00	EWW	WM	GP	17:00	2	3	C	0	0	E	
8/30/15	17:00	EWW	FB	GP	17:00	4	2	C	28	0	E	
8/30/15	17:00	EWW	MB	GP	17:00	4	3	C	0	0	G	
8/30/15	17:00	EWW	WM	GP	17:00	4	3	C	0	0	E	
8/31/15	14:00	EWW	FB	GP	14:00	3	1	C	16	0	E	
8/31/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
8/31/15	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	
9/1/15	14:00	EWW	FB	GP	14:00	2	1	C	24	0	E	
9/1/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
9/1/15	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	Very few seabirds left.
9/2/15	9:00	EWW	FB	GP	9:00	fog	3	C	0	0	E	PAWA leave 0830–0900.
9/2/15	9:00	EWW	MB	GP	9:00	fog		O	0	0	G	
9/2/15	9:00	EWW	WM	GP	9:00	fog	1	P	0	1	G	Partially obscured, but beach visible no PAWA except one swimming by in water.
9/3/15	9:00	EWW	FB	GP	9:00	fog	3	C	0	0	E	
9/3/15	9:00	EWW	MB	GP	9:00	fog		O	0	0	G	
9/3/15	9:00	EWW	WM	GP	9:00	fog	1	C	0	0	G	
9/4/15	17:00	EWW	FB	GP	17:00	2	0	C	9	4	E	
9/4/15	17:00	EWW	MB	GP	17:00	2	2	C	0	0	G	
9/4/15	17:00	EWW	WM	GP	17:00	2	3	C	0	0	E	
9/5/15	14:00	EWW	FB	GP	14:00	1	0	C	11	0	E	
9/5/15	14:00	EWW	MB	GP	14:00	1	1	C	0	0	G	
9/5/15	14:00	EWW	WM	GP	14:00	1	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
9/6/15	9:00	EWW	FB	GP	9:00	1	0	C	14	0	E	
9/6/15	9:00	EWW	MB	GP	9:00	1	0	C	0	0	G	
9/6/15	9:00	EWW	WM	GP	9:00	1	2	C	0	0	E	
9/7/15	17:00	EWW	FB	GP	17:00	2	1	C	0	0	E	
9/7/15	17:00	EWW	MB	GP	17:00	2	1	C	0	0	G	
9/7/15	17:00	EWW	WM	GP	17:00	2	2	C	0	0	E	
9/8/15	9:00	EWW	FB	GP	9:00	fog	1	C	1	1	E	One PAWA hauled out in various places along beach 1430–1900.
9/8/15	9:00	EWW	MB	GP	9:00	fog	1	C	0	0	G	
9/8/15	9:00	EWW	WM	GP	9:00	fog	2	C	0	0	E	
9/9/15	17:00	EWW	FB	GP	17:00	3	3	C	0	0	E	
9/9/15	17:00	EWW	MB	GP	17:00	3	3	C	0	0	G	
9/9/15	17:00	EWW	WM	GP	17:00	3	2	C	0	0	E	
9/10/15	9:00	EWW	FB	GP	9:00	fog	2	C	0	0	E	
9/10/15	9:00	EWW	MB	GP	9:00	fog	2	C	0	0	G	
9/10/15	9:00	EWW	WM	GP	9:00	fog	2	C	0	0	E	
9/11/15	14:00	EWW	FB	GP	14:00	3	2	C	0	0	E	
9/11/15	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	
9/11/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
9/12/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
9/12/15	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	
9/12/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
9/13/15	17:00	EWW	FB	GP	17:00	4	1	P	0	0	G	Slight blur
9/13/15	17:00	EWW	MB	GP	17:00	4	1	C	0	0	G	
9/13/15	17:00	EWW	WM	GP	17:00	4	3	P	0	0	G	Storm day
9/14/15	14:00	EWW	FB	GP	14:00		3	C	0	0	E	
9/14/15	14:00	EWW	MB	GP	14:00		3	P	0	0	G	
9/14/15	14:00	EWW	WM	GP	14:00		3	C	0	0	E	Storm day
9/15/15	17:00	EWW	FB	GP	17:00	3	2	C	0	0	E	
9/15/15	17:00	EWW	MB	GP	17:00	3	2	C	0	0	G	
9/15/15	17:00	EWW	WM	GP	17:00	3	3	C	0	0	E	
9/16/15	9:00	EWW	FB	GP	9:00	fog	2	C	0	0	E	
9/16/15	9:00	EWW	MB	GP	9:00	fog	1	P	0	0	G	
9/16/15	9:00	EWW	WM	GP	9:00	fog	3	C	0	0	E	
9/17/15	9:00	EWW	FB	GP	9:00	2	1	C	0	0	E	
9/17/15	9:00	EWW	MB	GP	9:00	2	2	C	1	0	G	1 PAWA leaves beach at 1600 as tide comes in
9/17/15	9:00	EWW	WM	GP	9:00	2	3	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
9/18/15	14:00	EWW	FB	GP	14:00	3	1	C	0	0	E	
9/18/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
9/18/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
9/19/15	17:00	EWW	FB	GP	17:00	2	2	C	0	0	E	
9/19/15	17:00	EWW	MB	GP	17:00	2	3	C	0	0	G	
9/19/15	17:00	EWW	WM	GP	17:00	2	3	C	0	0	E	
9/20/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
9/20/15	14:00	EWW	MB	GP	14:00	2	3	C	0	0	F	
9/20/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
9/21/15	17:00	EWW	FB	GP	17:00	4	1	C	0	0	E	
9/21/15	17:00	EWW	MB	GP	17:00	4	3	C	0	0	F	
9/21/15	17:00	EWW	WM	GP	17:00	4	3	C	0	0	E	
9/22/15	17:00	EWW	FB	GP	17:00	4	2	C	0	0	E	
9/22/15	17:00	EWW	MB	GP	17:00	4	3	C	1	0	G	1 PAWA leaves beach at 2000
9/22/15	17:00	EWW	WM	GP	17:00	4	3	C	0	0	E	
9/23/15	14:00	EWW	FB	GP	14:00	2	1	C	0	0	E	
9/23/15	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	
9/23/15	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
9/24/15	9:00	EWW	FB	GP	9:00	fog	1	C	0	0	E	
9/24/15	9:00	EWW	MB	GP	9:00	fog	2	C	0	0	G	
9/24/15	9:00	EWW	WM	GP	9:00	fog	3	P	0	0	F	
9/25/15	14:00	EWW	FB	GP	14:00	4	1	C	0	0	E	1 PAWA stops by @ 1130.
9/25/15	14:00	EWW	MB	GP	14:00	4	2	C	0	0	G	
9/25/15	14:00	EWW	WM	GP	14:00	4	3	P	0	0	G	
9/26/15	9:00	EWW	FB	GP	9:00	5	1	C	0	0	E	
9/26/15	9:00	EWW	MB	GP	9:00	5	1	O			N	No PAWA @ 2000 when cam clears
9/26/15	9:00	EWW	WM	GP	9:00	5	3	P	0	0	G	
9/27/15	9:00	EWW	FB	GP	9:00	4	2	C	0	0	E	1 PAWA stops by @ 1400.
9/27/15	9:00	EWW	MB	GP	9:00	4	1	P	0	0	G	1230 count; fog & low light in AM.
9/27/15	9:00	EWW	WM	GP	9:00	4	3	P	0	0	F	
9/28/15	9:00	EWW	FB	GP	9:00	4	2	C	0	0	E	
9/28/15	9:00	EWW	MB	GP	9:00	4	3	P	0	0	F	
9/28/15	9:00	EWW	WM	GP	9:00	4	3	C	0	0	E	
9/29/15	17:00	EWW	FB	GP	17:00	5	2	C	0	0	E	Blurred
9/29/15	17:00	EWW	MB	GP	17:00	5	3	C	0	0	G	
9/29/15	17:00	EWW	WM	GP	17:00	5	3	C	0	0	E	
9/30/15	14:00	EWW	FB	GP	14:00	3	0	P	0	0	F	Bad lighting, but no PAWA before & after.

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
9/30/15	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	
9/30/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
10/1/15	9:00	EWW	FB	GP	9:00	3	3	P	0	0	G	Bad lighting, but no PAWA before & after.
10/1/15	9:00	EWW	MB	GP	9:00	3	2	C	0	0	G	
10/1/15	9:00	EWW	WM	GP	9:00	3	2	P	0	0	G	
10/2/15	14:00	EWW	FB	GP	14:00	3	2	C	0	0	E	
10/2/15	14:00	EWW	MB	GP	14:00	3	1	C	0	0	G	
10/2/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
10/3/15	17:00	EWW	FB	GP	17:00	3	2	C	0	0	E	
10/3/15	17:00	EWW	MB	GP	17:00	3	1	C	0	0	G	
10/3/15	17:00	EWW	WM	GP	17:00	3	2	C	0	0	E	
10/4/15	17:00	EWW	FB	GP	17:00	2	1	C	0	0	E	
10/4/15	17:00	EWW	MB	GP	17:00	2	0	C	0	0	G	
10/4/15	17:00	EWW	WM	GP	17:00	2	2	C	0	0	E	
10/5/15	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
10/5/15	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	
10/5/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
10/6/15	9:00	EWW	FB	GP	9:00	2	2	C	0	0	E	
10/6/15	9:00	EWW	MB	GP	14:00	2	1	P	0	0	F	1400 count; fog & low light @ 0900
10/6/15	9:00	EWW	WM	GP	9:00	2	3	C	0	0	E	
10/7/15	14:00	EWW	FB	GP	14:00	2	1	C	0	0	G	
10/7/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
10/7/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
10/8/15	17:00	EWW	FB	GP	17:00	3	3	C	0	0	E	
10/8/15	17:00	EWW	MB	GP	17:00	3	3	C	0	0	G	
10/8/15	17:00	EWW	WM	GP	17:00	3	1	C	0	0	E	
10/9/15	9:00	EWW	FB	GP	9:00	2	3	C	0	0	E	
10/9/15	9:00	EWW	MB	GP	14:00	2	3	C	0	0	G	1400 count; low light @ 0900
10/9/15	9:00	EWW	WM	GP		2	2	O				Too dark used ???
10/10/15	17:00	EWW	FB	GP	17:00	2	2	C	0	0	E	
10/10/15	17:00	EWW	MB	GP	17:00	2	2	P	0	0	F	
10/10/15	17:00	EWW	WM	GP	17:00	2	2	C	0	0	E	
10/11/15	17:00	EWW	FB	GP	17:00	3	2	C	0	0	E	
10/11/15	17:00	EWW	MB	GP	17:00	3	1	C	0	0	G	
10/11/15	17:00	EWW	WM	GP	17:00	3	2	C	0	0	E	
10/12/15	9:00	EWW	FB	GP	9:00	2	1	C	0	0	E	
10/12/15	9:00	EWW	MB	GP	9:00	2	1	C	0	0	G	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
10/12/15	9:00	EWW	WM	GP	9:00	2	3	C	0	0	E	
10/13/15	14:00	EWW	FB	GP	14:00	1	1	C	0	0	E	
10/13/15	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	
10/13/15	14:00	EWW	WM	GP	14:00	1	2	C	0	0	E	
10/14/15	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
10/14/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
10/14/15	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	
10/15/15	17:00	EWW	FB	GP	17:00	2	3	C	0	0	E	
10/15/15	17:00	EWW	MB	GP	17:00	2	2	C	0	0	G	
10/15/15	17:00	EWW	WM	GP	14:00	2	1	C	0	0	E	
10/16/15	14:00	EWW	FB	GP	14:00	1	2	C	0	0	E	
10/16/15	14:00	EWW	MB	GP	14:00	1	2	C	0	0	G	
10/16/15	14:00	EWW	WM	GP	14:00	1	1	C	0	0	E	
10/17/15	14:00	EWW	FB	GP	14:00	fog	2	C	0	0	E	
10/17/15	14:00	EWW	MB	GP	13:30	fog	2	C	0	0	G	Fog @ 1400; used 1330 photo.
10/17/15	14:00	EWW	WM	GP	14:00	fog	1	C	0	0	E	
10/18/15	14:00	EWW	FB	GP	14:00	2	1	C	0	0	E	
10/18/15	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	
10/18/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
10/19/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
10/19/15	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
10/19/15	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	
10/20/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
10/20/15	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
10/20/15	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	
10/21/15	14:00	EWW	FB	GP	14:00	1	0	C	0	0	E	
10/21/15	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	
10/21/15	14:00	EWW	WM	GP	14:00	1	1	C	0	0	E	
10/22/15	14:00	EWW	FB	GP	14:00	2	1	C	0	0	E	
10/22/15	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	
10/22/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
10/23/15	14:00	EWW	FB	GP	14:00	4	3	C	0	0	E	Rough water, real wash tub day
10/23/15	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	
10/23/15	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	
10/24/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
10/24/15	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	
10/24/15	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
10/25/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
10/25/15	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
10/25/15	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
10/26/15	14:00	EWW	FB	GP	14:00	4	3	C	0	0	E	Rough water, real wash tub day
10/26/15	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	
10/26/15	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	
10/27/15	14:00	EWW	FB	GP	14:00	4	3	C	0	0	E	
10/27/15	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	
10/27/15	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	
10/28/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
10/28/15	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
10/28/15	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
10/29/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
10/29/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
10/29/15	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
10/30/15	14:00	EWW	FB	GP	14:00	6	2	P	0	0	N	GLARE, Bad lighting.
10/30/15	14:00	EWW	MB	GP	14:00	6	3	C	0	0	G	
10/30/15	14:00	EWW	WM	GP	14:00	6	3	C	0	0	E	
10/31/15	14:00	EWW	FB	GP	14:00	3	2	P	0	0	F	Bad lighting, but no PAWA before & after.
10/31/15	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	
10/31/15	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	
11/1/15	14:00	EWW	FB	GP	14:00	3	2	C	0	0	E	
11/1/15	14:00	EWW	MB	GP	14:00	3	2	P	0	0	F	
11/1/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
11/2/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
11/2/15	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	
11/2/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
11/3/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
11/3/15	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	
11/3/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
11/4/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
11/4/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
11/4/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
11/5/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
11/5/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
11/5/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
11/6/15	14:00	EWW	FB	GP	14:00	5	3	P	0	0	F	Glare, bad lighting, but no PAWA before & after.

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
11/6/15	14:00	EWW	MB	GP	14:00	5	3	C	0	0	G	
11/6/15	14:00	EWW	WM	GP	14:00	5	3	C	0	0	E	
11/7/15	14:00	EWW	FB	GP	14:00	3	2	C	0	0	E	
11/7/15	14:00	EWW	MB	GP	14:00	3	1	C	0	0	G	
11/7/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
11/8/15	14:00	EWW	FB	GP	14:00	4	3	C	0	0	E	
11/8/15	14:00	EWW	MB	GP	14:00	4	2	C	0	0	G	
11/8/15	14:00	EWW	WM	GP	14:00	4	3	C	0	0	E	
11/9/15	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	Snow at 1800. Camera obscured @ 1400, used 1500. Rain & wind.
11/9/15	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	
11/9/15	14:00	EWW	WM	GP	14:00	3	3	P	0	0	G	
11/10/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	A little snow overnight; snow at 1230
11/10/15	14:00	EWW	MB	GP	14:00	2	3	P	0	0	G	
11/10/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
11/11/15	14:00	EWW	FB	GP	14:00		3	P	0	0	G	SNOWED OVERNIGHT, Snow and rough seas in morning. BEGINS MELTING IN AFTERNOON.
11/11/15	14:00	EWW	MB	GP	14:00		3	P	0	0	F	Snowing most of day
11/11/15	14:00	EWW	WM	GP	14:00		3	O			N	Fog
11/12/15	14:00	EWW	FB	GP	14:00	5	3	P	0	0	G	Glare, bad lighting, but no PAWA before & after.
11/12/15	14:00	EWW	MB	GP	14:00	5	3	C	0	0	G	
11/12/15	14:00	EWW	WM	GP	14:00	5	3	C	0	0	E	
11/13/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
11/13/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
11/13/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	Scattered ice NW of Round Is.
11/14/15	14:00	EWW	FB	GP	14:00	2	3	P	0	0	F	Snowing after noon. Blurred, but no PAWA sign in fresh snow.
11/14/15	14:00	EWW	MB	GP	14:00	2	3	P	0	0	G	Snowing, visibility partially obscured but no sign of PAWA in fresh snow.
11/14/15	14:00	EWW	WM	GP	14:00	2	1	P	0	0	E	Snowed overnight, slight blur, beach fresh snow cover no PAWA sign. One PAWA hauls out at 1630.
11/15/15	14:00	EWW	FB	GP	14:00	3	3	P	0	0	G	Glare, bad lighting, but no PAWA before & after.
11/15/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
11/15/15	14:00	EWW	WM	GP	14:00	3	2	C	1	0	E	1 PAWA in bottom of frame

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
11/16/15	14:00	EWW	FB	GP	14:00	4	2	C	0	0	E	Glare @1400, used 1500.
11/16/15	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	
11/16/15	14:00	EWW	WM	GP	14:00	4	3	C	1	0	E	1 PAWA in bottom of frame
11/17/15	14:00	EWW	FB	GP	14:00		2	C	0	0	E	Snowed overnight
11/17/15	14:00	EWW	MB	GP	14:00		2	P	0	0	G	Snowed overnight/snowing, visibility partially obscured but no sign of PAWA in fresh snow.
11/17/15	14:00	EWW	WM	GP	14:00		1	C	0	0	E	Snowing
11/18/15	14:00	EWW	FB	GP	14:00		2	C	0	0	E	SNOWED OVERNIGHT, snowing.
11/18/15	14:00	EWW	MB	GP	14:00			O			N	Snowed overnight/snowing, visibility obscured by snow.
11/18/15	14:00	EWW	WM	GP	14:00		1	O			N	SNOWING CAMERA OBSCURED by ice/snow.
11/19/15	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	Warmed up to 40 with rain overnight
11/19/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
11/19/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
11/20/15	14:00	EWW	FB	GP	14:00		3	C	0	0	E	
11/20/15	14:00	EWW	MB	GP	14:00		2	C	0	0	G	
11/20/15	14:00	EWW	WM	GP	14:00		3	C	0	0	E	
11/21/15	14:00	EWW	FB	GP	14:00		2	C	0	0	E	Snowed overnight; snowing at 1830.
11/21/15	14:00	EWW	MB	GP	14:00			O			N	Cam obscured by snow
11/21/15	14:00	EWW	WM	GP	14:00		3	C	0	0	E	Snowing in evening
11/22/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
11/22/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	Snowed overnight
11/22/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
11/23/15	14:00	EWW	FB	GP	14:00	3	3	P	0	0	G	RAIN blur, but no PAWA before & after.
11/23/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	F	
11/23/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
11/24/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
11/24/15	14:00	EWW	MB	GP	14:00	2	2	P	0	0	G	
11/24/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
11/25/15	14:00	EWW	FB	GP	14:00	fog	2	C	0	0	E	
11/25/15	14:00	EWW	MB	GP	17:30	fog	2	C	0	0	G	Cam obscured by fog @ 1400; used 1730
11/25/15	14:00	EWW	WM	GP	14:00	fog	3	P	0	0	G	
11/26/15	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	Snow 1500–1530
11/26/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
11/26/15	14:00	EWW	WM	GP	14:00	3	2	P	0	0	G	
11/27/15	14:00	EWW	FB	GP	14:00	fog	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
11/27/15	14:00	EWW	MB	GP	14:00	fog	2	P	0	0	F	
11/27/15	14:00	EWW	WM	GP	14:00	fog	1	C	0	0	E	
11/28/15	14:00	EWW	FB	GP	14:00	2	1	C	0	0	E	
11/28/15	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	
11/28/15	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	
11/29/15	14:00	EWW	FB	GP	14:00	fog	3	C	0	0	E	
11/29/15	14:00	EWW	MB	GP	14:00	fog	2	P			N	Cam mostly obscured by fog.
11/29/15	14:00	EWW	WM	GP	14:00	fog	2	P	0	0	G	
11/30/15	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
11/30/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
11/30/15	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	
12/1/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
12/1/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
12/1/15	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
12/2/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	Glare @1400, used 1500.
12/2/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
12/2/15	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
12/3/15	14:00	EWW	FB	GP	14:00	fog	2	O	0	0	N	BLURRED - ice
12/3/15	14:00	EWW	MB	GP	14:00	fog	3	P			N	Ice fog; cam obscured
12/3/15	14:00	EWW	WM	GP	14:00	fog	1	O			N	Camera obscured by ice/snow
12/4/15	14:00	EWW	FB	GP	14:00	fog	2	O	0	0	N	BLURRED - ice, SNOWED OVERNIGHT
12/4/15	14:00	EWW	MB	GP	14:00	fog	2	P			N	Ice fog; cam obscured
12/4/15	14:00	EWW	WM	GP	14:00	fog	2	O			N	Camera obscured by ice/snow
12/5/15	14:00	EWW	FB	GP	14:00	fog	3	C	0	0	E	Shore ice forming above high tide line
12/5/15	14:00	EWW	MB	GP	14:00	fog	3	P			N	Ice fog; cam obscured
12/5/15	14:00	EWW	WM	GP	14:00	fog	1	C	0	0	E	
12/6/15	14:00	EWW	FB	GP	14:00	4	3	C	0	0	E	Shore ice forming above high tide line. Rough water, real wash tub day in afternoon. Glare @1400, used 1500.
12/6/15	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	
12/6/15	14:00	EWW	WM	GP	14:00	4	1	C	0	0	E	
12/7/15	14:00	EWW	FB	GP	14:00	5	3	C	0	0	E	Rough water, real wash tub day
12/7/15	14:00	EWW	MB	GP	14:00	5	3	C	0	0	G	
12/7/15	14:00	EWW	WM	GP	14:00	5	2	C	0	0	E	
12/8/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
12/8/15	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
12/8/15	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
12/9/15	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	
12/9/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
12/9/15	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	
12/10/15	14:00	EWW	FB	GP	14:00	fog	3	O	0	0	N	Blurred
12/10/15	14:00	EWW	MB	GP	14:00	fog	3	P	0	0	F	
12/10/15	14:00	EWW	WM	GP	14:00	fog	1	P	0	0	F	
12/11/15	14:00	EWW	FB	GP	14:00	snow		O	0	0	N	Blurred, snowed overnight
12/11/15	14:00	EWW	MB	GP	17:00	snow	2	P	0	0	G	Snowed overnight & in AM. Cam partially obscured but no sign of PAWA in fresh snow.
12/11/15	14:00	EWW	WM	GP	14:00	snow	3	C	0	0	G	
12/12/15	14:00	EWW	FB	GP	14:00	2	1	C	0	0	G	Snowed overnight
12/12/15	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
12/12/15	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
12/13/15	14:00	EWW	FB	GP	14:00	snow	3	C	0	0	E	Snowed overnight
12/13/15	14:00	EWW	MB	GP	14:00	snow	3	C	0	0	F	Snowed overnight & in AM. Cam obscured until 1600; used 1700.
12/13/15	14:00	EWW	WM	GP	14:00	snow	1	P	0	0	G	
12/14/15	14:00	EWW	FB	GP	14:00	3	3	P	0	0	F	Blurred
12/14/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
12/14/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
12/15/15	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
12/15/15	14:00	EWW	MB	GP	14:00	2	2	P	0	0	G	Snowed overnight. Cam partially obscured
12/15/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
12/16/15	14:00	EWW	FB	GP	14:00	1	3	C	0	0	E	
12/16/15	14:00	EWW	MB	GP	14:00	1	3	C	0	0	G	
12/16/15	14:00	EWW	WM	GP	14:00	1	1	C	0	0	E	
12/17/15	14:00	EWW	FB	GP	14:00	4	1	C	0	0	E	Glare @1400, used 1430.
12/17/15	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	
12/17/15	14:00	EWW	WM	GP	14:00	4	3	C	0	0	E	
12/18/15	14:00	EWW	FB	GP	14:00	fog	3	C	0	0	E	Loose sea ice moves in. Snowstorm in morning and early afternoon 1100–1400
12/18/15	14:00	EWW	MB	GP	14:00	fog	3	P	0	0	G	Snowing; cam part obscured but no sign of PAWA in fresh snow. Pack ice moves in along east side late in day.
12/18/15	14:00	EWW	WM	GP	14:00	fog	3	P	0	0	G	Camera partly obscured, but no PAWA sign in fresh snow on beach.
12/19/15	14:00	EWW	FB	GP	14:00	fog	3	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
12/19/15	14:00	EWW	MB	GP	14:00	fog	1	C	0	0	G	Snowing; light pack ice along shore
12/19/15	14:00	EWW	WM	GP	14:00	fog	3	C	0	0	E	
12/20/15	14:00	EWW	FB	GP	14:00		3	C	0	0	E	A little snow overnight
12/20/15	14:00	EWW	MB	GP	14:00		2	P			N	Snowing.
12/20/15	14:00	EWW	WM	GP	14:00		3	P	0	0	F	
12/21/15	14:00	EWW	FB	GP	14:00		2	P	0	0	G	NEW ICE - SLUSH, fog.
12/21/15	14:00	EWW	MB	GP	14:00			O			N	
12/21/15	14:00	EWW	WM	GP	14:00		3	O			N	Camera obscured by ice/snow
12/22/15	14:00	EWW	FB	GP	14:00		1	C	0	0	E	
12/22/15	14:00	EWW	MB	GP	14:00			O			N	
12/22/15	14:00	EWW	WM	GP	14:00		3	C	0	0	E	
12/23/15	14:00	EWW	FB	GP	14:00		1	C	0	0	E	
12/23/15	14:00	EWW	MB	GP	14:00		2	P			N	Snowing.
12/23/15	14:00	EWW	WM	GP	14:00		3	C	0	0	E	
12/24/15	14:00	EWW	FB	GP	14:00		3	P	0	0	G	SNOWED OVERNIGHT, SNOWING 1030–1100, rough seas.
12/24/15	14:00	EWW	MB	GP	14:00			O			N	
12/24/15	14:00	EWW	WM	GP	14:00		3	P	0	0	F	Snowed overnight, camera partly obscured.
12/25/15	14:00	EWW	FB	GP	14:00	4	3	P	0	0	F	Snowed overnight. Rough water, real wash tub day. Moisture blur.
12/25/15	14:00	EWW	MB	GP	14:00	4	3	P			N	
12/25/15	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	
12/26/15	14:00	EWW	FB	GP	14:00		3	C	0	0	E	Blurred, young ice - brash sea ice moves in
12/26/15	14:00	EWW	MB	GP	14:00		1	P			N	Pack ice moves in on east and north sides of island. Snow late in day.
12/26/15	14:00	EWW	WM	GP	14:00		2	C	0	0	E	NEW BRASH ICE around N & W sides of Round Is.
12/27/15	14:00	EWW	FB	GP	14:00		3	C	0	0	E	
12/27/15	14:00	EWW	MB	GP	14:00		3	P			N	Snowing.
12/27/15	14:00	EWW	WM	GP	14:00		2	C	0	0	E	
12/28/15	14:00	EWW	FB	GP	14:00		2	C	0	0	E	
12/28/15	14:00	EWW	MB	GP	14:00		1	P	0	0	F	Cam partially obscured
12/28/15	14:00	EWW	WM	GP	14:00		2	C	0	0	E	
12/29/15	14:00	EWW	FB	GP	14:00	2	3	P	0	0	G	Rough water, real wash tub day. Moisture blur.
12/29/15	14:00	EWW	MB	GP	14:00	2	3	P	0	0	F	Cam partially blurred

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
12/29/15	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
12/30/15	14:00	EWW	FB	GP	14:00	3	3	O	0	0	N	Rough water, real wash tub day. Moisture blur & glare.
12/30/15	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
12/30/15	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
12/31/15	14:00	EWW	FB	GP	15:00	2	1	C	0	0	E	Snowed overnight. Moisture blur, used 1500.
12/31/15	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	Snowed overnight
12/31/15	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	Snowed overnight
1/1/16	14:00	EWW	FB	GP	14:00	5	3	C	0	0	E	Rough water, real wash tub day
1/1/16	14:00	EWW	MB	GP	14:00	5	3	C	0	0	G	
1/1/16	14:00	EWW	WM	GP	14:00	5	2	C	0	0	E	
1/2/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
1/2/16	14:00	EWW	MB	GP	14:00	2	3	P	0	0	F	
1/2/16	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
1/3/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
1/3/16	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	Snow in AM.
1/3/16	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	Snowed overnight
1/4/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
1/4/16	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
1/4/16	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
1/5/16	14:00	EWW	FB	GP	13:30		3	P	0	0	G	Moisture blur used 1330.
1/5/16	14:00	EWW	MB	GP	14:00		3	P			N	Cam obscured by fog. Snow late in day.
1/5/16	14:00	EWW	WM	GP	14:00		2	C	0	0	E	
1/6/16	14:00	EWW	FB	GP	17:00	2	3	C	0	0	E	Blurred, iced? Used 1700.
1/6/16	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
1/6/16	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
1/7/16	14:00	EWW	FB	GP	15:00		3	P	0	0	G	Moisture blur used 1500.
1/7/16	14:00	EWW	MB	GP	14:00		3	P	0	0	F	Snowed overnight.
1/7/16	14:00	EWW	WM	GP	14:00		2	C	0	0	E	
1/8/16	14:00	EWW	FB	GP	14:00	4	3	C	0	0	E	
1/8/16	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	
1/8/16	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	
1/9/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
1/9/16	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
1/9/16	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	
1/10/16	14:00	EWW	FB	GP	14:00	snow	3	C	0	0	G	Snowing late morning thru evening
1/10/16	14:00	EWW	MB	GP	14:00	snow	2	P			N	Snowing

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
1/10/16	14:00	EWW	WM	GP	14:00	snow	3	O			N	Snowing at 1400, camera obscured.
1/11/16	14:00	EWW	FB	GP	14:00	snow	2	C	0	0	E	Blurred
1/11/16	14:00	EWW	MB	GP	14:00	snow	2	P	0	0	G	Cam part obscured but no sign of PAWA in fresh snow. Pack ice moves in along east side late in day.
1/11/16	14:00	EWW	WM	GP	14:00	snow		O			N	Snow obscurring camera
1/12/16	14:00	EWW	FB	GP	14:00	2	1	C	0	0	E	Snowed overnight
1/12/16	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	Snowed overnight
1/12/16	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
1/13/16	14:00	EWW	FB	GP	14:00	1	2	C	0	0	E	
1/13/16	14:00	EWW	MB	GP	14:00	1	2	C	0	0	G	
1/13/16	14:00	EWW	WM	GP	14:00	1	2	C	0	0	E	
1/14/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	Rough water, real wash tub day
1/14/16	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
1/14/16	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	
1/15/16	14:00	EWW	FB	GP	15:30	3	3	C	0	0	E	Rough water, real wash tub day. Glare, used 1530.
1/15/16	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
1/15/16	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	
1/16/16	14:00	EWW	FB	GP	15:30	3	3	C	0	0	E	Glare, used 1530.
1/16/16	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
1/16/16	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	
1/17/16	14:00	EWW	FB	GP	15:30	2	3	C	0	0	E	Rough water, real wash tub day. Glare, used 1530.
1/17/16	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
1/17/16	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	
1/18/16	14:00	EWW	FB	GP	14:00	1	2	C	0	0	E	
1/18/16	14:00	EWW	MB	GP	14:00	1	3	C	1	0	G	1 PAWA comes ashore stays the day.
1/18/16	14:00	EWW	WM	GP	14:00	1	1	C	0	0	E	
1/19/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
1/19/16	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
1/19/16	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	
1/20/16	14:00	EWW	FB	GP	14:00	1	3	C	0	0	E	
1/20/16	14:00	EWW	MB	GP	14:00	1	3	C	0	0	G	
1/20/16	14:00	EWW	WM	GP	14:00	1	1	C	0	0	E	
1/21/16	14:00	EWW	FB	GP	14:00	2	1	C	0	0	E	
1/21/16	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	
1/21/16	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
1/22/16	14:00	EWW	FB	GP	14:00	1	3	C	0	0	E	
1/22/16	14:00	EWW	MB	GP	14:00	1	3	C	0	0	G	
1/22/16	14:00	EWW	WM	GP	14:00	1	2	C	0	0	E	
1/23/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	Snowed overnight, snowing in evening
1/23/16	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	Snowed overnight; snow in evening.
1/23/16	14:00	EWW	WM	GP	14:00	3		O			N	Snow overnight, camera obscured.
1/24/16	14:00	EWW	FB	GP	14:00	fog	3	C	0	0	E	
1/24/16	14:00	EWW	MB	GP	17:00	fog	2	C	0	0	G	1400 obscured by fog; used 1700.
1/24/16	14:00	EWW	WM	GP	14:30	fog	2	C	0	0	E	Camera partly obscured @ 1400, clear by 1430 no PAWA.
1/25/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
1/25/16	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
1/25/16	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	
1/26/16	14:00	EWW	FB	GP	15:30	3	2	C	0	0	E	Glare, used 1530.
1/26/16	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	
1/26/16	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	
1/27/16	14:00	EWW	FB	GP	14:00	snow	2	P	0	0	G	Snowing after noon
1/27/16	14:00	EWW	MB	GP	14:00	snow	2	C	0	0	G	Snowing
1/27/16	14:00	EWW	WM	GP	14:00	snow	2	P	0	0	F	Snowing, camera partly obscured, but no PAWA at 1230
1/28/16	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	Snowed overnight, blurred iced up.
1/28/16	14:00	EWW	MB	GP	14:00	2	2	P			N	
1/28/16	14:00	EWW	WM	GP	14:00	2		O			N	Camera obscured by ice/snow all day
1/29/16	14:00	EWW	FB	GP	15:00	snow	1	C	0	0	E	Blurred, iced? Used 1500.
1/29/16	14:00	EWW	MB	GP	14:00	snow		O			N	Snow overnight; cam obscured.
1/29/16	14:00	EWW	WM	GP	19:00	snow		O			N	Camera obscured by ice/snow clears at 1900, no PAWA.
1/30/16	14:00	EWW	FB	GP	14:00	2	3	P	0	0	G	Warmed up snow melted. Rough water, real wash tub day
1/30/16	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	
1/30/16	14:00	EWW	WM	GP		2	2	C	0	0	E	
1/31/16	14:00	EWW	FB	GP	14:00	4	3	P	0	0	G	
1/31/16	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	
1/31/16	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	
2/1/16	14:00	EWW	FB	GP	14:00	fog	2	P	0	0	G	
2/1/16	14:00	EWW	MB	GP	14:00	fog		O			N	TLC shifts losing view of MB.
2/1/16	14:00	EWW	WM	GP	14:00	fog	3	P	0	0	G	
2/2/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
2/2/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
2/2/16	14:00	EWW	WM	GP	14:00	2	2	C	1	0	E	1 PAWA resting on north end of beach
2/3/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	Rough water, real wash tub day
2/3/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
2/3/16	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	
2/4/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
2/4/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
2/4/16	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
2/5/16	14:00	EWW	FB	GP	14:00	fog	3	C	0	0	E	Snowed overnight
2/5/16	14:00	EWW	MB	GP	14:00	fog		O			N	TLC shifts losing view of MB.
2/5/16	14:00	EWW	WM	GP	14:00	fog	1	C	0	0	E	Snow overnight, 1 PAWA in water offshore @ 1830
2/6/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
2/6/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
2/6/16	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	
2/7/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
2/7/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
2/7/16	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	
2/8/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
2/8/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
2/8/16	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	
2/9/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
2/9/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
2/9/16	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	1 PAWA in lower frame
2/10/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
2/10/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
2/10/16	14:00	EWW	WM	GP	14:00	3	1	P	1	0	E	1 PAWA IN LOWER FRAME, camera partly obscured @ 1400, but PAWA there before and after.
2/11/16	14:00	EWW	FB	GP	14:00	fog	2	C	0	0	E	
2/11/16	14:00	EWW	MB	GP	14:00	fog		O			N	TLC shifts losing view of MB.
2/11/16	14:00	EWW	WM	GP	14:00	fog	1	C	0	0	E	
2/12/16	14:00	EWW	FB	GP	14:00	fog	3	C	0	0	E	
2/12/16	14:00	EWW	MB	GP	14:00	fog		O			N	TLC shifts losing view of MB.
2/12/16	14:00	EWW	WM	GP	14:00	fog	1	C	0	0	E	
2/13/16	14:00	EWW	FB	GP	14:00	snow	3	C	0	0	E	Light snow overnight
2/13/16	14:00	EWW	MB	GP	14:00	snow		O			N	TLC shifts losing view of MB.
2/13/16	14:00	EWW	WM	GP	14:00	snow	0	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
2/14/16	14:00	EWW	FB	GP	14:00	1	2	C	0	0	E	
2/14/16	14:00	EWW	MB	GP	14:00	1		O			N	TLC shifts losing view of MB.
2/14/16	14:00	EWW	WM	GP	14:00	1	1	C	3	0	E	3 PAWA on mid beach most of day, 1 PAWA on mid beach late day
2/15/16	14:00	EWW	FB	GP	14:00	1	1	C	0	0	E	Light snow overnight; snow about 1230
2/15/16	14:00	EWW	MB	GP	14:00	1		O			N	TLC shifts losing view of MB.
2/15/16	14:00	EWW	WM	GP	14:00	1	1	C	1	0	E	1 on mid beach most of day; 1–2 in water also in afternoon.
2/16/16	14:00	EWW	FB	GP	14:00	snow	0	C			E	Blurred, snow or ice, fog covered. One PAWA on right part of beach
2/16/16	14:00	EWW	MB	GP	14:00	snow		O			N	TLC shifts losing view of MB.
2/16/16	14:00	EWW	WM	GP	14:00	snow		O			N	OBSCURRRED - snowing
2/17/16	14:00	EWW	FB	GP	16:00	3	2	C	0	0	E	SNOW OVERNIGHT, BLURRED, SNOW OR ICE, FOG COVERED, used 1600.
2/17/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
2/17/16	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
2/18/16	14:00	EWW	FB	GP	14:00	3	3	P	0	0	G	Glare
2/18/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
2/18/16	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	
2/19/16	14:00	EWW	FB	GP	14:30	2	3	C	0	0	E	Glare, used 1430.
2/19/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
2/19/16	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	
2/20/16	14:00	EWW	FB	GP	14:00	fog	3	C	0	0	E	Rough water, real wash tub day
2/20/16	14:00	EWW	MB	GP	14:00	fog		O			N	TLC shifts losing view of MB.
2/20/16	14:00	EWW	WM	GP	14:00	fog	3	P	0	0	G	
2/21/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
2/21/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
2/21/16	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	Snowed overnight
2/22/16	14:00	EWW	FB	GP	13:00	1	1	C	1	0	E	Light snow overnight, one PAWA laying on center of beach 0900–1530. Glare used 1300.
2/22/16	14:00	EWW	MB	GP	14:00	1		O			N	TLC shifts losing view of MB.
2/22/16	14:00	EWW	WM	GP	14:00	1	3	C	1	0	E	Light snow overnight. 1 PAWA on mid beach. Moves up beach with tide all morning; rump just visible by rock outcrop @ 1400
2/23/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
2/23/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
2/23/16	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	Windy
2/24/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
2/24/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
2/24/16	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	No PAWA visible.
2/25/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
2/25/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
2/25/16	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	2 at waterline mid beach 1600; 2 in waterr offshore 1930.
2/26/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
2/26/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
2/26/16	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	1 above waterline mid beach, 1630–1930; 2 above waterline mid beach, 2 more offshore in water, 2000.
2/27/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
2/27/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
2/27/16	14:00	EWW	WM	GP	14:00	2	2	C	57	10	E	Sm PAWA group of 18–20 mid beach in morning with more coming ashore throughout day
2/28/16	14:00	EWW	FB	GP	13:00	3	3	C	0	0	E	Glare, used 1300.
2/28/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
2/28/16	14:00	EWW	WM	GP	14:00	3	2	C	110	0	E	Good size PAWA group on beach throughout day
2/29/16	14:00	EWW	FB	GP	12:30	5	3	C	0	0	E	Rough water, real wash tub day. Glare, used 1230.
2/29/16	14:00	EWW	MB	GP	14:00	5		O			N	TLC shifts losing view of MB.
2/29/16	14:00	EWW	WM	GP	14:00	5	2	C	25	0	E	Fewer in group today
3/1/16	14:00	EWW	FB	GP	17:00	3	2	C	0	0	E	Rain/snow overnight. Glare, used 1700.
3/1/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
3/1/16	14:00	EWW	WM	GP	14:30	3	2	C	27	0	E	Poor lighting, used 1430.
3/2/16	14:00	EWW	FB	GP	17:00		3	C	0	0	E	Glare, used 1700.
3/2/16	14:00	EWW	MB	GP	14:00			O			N	TLC shifts losing view of MB.
3/2/16	14:00	EWW	WM	GP	14:30		2	C	44	1	E	PAWA group growing through day. Poor lighting, used 1430.
3/3/16	14:00	EWW	FB	GP	17:00		2	C	0	0	E	Glare, used 1700.
3/3/16	14:00	EWW	MB	GP	14:00			O			N	TLC shifts losing view of MB.
3/3/16	14:00	EWW	WM	GP	14:30		1	C	75	3	E	PAWA group growing through day. Poor lighting, used 1430.

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
3/4/16	14:00	EWW	FB	GP	17:00	2	2	C	0	0	E	Glare, used 1700.
3/4/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/4/16	14:00	EWW	WM	GP	14:30	2	2	C	65	0	E	Poor lighting, used 1430.
3/5/16	14:00	EWW	FB	GP	14:00	1	2	C	0	0	E	Snowing in evening
3/5/16	14:00	EWW	MB	GP	14:00	1		O			N	TLC shifts losing view of MB.
3/5/16	14:00	EWW	WM	GP	14:00	1	1	C	31	0	E	PAWA group smaller today. Snowing in late afternoon.
3/6/16	14:00	EWW	FB	GP	14:00	3	3	C	0	0	E	
3/6/16	14:00	EWW	MB	GP	14:00	3		O			N	TLC shifts losing view of MB.
3/6/16	14:00	EWW	WM	GP	14:00	3	1	C	12	0	E	Snow overnight. Most of group gone; but several haul out further up beach throughout day. More snow late afternoon.
3/7/16	14:00	EWW	FB	GP	14:00	fog	1	P	0	0	G	Snowed overnight. Camera part obscured by snow.
3/7/16	14:00	EWW	MB	GP	14:00	fog		O			N	TLC shifts losing view of MB.
3/7/16	14:00	EWW	WM	GP	14:00	fog	2	C	28	0	E	Snow overnight. PAWA group still hauled out at north end of beach. Snow mid afternoon and evening
3/8/16	14:00	EWW	FB	GP	14:00	2	2	C	0	0	E	1 PAWA stops by @ 1300.
3/8/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/8/16	14:00	EWW	WM	GP	14:00	2	1	C	105	5	E	PAWA group still hauled out at north end of beach. Grows thru day
3/9/16	14:00	EWW	FB	GP	14:00	2	1	C	0	0	E	
3/9/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/9/16	14:00	EWW	WM	GP	14:00	2	2	C	136	3	E	
3/10/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
3/10/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/10/16	14:00	EWW	WM	GP	14:00	2	1	C	106	0	E	
3/11/16	14:00	EWW	FB	GP	14:00	2	3	C	0	0	E	
3/11/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/11/16	14:00	EWW	WM	GP	14:30	2	2	C	56	1	E	Poor lighting, used 1430.
3/12/16	14:00	EWW	FB	GP	14:00	1	3	C	0	0	E	
3/12/16	14:00	EWW	MB	GP	14:00	1		O			N	TLC shifts losing view of MB.
3/12/16	14:00	EWW	WM	GP	14:00	1	2	C	52	3	E	
3/13/16	14:00	EWW	FB	GP	14:00	1	3	C	0	0	E	Camera out of operation after 2130 this date.
3/13/16	14:00	EWW	MB	GP	14:00	1		O			N	TLC shifts losing view of MB.
3/13/16	14:00	EWW	WM	GP	14:00	1	2	C	62	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
3/14/16	14:00	EWW	MB	GP	14:00	1		O			N	TLC shifts losing view of MB.
3/14/16	14:00	EWW	WM	GP	14:00	1	2	C	39	0	E	
3/15/16	14:00	EWW	MB	GP	14:00	fog		O			N	TLC shifts losing view of MB.
3/15/16	14:00	EWW	WM	GP	11:30	fog	2	C	22	0	E	Snowing at 1400, used 1130.
3/16/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/16/16	14:00	EWW	WM	GP	14:00	2	1	C	45	0	E	
3/17/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/17/16	14:00	EWW	WM	GP	14:00	2	2	C	10	0	E	PAWA group size a lot smaller today
3/18/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/18/16	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	PAWA gone, cam partially obscured in morning. 2 PAWA offshore at 1600.
3/19/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/19/16	14:00	EWW	WM	GP	14:00	2	1	C	0	2	G	Camera a little hazy. 2 PAWA OFFSHORE AT 1400, 1 ON BEACH 1500–2100.
3/20/16	14:00	EWW	MB	GP	14:00	2		O			N	TLC shifts losing view of MB.
3/20/16	14:00	EWW	WM	GP	14:00	2	2	C	1	0	E	1 PAWA on upper beach all day, 1 in water at north end 1700–1800.
3/21/16	14:00	EWW	MB	GP	14:00	fog		O			N	TLC shifts losing view of MB.
3/21/16	14:00	EWW	WM	GP	14:00	fog	2	C	0	0	E	Snowed overnight, snowing again in evening.
3/22/16	14:00	EWW	MB	GP	14:00			O			N	TLC shifts losing view of MB.
3/22/16	14:00	EWW	WM	GP	14:00		1	C	0	1	E	2 PAWA offshore at noon, 3 hauled out at north end by 1600, more hauling out mid beach by 1830.
3/23/16		RPM	BC	O	18:35	1	0	C	0	0	E	
3/23/16		RPM	CG	O	18:30	1	0	C	0	0	E	
3/23/16		RPM	FB	O	20:45	1	0	C	0	0	E	
3/23/16		RPM	FP	O	20:56	1	0	C	0	0	E	
3/23/16		RPM	FR	O	18:43	1	0	C	0	0	E	
3/23/16		RPM	MB	O	19:05	1	0	C	250	2	G	
3/23/16		RPM	NBC	O	18:55	1	0	C	0	0	E	
3/23/16		RPM	SB	O	21:00	1	0	C	0	0	E	
3/23/16		RPM	SP	O	21:07	1	0	C	0	0	E	
3/23/16	14:00	RPM	WM	GP	19:00	1	1	C	30	2	E	PAWA group mid beach grows thru day
3/24/16	14:00	EWW	WM	GP	14:00							PAWA group mid beach grows thru day. Snowing late afternoon.
3/25/16		RPM	BC	O	19:23	1	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
3/25/16		RPM	CG	O	19:20	1	1	C	0	0	E	
3/25/16		RPM	FB	O	19:10	1	1	C	0	0	E	
3/25/16		RPM	FP	O	19:07	1	1	C	0	0	E	
3/25/16		RPM	FR	O	19:29	1	1	C	0	0	E	
3/25/16		RPM	MB	O	19:40	1	1	C	282	8	G	
3/25/16		RPM	NBC	O	19:37	1	1	C	0	0	E	
3/25/16		RPM	SB	O	19:00	1	1	C	0	0	E	
3/25/16		RPM	SP	O	18:56	1	1	C	0	0	E	
3/25/16	14:00	RPM	WM	GP	19:30	1	1	C	80	2	E	Snowing at 1230
3/26/16		RPM	BC	O	16:49	1	0	C	0	0	E	
3/26/16		RPM	CG	O	16:45	1	0	C	0	0	E	
3/26/16		RPM	FB	O	16:33	1	0	C	0	0	E	
3/26/16		RPM	FP	O	16:29	1	0	C	0	0	E	
3/26/16		RPM	FR	O	16:56	1	0	C	0	3	E	
3/26/16		RPM	MB	O	17:15	1	0	C	90	31	G	
3/26/16		RPM	NBC	O	17:07	1	0	C	0	0	E	
3/26/16		RPM	SB	O	16:23	1	0	C	0	0	E	
3/26/16		RPM	SP	O	16:20	1	0	C	0	0	E	
3/26/16	14:00	RPM	WM	GP	16:30	1	1	C	20	0	E	Fewer PAWA today; all PAWA leave between 1700 and 1730
3/27/16		RPM	BC	O	17:15	5	3	C	0	0	E	
3/27/16		RPM	CG	O	17:11	5	3	C	0	0	E	
3/27/16		RPM	FB	O	18:25	5	3	C	0	0	E	
3/27/16		RPM	FP	O	18:35	5	3	C	0	0	E	
3/27/16		RPM	FR	O	17:23	5	3	C	0	0	E	
3/27/16		RPM	MB	O	17:36	5	3	P	9	0	P	
3/27/16		RPM	NBC	O	17:33	5	3	C	0	0	E	
3/27/16		RPM	SB	O	18:38	5	3	C	0	0	E	
3/27/16		RPM	SP	O	18:48	5	3	C	0	0	E	
3/27/16	14:00	RPM	WM	GP	12:00	3	1	P	0	0	P	Snowing in afternoon, camera obscured after 1430.
3/28/16		RPM	BC	O	15:35	4	2	C	0	0	E	
3/28/16		RPM	CG	O	15:30	4	2	C	0	0	E	
3/28/16		RPM	FB	O	18:07	4	2	C	0	0	E	
3/28/16		RPM	FP	O	18:12	4	2	C	0	0	E	
3/28/16		RPM	FR	O	15:42	4	2	C	0	0	E	
3/28/16		RPM	MB	O	15:56	4	2	C	11	0	E	
3/28/16		RPM	NBC	O	15:52	4	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
3/28/16		RPM	SB	O	18:15	4	2	C	0	0	E	
3/28/16		RPM	SP	O	18:24	4	2	C	0	0	E	
3/28/16	14:00	RPM	WM	GP	17:00	4	3	C	2	0	E	Camera obscured in AM. 2 PAWA on beach in afternoon, 1 by evening.
3/29/16		RPM	BC	O	11:37	3	2	C	0	0	E	
3/29/16		RPM	CG	O	11:33	3	2	C	0	0	E	
3/29/16		RPM	FB	O	11:15	3	2	C	0	0	E	
3/29/16		RPM	FP	O	11:12	3	2	C	0	0	E	
3/29/16		RPM	FR	O	11:45	3	2	C	0	0	E	
3/29/16		RPM	MB	O	12:00	3	2	C	90	2	G	
3/29/16		RPM	NBC	O	11:54	3	2	C	0	0	E	
3/29/16		RPM	SB	O	11:05	3	2	C	0	0	E	
3/29/16		RPM	SP	O	11:01	3	2	C	0	0	E	
3/29/16	14:00	RPM	WM	GP	17:00	3	2	C	0	0	E	No PAWA today, snowing.
3/30/16			BC					O			N	Fog
3/30/16			CG					O			N	Fog
3/30/16			FB					O			N	Fog
3/30/16			FP					O			N	Fog
3/30/16			FR					O			N	Fog
3/30/16			MB					O			N	Fog
3/30/16			NBC					O			N	Fog
3/30/16			SB					O			N	Fog
3/30/16			SP					O			N	Fog
3/30/16	14:00	RPM	WM	GP	14:00	2	1	C	20	0	E	3–4 PAWA mid way on beach, herd grows thru day
3/31/16		RPM	BC	A	11:40	2	1	C	0	0	E	
3/31/16		RPM	CG	A	11:35	2	1	C	0	0	E	
3/31/16		RPM	FB	A	11:30	2	1	C	0	0	E	
3/31/16		RPM	FP	A	11:25	2	1	C	0	0	E	
3/31/16		RPM	FR	A	11:45	2	1	C	0	0	E	
3/31/16		RPM	MB	A	11:55	2	1	C	10	0	E	
3/31/16		RPM	NBC	A	11:50	2	1	C	0	0	E	
3/31/16		RPM	SB	A	11:20	2	1	C	0	0	E	
3/31/16		RPM	SP	A	11:15	2	1	C	0	0	E	
3/31/16	14:00	EWW	WM	GP	11:00	1	1	C	46	0	E	PAWA spooked off by helo about 1130, some still in water offshore. Start rehauling by noon. Heard grows thru day. May have been slight dist between 1530–

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
												1600.
4/1/16	17:00	RPM	BC	A	9:20	6	3	C	0	0	E	
4/1/16	17:00	RPM	CG	A	9:17	6	3	C	0	0	E	
4/1/16	17:00	RPM	FB	A	9:15	6	3	C	0	0	E	
4/1/16	17:00	RPM	FP	A	9:10	6	3	C	0	0	E	
4/1/16	17:00	RPM	FR	A	9:23	6	3	C	0	0	E	
4/1/16	17:00	RPM	MB	A	9:30	6	3	C	0	0	E	
4/1/16	17:00	RPM	NBC	A	9:25	6	3	C	0	0	E	
4/1/16	17:00	RPM	SB	A	9:05	6	3	C	0	0	E	
4/1/16	17:00	RPM	SP	A	9:00	6	3	C	0	0	E	
4/1/16	17:00	RPM	WM	GP	17:00	1	3	C	108	1	G	
4/2/16	14:00	EWW	FB	GP	14:00		1	C	0	0	E	
4/3/16	17:00	EWW	FB	GP	17:00		3	P	0	0	F	
4/4/16	17:00	EWW	FB	GP	17:00		3	C	0	0	E	
4/5/16	14:00	EWW	FB	GP	14:00		2	C	0	0	E	
4/6/16	9:00	EWW	FB	GP	9:00		2	C	0	0	E	
4/7/16	17:00	EWW	FB	GP	17:00		1	C	1	0	E	1 PAWA on beach 0730–2200
4/8/16	14:00	EWW	FB	GP	14:00		3	C	0	0	E	
4/9/16	14:00	EWW	FB	GP	14:00		3	C	0	0	E	
4/10/16	17:00	EWW	FB	GP	17:00		2	C	0	0	E	
4/11/16	9:00	EWW	FB	GP	9:00		2	C	0	0	E	1 PAWA 2000–dark.
4/12/16	9:00	EWW	FB	GP	9:00		2	C	0	0	E	
4/13/16	14:00	EWW	FB	GP	14:00		1	C	0	0	E	
4/14/16	14:00	EWW	FB	GP	14:00		1	C	0	0	E	
4/15/16	9:00	EWW	FB	GP	9:00		1	C	0	0	E	
4/16/16	17:00	EWW	FB	GP	17:00		1	C	1	0	E	1 PAWA 1200–1730.
4/17/16	9:00	EWW	FB	GP	9:00		2	C	0	0	E	
4/18/16	17:00	EWW	FB	GP	17:00		3	P	0	0	G	
4/19/16	9:00	EWW	FB	GP	9:00		3	C	0	0	E	
4/20/16	9:00	RPM	BC	S	19:15	4	2	C	0	0	E	
4/20/16	9:00	RPM	CG	S	19:12	4	2	C	0	0	E	
4/20/16	9:00	NB	FB	S	19:15	4	2	C	0	0	E	
4/20/16	9:00	NB	FP	S	19:27	4	2	C	0	0	E	
4/20/16	9:00	RPM	FR	S	19:27	4	2	C	0	0	E	
4/20/16	9:00	RPM	MB	S	19:41	4	1	C	104	0	G	
4/20/16	9:00	RPM	NBC	S	19:37	4	2	C	0	0	E	
4/20/16	9:00	NB	SB	S	19:31	4	2	C	0	0	E	
4/20/16	9:00	NB	SP	S	19:50	4	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
4/20/16	9:00	MKA	WM	GP	9:00	2	2	C	0	0	G	
4/21/16	17:00	RPM	BC	S	17:04	3	2	C	0	0	E	
4/21/16	17:00	RPM	CG	S	17:00	3	2	C	0	0	E	
4/21/16	17:00	NB	FB	S	16:50	3	3	C	0	0	E	
4/21/16	17:00	NB	FP	S	16:47	3	3	C	0	0	E	
4/21/16	17:00	RPM	FR	S	17:10	3	2	C	0	0	E	
4/21/16	17:00	RPM	MB	S	17:20	3	1	C	207	8	G	
4/21/16	17:00	RPM	NBC	S	17:15	3	2	C	0	0	E	
4/21/16	17:00	NB	SB	S	16:40	3	3	C	0	0	E	
4/21/16	17:00	NB	SP	S	16:33	3	3	C	0	0	E	
4/21/16	17:00	MKA	WM	GP	17:00	3	2	C	4	2	E	
4/22/16	9:00	RPM	BC	S	9:41	3	2	C	0	0	E	
4/22/16	9:00	RPM	CG	S	9:40	3	2	C	0	0	E	
4/22/16	9:00	NB	FB	S	9:53	3	2	C	0	0	E	
4/22/16	9:00	NB	FP	S	9:57	3	2	C	0	0	E	
4/22/16	9:00	RPM	FR	S	9:46	3	2	C	0	0	E	
4/22/16	9:00	RPM	MB	S	9:56	3	1	C	372	1	G	
4/22/16	9:00	RPM	NBC	S	9:53	3	2	C	0	0	E	
4/22/16	9:00	NB	SB	S	10:03	3	2	C	0	0	E	
4/22/16	9:00	NB	SP	S	10:09	3	2	C	0	0	E	
4/22/16	9:00	MKA	WM	GP	9:00	2	2	C	0	1	E	
4/23/16	17:00	RPM	BC	S	17:51	1	0	C	1	0	E	
4/23/16	17:00	RPM	CG	S	17:48	1	0	C	0	1	E	
4/23/16	17:00	NB	FB	S	17:23	1	1	C	0	0	E	
4/23/16	17:00	NB	FP	S	17:21	1	1	C	0	0	E	
4/23/16	17:00	RPM	FR	S	17:59	1	0	C	0	0	E	
4/23/16	17:00	RPM	MB	S	18:09	1	0	C	1100	6	G	
4/23/16	17:00	RPM	NBC	S	18:01	1	0	C	0	0	E	
4/23/16	17:00	NB	SB	S	17:14	1	1	C	0	0	E	
4/23/16	17:00	NB	SP	S	17:02	1	1	C	0	0	E	
4/23/16	17:00	MKA	WM	GP	17:30	2	2	C	90	0	G	
4/24/16	9:00	RPM	BC	S	10:08	4	2	C	0	0	E	
4/24/16	9:00	RPM	CG	S	10:05	4	2	C	0	0	E	
4/24/16	9:00	NB	FB	S	9:43	4	2	C	4	0	E	
4/24/16	9:00	NB	FP	S	9:54	4	2	C	0	0	E	
4/24/16	9:00	RPM	FR	S	10:14	4	2	C	0	0	E	
4/24/16	9:00	RPM	MB	GP		4	2	C	680	7	E	
4/24/16	9:00	RPM	NBC	S	10:19	4	2	C	0	2	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
4/24/16	9:00	NB	SB	S	9:58	4	2	C	2	0	E	
4/24/16	9:00	NB	SP	S	10:11	4	2	C	0	0	E	Neil Barten didn't record stop times
4/24/16	9:00	MKA	WM	GP	9:00	2	2	C	97	5	G	
4/25/16	17:00	NB	BC	S		6	3	C	0	0	E	
4/25/16	17:00	NB	CG	S		6	3	C	0	0	E	
4/25/16	17:00	NB	FB	S		6	3	C	0	0	E	
4/25/16	17:00	NB	FP	S		6	3	C	0	0	E	
4/25/16	17:00	NB	FR	S		6	3	C	0	0	E	
4/25/16	17:00	NB	MB	S		6	3	C	24	0	G	
4/25/16	17:00	NB	NBC	S		6	3	C	0	0	E	
4/25/16	17:00	NB	SB	S		6	3	C	0	0	E	
4/25/16	17:00	NB	SP	S	8:00	6	3	C	0	0	E	Neil Barten records start stop time
4/25/16	17:00	MKA	WM	GP	13:30	2	2	C	50	0	G	
4/26/16	14:00	NB	BC	S		3	1	C	0	0	E	
4/26/16	14:00	NB	CG	S		3	1	C	0	0	E	
4/26/16	14:00	NB	FB	S		3	1	C	0	0	E	
4/26/16	14:00	NB	FP	S		3	1	C	0	0	E	
4/26/16	14:00	NB	FR	S		3	1	C	0	0	E	
4/26/16	14:00	NB	MB	S		3	1	C	0	0	E	
4/26/16	14:00	NB	NBC	S		3	1	C	0	0	E	
4/26/16	14:00	NB	SB	S		3	1	C	0	0	E	
4/26/16	14:00	NB	SP	S	8:30	3	1	C	0	0	E	Neil Barten records start stop time
4/26/16	14:00	MKA	WM	GP	14:00	1	1	C	28	9	G	
4/27/16	14:00	RPM	BC	S	15:48	4	2	C	0	0	E	
4/27/16	14:00	RPM	CG	S	15:45	4	2	C	0	0	E	
4/27/16	14:00	RPM	FB	S	15:23	4	2	C	0	0	E	
4/27/16	14:00	RPM	FP	S	15:18	4	2	C	0	0	E	
4/27/16	14:00	RPM	FR	S	15:56	4	2	C	0	0	E	
4/27/16	14:00	RPM	MB	S	16:09	4	2	C	0	0	E	
4/27/16	14:00	RPM	NBC	S	16:07	4	2	C	0	0	E	
4/27/16	14:00	RPM	SB	S	15:10	4	2	C	0	0	E	
4/27/16	14:00	RPM	SP	S	15:05	4	2	C	0	0	E	
4/27/16	14:00	MKA	WM	GP	14:00	2	1	C	41	0	G	
4/28/16	9:00	RPM	BC	S	8:59	3	2	C	0	1	E	
4/28/16	9:00	RPM	CG	S	8:55	3	2	C	0	0	E	
4/28/16	9:00	MKA	FB	S	10:40	3	2	C	0	0	E	
4/28/16	9:00	MKA	FP	S	10:49	3	2	C	0	0	E	
4/28/16	9:00	RPM	FR	S	9:05	3	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
4/28/16	9:00	RPM	MB	S	9:15	3	2	C	0	2	E	
4/28/16	9:00	RPM	NBC	S	9:12	3	2	C	0	0	E	
4/28/16	9:00	MKA	SB	S	10:52	3	2	C	0	0	E	
4/28/16	9:00	MKA	SP	S	11:01	3	2	C	0	0	E	
4/28/16	9:00	RPM	WM	GP	9:00	2	2	C	54	2	G	
4/29/16	17:00	RPM	BC	S	18:40	1	0	C	0	0	E	
4/29/16	17:00	RPM	CG	S	18:35	1	0	C	0	1	E	
4/29/16	17:00	MKA	FB	S	17:16	1	0	C	0	0	E	
4/29/16	17:00	MKA	FP	S	17:13	1	0	C	0	0	E	
4/29/16	17:00	RPM	FR	S	18:50	1	0	C	0	0	E	
4/29/16	17:00	RPM	MB	S	19:04	1	0	C	60	8	G	
4/29/16	17:00	RPM	NBC	S	18:58	1	0	C	0	0	E	
4/29/16	17:00	MKA	SB	S	17:06	1	0	C	0	0	E	
4/29/16	17:00	MKA	SP	S	17:00	1	0	C	0	0	E	
4/29/16	17:00	RPM	WM	GP	21:01	1	0	C	289	7	E	
4/30/16	9:00	MKA	BC	S	9:33	3	3	C	0	0	E	
4/30/16	9:00	MKA	CG	S	9:30	3	3	C	0	0	E	
4/30/16	9:00	RPM	FB	S	9:38	3	1	C	0	0	E	
4/30/16	9:00	RPM	FP	S	9:44	3	1	C	0	0	E	
4/30/16	9:00	MKA	FR	S	9:39	3	3	C	0	0	E	
4/30/16	9:00	MKA	MB	S	9:50	3	3	C	50	1	G	
4/30/16	9:00	MKA	NBC	S	9:47	3	3	C	0	0	E	
4/30/16	9:00	RPM	SB	S	9:47	3	1	C	1	0	E	
4/30/16	9:00	RPM	SP	S	10:10	3	1	C	0	0	E	
4/30/16	9:00	MKA	WM	GP	9:00	2	2	C	126	9	G	
5/1/16	9:00	RPM	BC	S	10:09	1	1	C	0	6	E	
5/1/16	9:00	RPM	CG	S	10:05	1	1	C	0	5	E	
5/1/16	9:00	MKA	FB	S	12:24	1	1	C	3	0	E	
5/1/16	9:00	MKA	FP	S	12:36	1	1	C	0	0	E	
5/1/16	9:00	RPM	FR	S	10:21	1	1	C	0	3	E	
5/1/16	9:00	RPM	MB	GP	11:51	1	1	C	528	25	E	
5/1/16	9:00	RPM	NBC	S	10:31	1	1	C	0	0	E	
5/1/16	9:00	MKA	SB	S	12:47	1	1	C	4	0	E	
5/1/16	9:00	MKA	SP	S	12:57	1	1	C	0	0	E	
5/1/16	9:00	RPM	WM	GP	12:20	2	2	C	138	1	E	
5/2/16	17:00	MKA	BC	S	14:16	1	0	C	0	3	E	
5/2/16	17:00	MKA	CG	S	14:12	1	0	C	0	0	E	
5/2/16	17:00	RPM	FB	S	14:22	1	0	C	3	1	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
5/2/16	17:00	RPM	FP	S	14:29	1	0	C	0	1	E	
5/2/16	17:00	MKA	FR	S	14:20	1	0	C	0	0	E	
5/2/16	17:00	MKA	MB	GP	15:59	1	0	C	681	14	E	
5/2/16	17:00	MKA	NBC	S	14:39	1	0	C	0	1	E	
5/2/16	17:00	RPM	SB	S	14:32	1	0	C	1	2	E	
5/2/16	17:00	RPM	SP	S	14:39	1	0	C	0	0	E	
5/2/16	17:00	MKA	WM	GP	14:00	2	2	C	77	0	G	
5/3/16	9:00	RPM	BC	S	9:31	2	2	C	0	2	E	
5/3/16	9:00	RPM	CG	S	9:28	2	2	C	0	2	E	
5/3/16	9:00	MKA	FB	S	9:48	2	1	C	0	1	E	
5/3/16	9:00	MKA	FP	S	9:59	2	1	C	0	0	E	
5/3/16	9:00	RPM	FR	S	9:36	2	2	C	0	8	E	
5/3/16	9:00	RPM	MB	S	9:47	2	2	C	630	25	G	
5/3/16	9:00	RPM	NBC	S	9:44	2	2	C	0	0	E	
5/3/16	9:00	MKA	SB	S	10:05	2	1	C	1	1	E	
5/3/16	9:00	MKA	SP	S	10:15	2	1	C	0	1	E	
5/3/16	9:00	MKA	WM	GP	9:00	2	2	C	64	1	G	
5/4/16	14:00	MKA	BC	S	14:35	1	1	C	0	2	E	
5/4/16	14:00	MKA	CG	S	14:28	1	1	C	0	0	E	
5/4/16	14:00	MKA	FB	S	13:50	1	1	C	0	0	E	
5/4/16	14:00	MKA	FP	S	13:47	1	1	C	0	0	E	
5/4/16	14:00	MKA	FR	S	14:48	1	1	C	0	0	E	
5/4/16	14:00	MKA	MB	S	14:58	1	1	C	337	12	G	
5/4/16	14:00	MKA	NBC	S	14:56	1	1	C	0	0	E	
5/4/16	14:00	MKA	SB	S	13:32	1	1	C	0	0	E	
5/4/16	14:00	MKA	SP	S	13:31	1	1	C	0	0	E	
5/4/16	14:00	MKA	WM	GP	14:00	2	1	C	44	5	G	
5/5/16	17:00	RPM	BC	S	17:16	4	3	C	0	0	E	
5/5/16	17:00	RPM	CG	S	17:12	4	3	C	0	0	E	
5/5/16	17:00	MKA	FB	S	17:09	4	3	C	0	0	E	
5/5/16	17:00	MKA	FP	S	17:19	4	3	C	0	0	E	
5/5/16	17:00	RPM	FR	S	17:22	4	3	C	0	0	E	
5/5/16	17:00	RPM	MB	S	17:33	4	3	C	170	0	G	
5/5/16	17:00	RPM	NBC	S	17:29	4	3	C	0	0	E	
5/5/16	17:00	MKA	SB	S	17:20	4	3	C	0	0	E	
5/5/16	17:00	MKA	SP	S	17:29	4	3	C	0	0	E	
5/5/16	17:00	MKA	WM	GP	16:30	2	2	C	46	0	G	
5/6/16	14:00	MKA	BC	S	14:14	1	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
5/6/16	14:00	MKA	CG	S	14:12	1	1	C	0	1	E	
5/6/16	14:00	RPM	FB	S	14:21	1	1	C	0	0	E	
5/6/16	14:00	RPM	FP	S	14:19	1	1	C	0	0	E	
5/6/16	14:00	MKA	FR	S	14:26	1	1	C	0	0	E	
5/6/16	14:00	MKA	MB	S	14:42	1	1	C	106	3	G	
5/6/16	14:00	MKA	NBC	S	14:40	1	1	C	0	0	E	
5/6/16	14:00	RPM	SB	S	14:14	1	1	C	0	0	E	
5/6/16	14:00	RPM	SP	S	14:10	1	1	C	0	1	E	
5/6/16	14:00	MKA	WM	GP	14:30	2	2	C	48	0	G	
5/7/16	9:00	RPM	BC	S	9:29	1	1	C	0	0	E	
5/7/16	9:00	RPM	CG	S	9:26	1	1	C	0	1	E	
5/7/16	9:00	MKA	FB	S	9:24	1	0	C	0	0	E	
5/7/16	9:00	MKA	FP	S	9:38	1	0	C	0	0	E	
5/7/16	9:00	RPM	FR	S	9:35	1	1	C	0	0	E	
5/7/16	9:00	RPM	MB	S	9:45	1	1	C	184	9	G	
5/7/16	9:00	RPM	NBC	S	9:41	1	1	C	0	0	E	
5/7/16	9:00	MKA	SB	S	9:40	1	0	C	0	0	E	
5/7/16	9:00	MKA	SP	S	9:52	1	0	C	0	0	E	
5/7/16	9:00	MKA	WM	GP	9:30	2	2	C	10	0	G	
5/8/16	14:00	RPM	BC	S	14:41	2	1	C	0	2	E	
5/8/16	14:00	RPM	CG	S	14:38	2	1	C	0	1	E	
5/8/16	14:00	MKA	FB	S	13:45	2	1	C	0	0	E	
5/8/16	14:00	MKA	FP	S	13:43	2	1	C	0	0	E	
5/8/16	14:00	RPM	FR	S	14:45	2	1	C	0	1	E	
5/8/16	14:00	RPM	MB	GP	15:25	2	1	C	771	17	E	
5/8/16	14:00	RPM	NBC	S	14:50	2	1	C	0	1	E	
5/8/16	14:00	MKA	SB	S	13:37	2	1	C	0	0	E	
5/8/16	14:00	MKA	SP	S	13:33	2	1	C	0	0	E	
5/8/16	14:00	MKA	WM	GP	14:00	3	2	C	11	1	G	
5/9/16	14:00	RPM	BC	S	14:32	2	1	C	0	0	E	
5/9/16	14:00	RPM	CG	S	14:29	2	1	C	0	0	E	
5/9/16	14:00	MKA	FB	S	15:02	2	1	C	5	0	E	
5/9/16	14:00	MKA	FP	S	14:58	2	1	C	0	0	E	
5/9/16	14:00	RPM	FR	S	14:36	2	1	C	0	0	E	
5/9/16	14:00	RPM	MB	S	14:45	2	1	C	725	9	G	
5/9/16	14:00	RPM	NBC	S	14:42	2	1	C	0	0	E	
5/9/16	14:00	MKA	SB	S	14:51	2	1	C	1	0	E	
5/9/16	14:00	MKA	SP	S	14:45	2	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
5/9/16	14:00	MKA	WM	GP	14:00	2	2	C	18	1	G	
5/10/16	9:00	MKA	BC	S	10:08	4	2	C	0	0	E	
5/10/16	9:00	MKA	CG	S	10:02	4	2	C	0	0	E	
5/10/16	9:00	RPM	FB	S	9:47	4	2	C	0	0	E	
5/10/16	9:00	RPM	FP	S	9:55	4	2	C	0	0	E	
5/10/16	9:00	MKA	FR	S	10:17	4	2	C	0	0	E	
5/10/16	9:00	MKA	MB	S	10:35	4	2	C	143	1	G	
5/10/16	9:00	MKA	NBC	S	10:28	4	2	C	0	0	E	
5/10/16	9:00	RPM	SB	S	9:58	4	2	C	0	0	E	
5/10/16	9:00	RPM	SP	S	10:06	4	2	C	0	0	E	
5/10/16	9:00	MKA	WM	GP	9:00	3	3	C	0	0	E	
5/11/16	17:00	MKA	BC	S	17:58	1	1	C	0	1	E	
5/11/16	17:00	MKA	CG	S	17:50	1	1	C	0	0	E	
5/11/16	17:00	RPM	FB	S	17:58	1	1	C	0	0	E	
5/11/16	17:00	RPM	FP	S	17:49	1	1	C	0	0	E	
5/11/16	17:00	MKA	FR	S	18:04	1	1	C	0	0	E	
5/11/16	17:00	MKA	MB	S	18:17	1	1	C	123	1	G	
5/11/16	17:00	MKA	NBC	S	18:14	1	1	C	0	0	E	
5/11/16	17:00	RPM	SB	S	17:46	1	1	C	0	0	E	
5/11/16	17:00	RPM	SP	S	17:38	1	1	C	1	0	E	
5/11/16	17:00	MKA	WM	GP	17:00	3	3	C	0	0	E	
5/12/16	17:00	RPM	BC	S	17:26	1	1	C	0	0	E	
5/12/16	17:00	RPM	CG	S	17:22	1	1	C	0	0	E	
5/12/16	17:00	MKA	FB	S	17:40	1	1	C	0	0	E	
5/12/16	17:00	MKA	FP	S	17:50	1	1	C	0	0	E	
5/12/16	17:00	RPM	FR	S	17:33	1	1	C	0	2	E	
5/12/16	17:00	RPM	MB	S	17:46	1	1	C	390	9	G	
5/12/16	17:00	RPM	NBC	S	17:43	1	1	C	0	0	E	
5/12/16	17:00	MKA	SB	S	17:53	1	1	C	0	0	E	
5/12/16	17:00	MKA	SP	S	18:00	1	1	C	0	0	E	
5/12/16	17:00	MKA	WM	GP	17:00	3	3	C	0	0	E	
5/13/16	17:00	RPM	BC	S	18:05	1	1	C	0	0	E	
5/13/16	17:00	RPM	CG	S	18:11	1	1	C	0	0	E	
5/13/16	17:00	MKA	FB	S	12:45	1	1	C	0	1	E	
5/13/16	17:00	MKA	FP	S	12:52	1	1	C	0	0	E	
5/13/16	17:00	RPM	FR	S	18:00	1	1	C	4	0	E	
5/13/16	17:00	RPM	MB	GP	17:19	1	1	C	491	8	E	
5/13/16	17:00	RPM	NBC	S	17:53	1	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
5/13/16	17:00	MKA	SB	S	12:55	1	1	C	0	1	E	
5/13/16	17:00	MKA	SP	S	13:05	1	1	C	0	0	E	
5/13/16	17:00	MKA	WM	GP	17:00	2	2	C	0	0	E	
5/14/16	9:00	RPM	BC	S	9:28	1	1	C	0	2	E	
5/14/16	9:00	RPM	CG	S	9:24	1	1	C	0	1	E	
5/14/16	9:00	MKA	FB	S	9:40	1	1	C	3	3	E	
5/14/16	9:00	MKA	FP	S	9:48	1	1	C	0	0	E	
5/14/16	9:00	RPM	FR	S	9:35	1	1	C	5	1	E	
5/14/16	9:00	RPM	MB	S	9:45	1	0	C	400	36	G	
5/14/16	9:00	RPM	NBC	S	9:42	1	1	C	0	2	E	
5/14/16	9:00	MKA	SB	S	9:54	1	1	C	0	1	E	
5/14/16	9:00	MKA	SP	S	10:00	1	1	C	0	2	E	
5/14/16	9:00	MKA	WM	GP	9:00	2	2	C	0	0	E	
5/15/16	14:00	MKA	BC	S	15:12	1	1	C	0	0	E	
5/15/16	14:00	MKA	CG	S	15:22	1	1	C	3	0	E	
5/15/16	14:00	RPM	FB	S	13:35	1	0	C	38	2	E	
5/15/16	14:00	RPM	FP	S	13:44	1	0	C	0	0	E	
5/15/16	14:00	MKA	FR	S	15:00	1	1	C	14	0	E	
5/15/16	14:00	MKA	MB	GP	14:14	1	1	C	820	27	E	
5/15/16	14:00	MKA	NBC	S	14:45	1	1	C	0	1	E	
5/15/16	14:00	RPM	SB	S	13:46	1	0	C	0	0	E	
5/15/16	14:00	RPM	SP	S	13:57	1	0	C	1	0	E	
5/15/16	14:00	MKA	WM	S	13:20	1	1	C	58	11	E	
5/16/16	14:00	RPM	BC	S	14:55	1	0	C	3	0	E	
5/16/16	14:00	RPM	CG	S	14:40	1	0	C	2	0	E	
5/16/16	14:00	MKA	FB	S	14:13	1	0	C	53	0	E	
5/16/16	14:00	MKA	FP	S	14:29	1	0	C	0	0	E	
5/16/16	14:00	RPM	FR	S	15:01	1	0	C	13	1	E	
5/16/16	14:00	RPM	MB	GP	15:52	1	0	C	854	7	E	
5/16/16	14:00	RPM	NBC	S	15:17	1	0	C	0	1	E	
5/16/16	14:00	MKA	SB	S	14:33	1	0	C	24	0	E	
5/16/16	14:00	MKA	SP	S	14:40	1	0	C	0	0	E	
5/16/16	14:00	RPM	WM	S	16:25	1	0	C	94	2	E	
5/17/16	9:00	MKA	BC	S	9:30	1	1	C	2	0	E	
5/17/16	9:00	MKA	CG	S	9:25	1	1	C	0	2	E	
5/17/16	9:00	RPM	FB	S	9:17	1	1	C	29	3	E	
5/17/16	9:00	RPM	FP	S	9:25	1	1	C	0	0	E	
5/17/16	9:00	MKA	FR	S	9:37	1	1	C	2	2	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
5/17/16	9:00	MKA	MB	GP	12:45	1	1	C	425	12	E	Camera batteries died, had to return to cabin
5/17/16	9:00	MKA	NBC	S	9:49	1	1	C	0	0	E	
5/17/16	9:00	RPM	SB	S	9:28	1	1	C	19	0	E	
5/17/16	9:00	RPM	SP	S	9:33	1	1	C	0	2	E	
5/17/16	9:00	MKA	WM	S	13:15	1	1	C	52	5	E	
5/18/16	14:00	RPM	BC	S	14:20	2	1	C	0	0	E	
5/18/16	14:00	RPM	CG	S	14:15	2	1	C	0	0	E	
5/18/16	14:00	MKA	FB	S	13:51	1	1	C	1	0	E	
5/18/16	14:00	MKA	FP	S	13:47	1	1	C	0	0	E	
5/18/16	14:00	RPM	FR	S	14:28	2	1	C	0	0	E	
5/18/16	14:00	RPM	MB	S	14:37	2	1	C	46	2	G	
5/18/16	14:00	RPM	NBC	S	14:34	2	1	C	0	0	E	
5/18/16	14:00	MKA	SB	S	13:42	1	1	C	0	0	E	
5/18/16	14:00	MKA	SP	S	13:36	1	1	C	0	0	E	
5/18/16	14:00	RPM	WM	S	15:29	3	3	C	0	2	E	
5/19/16	17:00	MKA	BC	S	17:51	3	2	C	0	0	E	
5/19/16	17:00	MKA	CG	S	17:45	3	2	C	0	0	E	
5/19/16	17:00	RPM	FB	S	17:17	3	2	C	0	0	E	
5/19/16	17:00	RPM	FP	S	17:27	3	2	C	0	0	E	
5/19/16	17:00	MKA	FR	S	18:00	3	2	C	0	0	E	
5/19/16	17:00	MKA	MB	S	18:11	3	2	C	21	0	G	
5/19/16	17:00	MKA	NBC	S	18:09	3	2	C	0	0	E	
5/19/16	17:00	RPM	SB	S	17:29	3	2	C	0	0	E	
5/19/16	17:00	RPM	SP	S	17:38	3	2	C	0	1	E	
5/19/16	17:00	MKA	WM	GP	17:00	3	2	C	0	0	E	
5/20/16	17:00	RPM	BC	S	17:17	2	1	C	0	0	E	
5/20/16	17:00	RPM	CG	S	17:14	2	1	C	0	0	E	
5/20/16	17:00	MKA	FB	S	17:30	2	1	C	0	0	E	
5/20/16	17:00	MKA	FP	S	17:36	2	1	C	0	0	E	
5/20/16	17:00	RPM	FR	S	17:24	2	1	C	0	0	E	
5/20/16	17:00	RPM	MB	S	17:33	2	1	P	60	4	G	
5/20/16	17:00	RPM	NBC	S	17:30	2	1	C	0	0	E	
5/20/16	17:00	MKA	SB	S	17:38	2	1	C	0	0	E	
5/20/16	17:00	MKA	SP	S	17:48	2	1	C	0	0	E	
5/20/16	17:00	RPM	WM	GP	17:00	2	2	C	0	0	E	
5/21/16	14:00	MKA	BC	S	14:37	2	1	C	0	0	E	
5/21/16	14:00	MKA	CG	S	14:36	2	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
5/21/16	14:00	RPM	FB	S	14:23	3	1	C	0	0	E	
5/21/16	14:00	RPM	FP	S	14:34	3	1	C	0	0	E	
5/21/16	14:00	MKA	FR	S	14:45	2	1	C	0	0	E	
5/21/16	14:00	MKA	MB	S	14:56	2	1	C	46	0	G	
5/21/16	14:00	MKA	NBC	S	14:51	2	1	C	0	0	E	
5/21/16	14:00	RPM	SB	S	14:36	3	1	C	0	0	E	
5/21/16	14:00	RPM	SP	S	14:45	3	1	C	1	0	E	
5/21/16	14:00	MKA	WM	GP	14:00	3	3	C	0	0	E	
5/22/16	9:00	RPM	BC	S	9:18	3	1	C	0	2	E	
5/22/16	9:00	RPM	CG	S	9:15	3	1	C	0	1	E	
5/22/16	9:00	MKA	FB	S	9:35	3	1	C	0	2	E	
5/22/16	9:00	MKA	FP	S	9:40	3	1	C	0	0	E	
5/22/16	9:00	RPM	FR	S	9:24	3	1	C	0	1	E	
5/22/16	9:00	RPM	MB	S	9:36	3	1	C	80	0	G	
5/22/16	9:00	RPM	NBC	S	9:33	3	1	C	0	0	E	
5/22/16	9:00	MKA	SB	S	9:43	3	1	C	0	0	E	
5/22/16	9:00	MKA	SP	S	9:52	3	1	C	0	0	E	
5/22/16	9:00	MKA	WM	GP	9:00	3	3	C	0	0	E	
5/23/16	17:00	MKA	BC	S	14:28	2	1	C	0	0	E	
5/23/16	17:00	MKA	CG	S	14:26	2	1	C	0	0	E	
5/23/16	17:00	RPM	FB	S	15:21	2	1	C	0	0	E	
5/23/16	17:00	RPM	FP	S	15:27	2	1	C	0	0	E	
5/23/16	17:00	MKA	FR	S	14:37	2	1	C	0	0	E	
5/23/16	17:00	MKA	MB	GP	14:58	2	1	C	106	4	E	
5/23/16	17:00	MKA	NBC	S	14:43	2	1	C	0	0	E	
5/23/16	17:00	RPM	SB	S	15:30	2	1	C	0	0	E	
5/23/16	17:00	RPM	SP	S	15:40	2	1	C	0	0	E	
5/23/16	17:00	MKA	WM	GP	14:00	2	2	C	0	0	E	
5/24/16	9:00	RPM	BC	S	9:30	2	1	C	0	1	E	
5/24/16	9:00	RPM	CG	S	9:27	2	1	C	1	3	E	
5/24/16	9:00	MKA	FB	S	9:28	2	1	C	0	4	E	
5/24/16	9:00	MKA	FP	S	9:36	2	1	C	0	2	E	
5/24/16	9:00	RPM	FR	S	9:37	2	1	C	0	5	E	
5/24/16	9:00	RPM	MB	S	9:50	2	1	C	118	4	G	
5/24/16	9:00	RPM	NBC	S	9:46	2	1	C	0	1	E	
5/24/16	9:00	MKA	SB	S	9:39	2	1	C	0	2	E	
5/24/16	9:00	MKA	SP	S	9:51	2	1	C	1	3	E	
5/24/16	9:00	MKA	WM	GP	9:00	2	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
5/25/16	9:00	MKA	BC	S	9:22	2	1	C	0	0	E	
5/25/16	9:00	MKA	CG	S	9:18	2	1	C	0	3	E	
5/25/16	9:00	RPM	FB	S	9:09	2	1	C	3	3	E	
5/25/16	9:00	RPM	FP	S	9:16	2	1	C	0	0	E	
5/25/16	9:00	MKA	FR	S	9:30	2	1	C	5	0	E	
5/25/16	9:00	MKA	MB	GP	10:45	2	1	C	405	4	G	
5/25/16	9:00	MKA	NBC	S	9:42	2	1	C	0	1	E	
5/25/16	9:00	RPM	SB	S	9:19	2	1	C	2	0	E	
5/25/16	9:00	RPM	SP	S	9:25	2	1	C	0	0	E	
5/25/16	9:00	MKA	WM	GP	9:00	2	2	C	0	0	E	
5/26/16	9:00	RPM	BC	S	9:17	1	1	C	0	2	E	
5/26/16	9:00	RPM	CG	S	9:12	1	1	C	0	2	E	
5/26/16	9:00	MKA	FB	S	9:15	1	1	C	13	2	E	
5/26/16	9:00	MKA	FP	S	9:25	1	1	C	0	0	E	
5/26/16	9:00	RPM	FR	S	9:27	1	1	C	12	4	E	
5/26/16	9:00	RPM	MB	S	9:40	1	1	C	452	28	G	
5/26/16	9:00	RPM	NBC	S	9:36	1	1	C	0	0	E	
5/26/16	9:00	MKA	SB	S	9:29	1	1	C	5	0	E	
5/26/16	9:00	MKA	SP	S	9:40	1	1	C	0	0	E	
5/26/16	9:00	MKA	WM	GP	9:00	2	2	C	0	0	E	
5/27/16	9:00	MKA	BC	S	9:44	2	2	C	0	3	E	
5/27/16	9:00	MKA	CG	S	9:38	2	2	C	0	0	E	
5/27/16	9:00	RPM	FB	S	9:22	2	2	C	2	2	E	
5/27/16	9:00	RPM	FP	S	9:30	2	2	C	0	0	E	
5/27/16	9:00	MKA	FR	S	9:52	2	2	C	2	0	E	
5/27/16	9:00	MKA	MB	S	10:00	2	2	C	51	6	G	
5/27/16	9:00	MKA	NBC	S	9:59	2	2	C	0	2	E	
5/27/16	9:00	RPM	SB	S	9:33	2	2	C	0	0	E	
5/27/16	9:00	RPM	SP	S	9:40	2	2	C	0	0	E	
5/27/16	9:00	MKA	WM	S	11:00	2	2	C	0	0	E	
5/28/16	17:00	RPM	BC	S	17:10	3	1	C	0	0	E	
5/28/16	17:00	RPM	CG	S	17:07	3	1	C	0	0	E	
5/28/16	17:00	MKA	FB	S	16:10	2	1	C	1	0	E	
5/28/16	17:00	MKA	FP	S	16:15	2	1	C	0	0	E	
5/28/16	17:00	RPM	FR	S	17:16	3	1	C	0	1	E	
5/28/16	17:00	RPM	MB	S	17:31	3	1	C	83	4	G	
5/28/16	17:00	RPM	NBC	S	17:27	3	1	C	0	0	E	
5/28/16	17:00	MKA	SB	S	16:19	2	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
5/28/16	17:00	MKA	SP	S	16:35	2	1	C	0	0	E	
5/28/16	17:00	MKA	WM	GP	17:00	2	2	C	0	0	E	
5/29/16	14:00	MKA	BC	S	14:50	3	1	C	0	0	E	
5/29/16	14:00	MKA	CG	S	14:40	3	1	C	0	0	E	
5/29/16	14:00	RPM	FB	S	14:19	3	0	C	0	0	E	
5/29/16	14:00	RPM	FP	S	14:26	3	0	C	0	0	E	
5/29/16	14:00	MKA	FR	S	14:54	3	1	C	0	0	E	
5/29/16	14:00	MKA	MB	S	15:32	3	1	C	66	0	G	
5/29/16	14:00	MKA	NBC	S	15:28	3	1	C	0	0	E	
5/29/16	14:00	RPM	SB	S	14:29	3	0	C	0	0	E	
5/29/16	14:00	RPM	SP	S	14:37	3	0	C	0	0	E	
5/29/16	14:00	MKA	WM	GP	14:30	3	2	P	0	0	G	
5/30/16	14:00	RPM	BC	S	14:17	2	1	C	0	0	E	
5/30/16	14:00	RPM	CG	S	14:14	2	1	C	0	0	E	
5/30/16	14:00	MKA	FB	S	14:34	2	1	C	0	0	E	
5/30/16	14:00	MKA	FP	S	14:41	2	1	C	0	0	E	
5/30/16	14:00	RPM	FR	S	14:23	2	1	C	2	0	E	
5/30/16	14:00	RPM	MB	S	14:35	2	1	C	35	0	G	
5/30/16	14:00	RPM	NBC	S	14:31	2	1	C	0	0	E	
5/30/16	14:00	MKA	SB	S	14:45	2	1	C	1	0	E	
5/30/16	14:00	MKA	SP	S	15:00	2	1	C	0	0	E	
5/30/16	14:00	MKA	WM	GP	13:30	2	2	C	0	0	E	
5/31/16	14:00	MKA	BC	S	14:33	3	2	C	0	0	E	
5/31/16	14:00	MKA	CG	S	14:25	3	2	C	0	0	E	
5/31/16	14:00	RPM	FB	S	14:17	4	3	C	0	0	E	
5/31/16	14:00	RPM	FP	S	14:22	4	3	C	0	0	E	
5/31/16	14:00	MKA	FR	S	14:40	3	2	C	0	0	E	
5/31/16	14:00	MKA	MB	S	14:53	3	2	C	9	1	E	
5/31/16	14:00	MKA	NBC	S	14:44	3	2	C	0	0	E	
5/31/16	14:00	RPM	SB	S	14:24	4	3	C	0	0	E	
5/31/16	14:00	RPM	SP	S	14:30	4	3	C	0	0	E	
5/31/16	14:00	MKA	WM	S	16:14	3	1	C	36	6	E	
6/1/16	17:00	RPM	BC	S	17:20	2	1	C	0	0	E	
6/1/16	17:00	RPM	CG	S	17:16	2	1	C	0	0	E	
6/1/16	17:00	MKA	FB	S	17:34	2	1	C	0	1	E	
6/1/16	17:00	MKA	FP	S	17:47	2	1	C	0	0	E	
6/1/16	17:00	RPM	FR	S	17:26	2	1	C	0	0	E	
6/1/16	17:00	RPM	MB	S	17:40	2	1	C	20	0	G	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
6/1/16	17:00	RPM	NBC	S	17:33	2	1	C	0	0	E	
6/1/16	17:00	MKA	SB	S	17:50	2	1	C	0	2	E	
6/1/16	17:00	MKA	SP	S	18:08	2	1	C	0	0	E	
6/1/16	17:00	MKA	WM	GP	17:00	2	1	C	67	0	G	
6/2/16	9:00	MKA	BC	S	9:35	2	1	C	0	0	E	
6/2/16	9:00	MKA	CG	S	9:30	2	1	C	0	0	E	
6/2/16	9:00	RPM	FB	S	9:20	2	1	C	12	0	E	
6/2/16	9:00	RPM	FP	S	9:27	2	1	C	0	0	E	
6/2/16	9:00	MKA	FR	S	9:42	2	1	C	6	0	E	
6/2/16	9:00	MKA	MB	S	10:01	2	1	C	162	1	G	
6/2/16	9:00	MKA	NBC	S	9:55	2	1	C	0	0	E	
6/2/16	9:00	RPM	SB	S	9:30	2	1	C	0	0	E	
6/2/16	9:00	RPM	SP	S	9:39	2	1	C	0	0	E	
6/2/16	9:00	MKA	WM	GP	9:00	2	1	C	16	0	G	
6/3/16	17:00	RPM	BC	S	17:07	1	1	C	0	0	E	
6/3/16	17:00	RPM	CG	S	17:01	1	1	C	0	0	E	
6/3/16	17:00	MKA	FB	S	18:17	2	1	C	47	0	E	
6/3/16	17:00	MKA	FP	S	18:13	2	1	C	0	0	E	
6/3/16	17:00	RPM	FR	S	17:39	1	1	C	0	0	E	
6/3/16	17:00	RPM	MB	GP	18:42	1	1	C	426	2	E	
6/3/16	17:00	RPM	NBC	S	17:46	1	1	C	0	0	E	
6/3/16	17:00	MKA	SB	S	18:03	2	1	C	0	2	E	
6/3/16	17:00	MKA	SP	S	17:43	2	1	C	0	0	E	
6/3/16	17:00	RPM	WM	S	19:03	1	1	C	0	0	E	
6/4/16	9:00	MKA	BC	S	10:09	2	2	C	0	0	E	
6/4/16	9:00	MKA	CG	S	10:05	2	2	C	0	2	E	
6/4/16	9:00	RPM	FB	S	10:00	2	1	C	18	2	E	
6/4/16	9:00	RPM	FP	S	10:08	2	1	C	0	0	E	
6/4/16	9:00	MKA	FR	S	10:19	2	2	C	5	1	E	
6/4/16	9:00	MKA	MB	S	10:32	2	2	C	197	3	G	
6/4/16	9:00	MKA	NBC	S	10:27	2	2	C	0	2	E	
6/4/16	9:00	RPM	SB	S	10:10	2	1	C	0	0	E	
6/4/16	9:00	RPM	SP	S	10:15	2	2	C	0	0	E	
6/4/16	9:00	MKA	WM	GP	9:00	2	2	C	0	0	E	
6/5/16	9:00	RPM	BC	S	9:36	2	1	C	0	0	E	
6/5/16	9:00	RPM	CG	S	9:32	2	1	C	0	0	E	
6/5/16	9:00	MKA	FB	S	9:53	2	2	C	8	0	E	
6/5/16	9:00	MKA	FP	S	10:01	2	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
6/5/16	9:00	RPM	FR	S	9:42	2	1	C	4	0	E	
6/5/16	9:00	RPM	MB	S	9:55	2	1	C	69	1	G	
6/5/16	9:00	RPM	NBC	S	9:51	2	1	C	0	0	E	
6/5/16	9:00	MKA	SB	S	10:05	2	2	C	0	0	E	
6/5/16	9:00	MKA	SP	S	10:30	2	2	C	0	0	E	
6/5/16	9:00	MKA	WM	GP	9:00	2	1	C	0	0	E	
6/6/16	14:00	RPM	BC	S	14:19	3	1	C	0	0	E	
6/6/16	14:00	RPM	CG	S	14:15	3	1	C	0	1	E	
6/6/16	14:00	MKA	FB	S	14:31	3	2	C	2	2	E	
6/6/16	14:00	MKA	FP	S	14:39	3	2	C	0	0	E	
6/6/16	14:00	RPM	FR	S	14:25	3	1	C	2	1	E	
6/6/16	14:00	RPM	MB	S	14:40	3	1	C	41	1	G	
6/6/16	14:00	RPM	NBC	S	14:37	3	1	C	0	0	E	
6/6/16	14:00	MKA	SB	S	14:42	3	2	C	0	1	E	
6/6/16	14:00	MKA	SP	S	14:57	3	2	C	0	0	E	
6/6/16	14:00	MKA	WM	GP	14:00	3	2	C	0	0	E	
6/7/16	14:00	MKA	BC	S	14:28	2	1	C	0	0	E	
6/7/16	14:00	MKA	CG	S	14:20	2	1	C	0	0	E	
6/7/16	14:00	RPM	FB	S	14:36	2	1	C	0	1	E	
6/7/16	14:00	RPM	FP	S	14:52	2	1	C	0	0	E	
6/7/16	14:00	MKA	FR	S	14:51	2	1	C	0	0	E	
6/7/16	14:00	MKA	MB	S	15:20	2	1	C	21	0	G	
6/7/16	14:00	MKA	NBC	S	15:15	2	1	C	0	0	E	
6/7/16	14:00	RPM	SB	S	14:57	2	1	C	0	0	E	
6/7/16	14:00	RPM	SP	S	15:03	2	1	C	0	1	E	
6/7/16	14:00	MKA	WM	S	16:55	2	2	C	0	0	E	
6/8/16	14:00	RPM	BC	S	14:09	2	1	C	0	0	E	
6/8/16	14:00	RPM	CG	S	14:06	2	1	C	0	1	E	
6/8/16	14:00	MKA	FB	S	14:17	2	1	C	5	0	E	
6/8/16	14:00	MKA	FP	S	14:29	2	1	C	0	0	E	
6/8/16	14:00	RPM	FR	S	14:14	2	1	C	0	0	E	
6/8/16	14:00	RPM	MB	S	14:25	2	1	C	0	0	E	
6/8/16	14:00	RPM	NBC	S	14:20	2	1	C	0	0	E	
6/8/16	14:00	MKA	SB	S	14:33	2	1	C	0	0	E	
6/8/16	14:00	MKA	SP	S	15:10	2	1	C	0	0	E	
6/8/16	14:00	MKA	WM	GP	14:00	2	1	C	0	0	E	
6/9/16	14:00	MKA	BC	S	14:32	3	2	C	0	0	E	
6/9/16	14:00	MKA	CG	S	14:28	3	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
6/9/16	14:00	RPM	FB	S	14:30	4	2	C	0	0	E	
6/9/16	14:00	RPM	FP	S	14:38	4	2	C	0	0	E	
6/9/16	14:00	MKA	FR	S	14:40	3	2	C	0	0	E	
6/9/16	14:00	MKA	MB	S	14:55	3	2	C	73	3	G	
6/9/16	14:00	MKA	NBC	S	14:42	3	2	C	0	0	E	
6/9/16	14:00	RPM	SB	S	14:40	4	2	C	0	0	E	
6/9/16	14:00	RPM	SP	S	14:46	4	2	C	0	0	E	
6/9/16	14:00	MKA	WM	GP	14:00	4	2	C	0	0	E	
6/10/16	14:00	RPM	BC	S	15:40	2	1	C	0	0	E	
6/10/16	14:00	RPM	CG	S	15:36	2	1	C	0	0	E	
6/10/16	14:00	MKA	FB	S	15:20	2	1	C	12	3	E	
6/10/16	14:00	MKA	FP	S	15:36	2	1	C	0	2	E	
6/10/16	14:00	RPM	FR	S	15:48	2	1	C	0	1	E	
6/10/16	14:00	RPM	MB	S	16:04	2	1	C	192	8	G	
6/10/16	14:00	RPM	NBC	S	15:59	2	1	C	0	1	E	
6/10/16	14:00	MKA	SB	S	15:40	2	1	C	2	0	E	
6/10/16	14:00	MKA	SP	S	15:55	2	1	C	0	0	E	
6/10/16	14:00	MKA	WM	GP	14:00	2	3	C	0	0	E	
6/11/16	17:00	MKA	BC	O	19:11	2	1	C	0	5	E	
6/11/16	17:00	MKA	CG	O	19:18	2	1	C	0	5	E	
6/11/16	17:00	RPM	FB	O	19:45	2	1	C	134	5	E	
6/11/16	17:00	RPM	FP	O	20:00	2	1	C	2	2	E	
6/11/16	17:00	MKA	FR	O	14:25	2	1	C	12	2	E	
6/11/16	17:00	MKA	MB	O	15:00	2	1	C	800	50	G	
6/11/16	17:00	MKA	NBC	O	19:00	2	1	C	0	3	E	
6/11/16	17:00	RPM	SB	O	20:04	2	1	C	51	1	E	
6/11/16	17:00	RPM	SP	O	20:16	2	1	C	0	0	E	
6/11/16	17:00	MKA	WM	S	17:00	2	2	C	0	0	E	
6/12/16	17:00	RPM	BC	S	17:20	4	2	C	0	2	E	
6/12/16	17:00	RPM	CG	S	17:16	4	2	C	0	6	E	
6/12/16	17:00	MKA	FB	S	17:15	3	2	C	100	3	E	
6/12/16	17:00	MKA	FP	S	17:27	3	2	C	5	0	E	
6/12/16	17:00	RPM	FR	S	17:28	4	2	C	5	2	E	
6/12/16	17:00	RPM	MB	GP	17:54	4	2	C	459	7	E	
6/12/16	17:00	RPM	NBC	S	17:35	4	2	C	0	8	E	
6/12/16	17:00	MKA	SB	S	17:30	3	2	C	121	5	E	
6/12/16	17:00	MKA	SP	S	17:45	3	2	C	0	1	E	
6/12/16	17:00	RPM	WM	S	16:00	4	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
6/13/16	14:00	RPM	BC	S	14:17	3	1	C	0	0	E	
6/13/16	14:00	RPM	CG	S	14:14	3	2	C	0	1	E	
6/13/16	14:00	MKA	FB	S	14:25	3	2	C	41	10	E	
6/13/16	14:00	MKA	FP	S	14:40	3	2	C	0	2	E	
6/13/16	14:00	RPM	FR	S	14:23	3	1	C	0	1	E	
6/13/16	14:00	RPM	MB	S	14:35	3	1	C	51	5	G	
6/13/16	14:00	RPM	NBC	S	14:31	3	1	C	0	3	E	
6/13/16	14:00	MKA	SB	S	14:48	3	2	C	67	10	E	
6/13/16	14:00	MKA	SP	S	15:00	3	2	C	0	4	E	
6/13/16	14:00	RPM	WM	S	15:51	4	3	C	0	0	E	
6/14/16	9:00	MKA	BC	S	9:46	2	2	C	0	0	E	
6/14/16	9:00	MKA	CG	S	9:40	2	2	C	0	0	E	
6/14/16	9:00	RPM	FB	S	9:20	3	1	C	40	2	E	
6/14/16	9:00	RPM	FP	S	9:40	3	1	C	0	4	E	
6/14/16	9:00	MKA	FR	S	9:54	2	2	C	0	0	E	
6/14/16	9:00	MKA	MB	S	10:02	2	2	C	2	0	G	
6/14/16	9:00	MKA	NBC	S	9:55	2	2	C	0	0	E	
6/14/16	9:00	RPM	SB	S	9:43	3	1	C	57	6	E	
6/14/16	9:00	RPM	SP	S	9:54	3	1	C	0	1	E	
6/14/16	9:00	MKA	WM	GP	9:00	3	3	C	0	0	E	
6/15/16	9:00	MKA	BC	S	9:30	1	0	C	0	0	E	
6/15/16	9:00	MKA	CG	S	9:23	1	0	C	0	0	E	
6/15/16	9:00	RPM	FB	S	9:45	1	1	C	42	1	E	
6/15/16	9:00	RPM	FP	S	10:00	1	1	C	0	0	E	
6/15/16	9:00	MKA	FR	S	9:40	1	0	C	0	0	E	
6/15/16	9:00	MKA	MB	S	9:55	1	0	C	12	0	G	
6/15/16	9:00	MKA	NBC	S	9:50	1	0	C	0	0	E	
6/15/16	9:00	RPM	SB	S	10:03	1	1	C	38	0	E	
6/15/16	9:00	RPM	SP	S	10:11	1	1	C	0	0	E	
6/15/16	9:00	MKA	WM	GP	9:00	2	2	C	0	0	E	
6/16/16	17:00	RPM	BC	S	16:58	3	3	C	0	0	E	
6/16/16	17:00	RPM	CG	S	16:55	3	3	C	0	1	E	
6/16/16	17:00	MKA	FB	S	17:17	3	3	C	22	3	E	
6/16/16	17:00	MKA	FP	S	17:13	3	3	C	0	0	E	
6/16/16	17:00	RPM	FR	S	17:04	3	3	C	0	0	E	
6/16/16	17:00	RPM	MB	S	17:15	3	3	C	33	1	G	
6/16/16	17:00	RPM	NBC	S	17:10	3	3	C	0	1	E	
6/16/16	17:00	MKA	SB	S	17:04	3	3	C	9	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
6/16/16	17:00	MKA	SP	S	17:00	3	3	C	0	0	E	
6/16/16	17:00	MKA	WM	GP	17:00	3	0	C	0	0	E	
6/17/16	9:00	MKA	BC	S	9:55	2	1	C	0	0	E	
6/17/16	9:00	MKA	CG	S	9:45	2	1	C	0	0	E	
6/17/16	9:00	MKA	FB	S	9:30	2	1	C	9	1	E	
6/17/16	9:00	MKA	FP	S	9:38	2	1	C	0	0	E	
6/17/16	9:00	MKA	FR	S	10:05	2	1	C	0	0	E	
6/17/16	9:00	MKA	MB	S	10:15	2	1	C	67	2	G	
6/17/16	9:00	MKA	NBC	S	10:11	2	1	C	0	0	E	
6/17/16	9:00	MKA	SB	S	9:40	2	1	C	0	0	E	
6/17/16	9:00	MKA	SP	S	9:47	2	1	C	0	0	E	
6/17/16	9:00	MKA	WM	GP	9:00	2	3	C	0	0	E	
6/18/16	14:00	RPM	BC	S	14:30	5	3	C	0	4	E	
6/18/16	14:00	RPM	CG	S	14:26	5	3	C	0	0	E	
6/18/16	14:00	MKA	FB	S	14:36	4	3	C	0	0	E	
6/18/16	14:00	MKA	FP	S	14:42	4	3	C	0	0	E	
6/18/16	14:00	RPM	FR	S	14:36	5	3	C	0	1	E	
6/18/16	14:00	RPM	MB	S	14:52	5	3	C	48	6	G	
6/18/16	14:00	RPM	NBC	S	14:46	5	3	C	0	2	E	
6/18/16	14:00	MKA	SB	S	14:44	4	3	C	0	0	E	
6/18/16	14:00	MKA	SP	S	14:52	4	3	C	0	0	E	
6/18/16	14:00	MKA	WM	GP	14:00	2	1	C	0	0	E	
6/19/16	17:00	MKA	BC	S	17:02	3	2	C	0	0	E	
6/19/16	17:00	MKA	CG	S	17:00	3	2	C	0	0	E	
6/19/16	17:00	RPM	FB	S	17:26	3	1	C	0	0	E	
6/19/16	17:00	RPM	FP	S	17:23	3	1	C	0	0	E	
6/19/16	17:00	MKA	FR	S	17:16	3	2	C	0	0	E	
6/19/16	17:00	MKA	MB	S	17:24	3	2	C	68	2	G	
6/19/16	17:00	MKA	NBC	S	17:17	3	2	C	0	0	E	
6/19/16	17:00	RPM	SB	S	17:19	3	1	C	0	0	E	
6/19/16	17:00	RPM	SP	S	17:13	3	1	C	0	0	E	
6/19/16	17:00	MKA	WM	GP	17:00	3	3	C	0	0	E	
6/20/16	14:00	RPM	BC	S	14:24	2	2	C	0	0	E	
6/20/16	14:00	RPM	CG	S	14:20	2	2	C	0	1	E	
6/20/16	14:00	MKA	FB	S	14:25	2	2	C	0	0	E	
6/20/16	14:00	MKA	FP	S	14:34	2	2	C	0	0	E	
6/20/16	14:00	RPM	FR	S	14:30	2	2	C	0	0	E	
6/20/16	14:00	RPM	MB	S	14:44	2	2	C	102	7	G	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
6/20/16	14:00	RPM	NBC	S	14:40	2	2	C	0	1	E	
6/20/16	14:00	MKA	SB	S	14:35	2	2	C	0	1	E	
6/20/16	14:00	MKA	SP	S	14:47	2	2	C	0	0	E	
6/20/16	14:00	MKA	WM	GP	14:00	2	2	C	0	0	E	
6/21/16	9:00	MKA	BC	S	9:47	2	2	C	0	0	E	
6/21/16	9:00	MKA	CG	S	9:40	2	2	C	0	0	E	
6/21/16	9:00	RPM	FB	S	9:09	2	2	C	0	2	E	
6/21/16	9:00	RPM	FP	S	9:18	2	2	C	0	0	E	
6/21/16	9:00	MKA	FR	S	9:57	2	2	C	3	0	E	
6/21/16	9:00	MKA	MB	S	10:08	2	2	C	132	2	G	
6/21/16	9:00	MKA	NBC	S	10:05	2	2	C	0	0	E	
6/21/16	9:00	RPM	SB	S	9:21	2	2	C	0	0	E	
6/21/16	9:00	RPM	SP	S	9:29	2	2	C	0	0	E	
6/21/16	9:00	MKA	WM	S	12:00	2	2	C	0	0	E	
6/22/16	14:00	RPM	BC	S	14:19	1	0	C	0	0	E	
6/22/16	14:00	RPM	CG	S	14:14	1	0	C	0	0	E	
6/22/16	14:00	MKA	FB	S	14:30	2	1	C	60	0	E	
6/22/16	14:00	MKA	FP	S	14:50	2	1	C	0	0	E	
6/22/16	14:00	RPM	FR	S	14:27	1	0	C	8	0	E	
6/22/16	14:00	RPM	MB	S	14:37	1	0	C	327	3	G	
6/22/16	14:00	RPM	NBC	S	14:33	1	0	C	0	0	E	
6/22/16	14:00	MKA	SB	S	14:53	2	1	C	1	0	E	
6/22/16	14:00	MKA	SP	S	15:05	2	1	P	0	0	E	
6/22/16	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	Camera shift, not covering near end of beach.
6/22/16	14:00	MKA	WM	GP	14:00	2	1	C	0	0	E	
6/23/16	14:00	MKA	BC	S	15:00	2	1	C	0	0	E	
6/23/16	14:00	MKA	CG	S	14:56	2	1	C	0	2	E	
6/23/16	14:00	RPM	FB	S	17:13	2	1	C	46	1	E	
6/23/16	14:00	RPM	FP	S	17:22	2	1	C	0	0	E	
6/23/16	14:00	MKA	FR	S	15:07	2	1	C	6	2	E	
6/23/16	14:00	MKA	MB	S	15:20	2	1	C	118	1	G	
6/23/16	14:00	MKA	NBC	S	15:09	2	1	C	0	1	E	
6/23/16	14:00	RPM	SB	S	17:25	2	1	C	4	0	E	
6/23/16	14:00	RPM	SP	S	17:34	2	1	C	0	0	E	
6/23/16	14:00	EWW	WBN	GP	14:00	2	3	C	0	0	G	Camera shift, not covering near end of beach.
6/23/16	14:00	MKA	WM	GP	14:00	2	3	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
6/24/16	17:00	RPM	BC	S	17:19	2	2	C	0	0	E	
6/24/16	17:00	RPM	CG	S	17:14	2	2	C	0	0	E	
6/24/16	17:00	MKA	FB	S	17:36	2	3	C	30	2	E	
6/24/16	17:00	MKA	FP	S	17:52	2	3	C	0	0	E	
6/24/16	17:00	RPM	FR	S	17:26	2	2	C	7	0	E	
6/24/16	17:00	RPM	MB	S	17:42	2	2	C	140	1	G	
6/24/16	17:00	RPM	NBC	S	17:37	2	2	C	0	2	E	
6/24/16	17:00	MKA	SB	S	17:57	2	3	C	8	0	E	
6/24/16	17:00	MKA	SP	S	18:05	2	3	C	0	0	E	
6/24/16	17:00	EWW	WBN	GP	17:00	2	3	C	0	0	G	Camera shift, not covering near end of beach.
6/24/16	17:00	MKA	WM	GP	17:00	2	3	C	0	0	E	
6/25/16	17:00	MKA	BC	S	17:31	2	2	C	0	0	E	
6/25/16	17:00	MKA	CG	S	17:25	2	2	C	0	0	E	
6/25/16	17:00	RPM	FB	S	18:15	2	1	C	44	1	E	
6/25/16	17:00	RPM	FP	S	18:27	2	1	C	0	0	E	
6/25/16	17:00	MKA	FR	S	17:48	2	2	C	2	2	E	
6/25/16	17:00	MKA	MB	S	18:00	2	2	C	61	0	G	
6/25/16	17:00	MKA	NBC	S	17:52	2	2	C	0	3	E	
6/25/16	17:00	RPM	SB	S	18:30	2	1	C	0	0	E	
6/25/16	17:00	RPM	SP	S	18:40	2	1	C	0	1	E	
6/25/16	17:00	EWW	WBN	GP	17:00	2	2	C	0	0	G	Camera shift, not covering near end of beach.
6/25/16	17:00	MKA	WM	GP	17:00	2	2	C	0	0	E	
6/26/16	17:00	RPM	BC	S	17:09	1	0	C	0	1	E	
6/26/16	17:00	RPM	CG	S	17:06	1	0	C	0	1	E	
6/26/16	17:00	MKA	FB	S	17:10	2	1	C	55	0	E	
6/26/16	17:00	MKA	FP	S	17:38	2	1	C	0	0	E	
6/26/16	17:00	RPM	FR	S	17:15	1	0	C	1	0	E	
6/26/16	17:00	RPM	MB	S	17:30	1	0	C	52	2	G	
6/26/16	17:00	RPM	NBC	S	17:25	1	0	C	0	1	E	
6/26/16	17:00	MKA	SB	S	17:41	2	1	C	0	1	E	
6/26/16	17:00	MKA	SP	S	17:52	2	1	C	0	1	E	
6/26/16	17:00	EWW	WBN	GP	17:00	2	1	C	0	0	G	Camera shift, not covering near end of beach.
6/26/16	17:00	MKA	WM	GP	17:00	2	1	C	0	0	E	
6/27/16	14:00	MKA	BC	S	14:36	2	1	C	0	0	E	
6/27/16	14:00	MKA	CG	S	14:18	2	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
6/27/16	14:00	BMH	FB	S	14:14	2	0	C	17	3	E	
6/27/16	14:00	BMH	FP	S	14:27	2	0	C	0	0	E	
6/27/16	14:00	MKA	FR	S	14:45	2	1	C	1	0	E	
6/27/16	14:00	MKA	MB	S	15:03	2	1	C	57	0	G	Walrus all on dragon tip
6/27/16	14:00	MKA	NBC	S	14:58	2	1	C	0	0	E	
6/27/16	14:00	BMH	SB	S	14:30	2	0	C	0	0	E	
6/27/16	14:00	BMH	SP	S	14:38	2	1	C	1	0	E	
6/27/16	14:00	EWW	WBN	GP	14:00	1	1	C	0	0	G	Camera shift, not covering near end of beach.
6/27/16	14:00	MKA	WM	GP	14:00	1	1	C	0	0	E	
6/28/16	17:00	BMH	BC	S	17:52	2	0	C	0	0	E	
6/28/16	17:00	BMH	CG	S	18:00	2	1	C	0	0	E	
6/28/16	17:00	MKA	FB	S	17:25	2	1	C	6	1	E	
6/28/16	17:00	MKA	FP	S	17:21	2	1	C	0	0	E	
6/28/16	17:00	BMH	FR	S	17:50	2	0	C	2	1	E	
6/28/16	17:00	BMH	MB	S	17:14	2	0	C	36	3	G	
6/28/16	17:00	BMH	NBC	S	17:40	2	0	C	0	1	E	
6/28/16	17:00	MKA	SB	S	17:17	2	1	C	0	1	E	
6/28/16	17:00	MKA	SP	S	17:13	2	1	C	0	0	E	
6/28/16	17:00	EWW	WBN	GP	17:00	1	0	C	0	0	G	Camera shift, not covering near end of beach.
6/28/16	17:00	DEJ	WM	O	12:45	1	1	C	0	0	E	
6/29/16	17:00	MKA	BC	S	16:56	3	2	C	0	0	E	
6/29/16	17:00	MKA	CG	S	16:52	3	2	C	0	1	E	
6/29/16	17:00	BMH	FB	S	17:52	2	0	C	21	0	E	
6/29/16	17:00	BMH	FP	S	17:48	2	0	C	0	0	E	
6/29/16	17:00	MKA	FR	S	17:14	3	2	C	0	0	E	
6/29/16	17:00	MKA	MB	S	17:29	3	2	C	28	0	G	
6/29/16	17:00	MKA	NBC	S	17:26	3	2	C	0	1	E	
6/29/16	17:00	BMH	SB	S	17:44	2	0	C	0	0	E	
6/29/16	17:00	BMH	SP	S	17:39	2	1	C	0	0	E	
6/29/16	17:00	EWW	WBN	GP	17:00	1	0	C	0	0	G	Camera shift, not covering near end of beach.
6/29/16	17:00	MKA	WM	GP	17:00	1	0	C	0	0	E	
6/30/16	14:00	DEJ	BC	S	14:50	1	0	C	0	0	E	
6/30/16	14:00	DEJ	CG	S	14:46	1	0	C	0	0	E	
6/30/16	14:00	MKA	FB	S	15:20	1	1	C	20	2	E	
6/30/16	14:00	MKA	FP	S	15:38	1	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
6/30/16	14:00	DEJ	FR	S	14:59	1	0	C	2	0	E	
6/30/16	14:00	DEJ	MB	S	15:16	1	0	C	57	1	G	
6/30/16	14:00	DEJ	NBC	S	15:13	1	0	C	0	0	E	
6/30/16	14:00	MKA	SB	S	15:41	1	1	C	0	0	E	
6/30/16	14:00	MKA	SP	S	15:51	1	1	C	0	0	E	
6/30/16	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	Camera shift, not covering near end of beach.
6/30/16	14:00	MKA	WM	GP	14:00	1	0	C	0	0	E	
7/1/16	9:00	BMH	BC	S	9:44	4	2	C	0	0	E	
7/1/16	9:00	BMH	CG	S	9:42	4	2	C	0	0	E	
7/1/16	9:00	DEJ	FB	S	10:01	3	1	C	23	2	E	
7/1/16	9:00	DEJ	FP	S	9:58	3	1	C	0	0	E	
7/1/16	9:00	BMH	FR	S	9:52	4	2	C	1	0	E	
7/1/16	9:00	BMH	MB	S	9:59	4	2	C	15	0	G	
7/1/16	9:00	BMH	NBC	S	9:56	4	2	C	0	0	E	
7/1/16	9:00	DEJ	SB	S	9:54	3	1	C	0	0	E	
7/1/16	9:00	DEJ	SP	S	9:50	3	1	C	0	0	E	
7/1/16	9:00	EWW	WBN	GP	9:00	3	2	C	0	0	G	Camera shift, not covering near end of beach.
7/1/16	9:00	MKA	WM	GP	9:00	3	3	C	0	0	E	
7/2/16	9:00	MKA	BC	S	9:18	2	2	C	0	0	E	
7/2/16	9:00	MKA	CG	S	9:10	2	2	C	0	0	E	
7/2/16	9:00	BMH	FB	S	9:11	3	1	C	14	0	E	
7/2/16	9:00	BMH	FP	S	9:18	3	1	C	0	0	E	
7/2/16	9:00	MKA	FR	S	9:26	2	2	C	1	0	E	
7/2/16	9:00	MKA	MB	S	9:45	2	2	C	20	0	G	
7/2/16	9:00	MKA	NBC	S	9:35	2	2	C	0	0	E	
7/2/16	9:00	BMH	SB	S	9:20	3	1	C	0	0	E	
7/2/16	9:00	BMH	SP	S	9:25	3	1	C	0	0	E	
7/2/16	9:00	EWW	WBN	GP	9:00	3	3	C	0	0	G	Camera shift, not covering near end of beach.
7/2/16	9:00	MKA	WM	GP	9:00	3	3	C	0	0	E	
7/3/16	17:00	DEJ	BC	S	19:08	3	1	C	0	0	E	
7/3/16	17:00	DEJ	CG	S	19:13	3	1	C	0	0	E	
7/3/16	17:00	MKA	FB	S	16:59	3	2	C	0	0	E	
7/3/16	17:00	MKA	FP	S	17:06	3	2	C	0	0	E	
7/3/16	17:00	DEJ	FR	S	19:06	3	1	C	1	0	E	
7/3/16	17:00	DEJ	MB	S	18:56	3	1	C	18	0	G	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/3/16	17:00	DEJ	NBC	S	19:01	3	1	C	0	0	E	
7/3/16	17:00	MKA	SB	S	17:09	3	2	C	1	0	E	
7/3/16	17:00	MKA	SP	S	17:14	3	2	C	0	0	E	
7/3/16	17:00	EWW	WBN	GP	17:00	3	3	C	0	0	G	Camera shift, not covering near end of beach.
7/3/16	17:00	DEJ	WM	S	16:25	3	2	C	0	0	E	
7/4/16	14:00	MKA	BC	S	14:17	2	1	C	0	0	E	
7/4/16	14:00	MKA	CG	S	14:14	2	1	C	0	0	E	
7/4/16	14:00	BMH	FB	S	14:15	1	1	C	1	1	E	
7/4/16	14:00	BMH	FP	S	14:25	1	1	C	0	0	E	
7/4/16	14:00	MKA	FR	S	14:27	2	1	C	2	0	E	
7/4/16	14:00	MKA	MB	S	14:36	2	1	C	20	0	G	
7/4/16	14:00	MKA	NBC	S	14:28	2	1	C	0	0	E	
7/4/16	14:00	BMH	SB	S	14:29	1	1	C	0	0	E	
7/4/16	14:00	BMH	SP	S	14:33	1	1	C	0	0	E	
7/4/16	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	Camera shift, not covering near end of beach.
7/4/16	14:00	MKA	WM	GP	14:00	2	2	C	0	0	E	
7/5/16	14:00	BMH	BC	S	14:36	1	0	C	0	0	E	
7/5/16	14:00	BMH	CG	S	14:34	1	0	C	0	0	E	
7/5/16	14:00	MKA	FB	S	13:42	1	1	C	1	1	E	
7/5/16	14:00	MKA	FP	S	13:57	1	1	C	0	0	E	
7/5/16	14:00	BMH	FR	S	14:47	1	0	C	3	0	E	
7/5/16	14:00	BMH	MB	S	14:58	1	0	C	40	1	G	
7/5/16	14:00	BMH	NBC	S	14:55	1	0	C	0	0	E	
7/5/16	14:00	MKA	SB	S	14:01	1	1	C	0	0	E	
7/5/16	14:00	MKA	SP	S	14:12	1	1	C	0	0	E	
7/5/16	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	Camera shift, not covering near end of beach.
7/5/16	14:00	MKA	WM	GP	14:00	2	2	C	0	0	E	
7/6/16	9:00	MKA	BC	S	9:21	2	1	C	0	0	E	
7/6/16	9:00	MKA	CG	S	9:18	2	1	C	0	0	E	
7/6/16	9:00	BMH	FB	S	9:18	2	0	C	11	2	E	
7/6/16	9:00	BMH	FP	S	9:24	2	0	C	0	0	E	
7/6/16	9:00	MKA	FR	S	9:29	2	1	C	2	0	E	
7/6/16	9:00	MKA	MB	S	9:37	2	1	P	20	0	P	
7/6/16	9:00	MKA	NBC	S	9:31	2	1	C	0	0	E	
7/6/16	9:00	BMH	SB	S	9:27	2	0	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/6/16	9:00	BMH	SP	S	9:29	2	0	C	0	0	E	
7/6/16	9:00	EWW	WBN	GP	9:00	2	2	C	0	0	G	Camera shift, not covering near end of beach.
7/6/16	9:00	MKA	WM	GP	9:00	2	2	C	0	0	E	
7/7/16	17:00	DEJ	BC	S	16:41	2	1	C	0	0	E	
7/7/16	17:00	DEJ	CG	S	16:52	2	1	C	0	0	E	
7/7/16	17:00	MKA	FB	S	16:30	2	1	C	27	0	E	
7/7/16	17:00	MKA	FP	S	17:29	2	1	C	0	0	E	
7/7/16	17:00	DEJ	FR	S	16:40	2	1	C	0	0	E	
7/7/16	17:00	DEJ	MB	S	16:18	3	1	C	28	1	G	Plane flew "over the dragon's tail at 9:45". See disturbance notes.
7/7/16	17:00	DEJ	NBC	S	16:33	2	1	C	0	0	E	
7/7/16	17:00	MKA	SB	S	17:32	2	1	C	3	0	E	
7/7/16	17:00	MKA	SP	S	17:38	2	1	C	0	0	E	
7/7/16	17:00	EWW	WBN	GP	17:00	4	2	C	0	0	G	Camera shift, not covering near end of beach.
7/7/16	17:00	DEJ	WM	S	14:13	4	2	C	0	0	E	
7/8/16	17:00	MKA	BC	S	19:16	2	1	C	0	0	E	
7/8/16	17:00	MKA	CG	S	19:21	2	1	C	0	0	E	
7/8/16	17:00	DEJ	FB	S	16:52	1	0	C	31	0	E	
7/8/16	17:00	DEJ	FP	S	17:02	1	0	C	0	0	E	
7/8/16	17:00	MKA	FR	S	19:15	2	1	C	0	0	E	
7/8/16	17:00	MKA	MB	S	18:30	2	1	C	59	2	G	
7/8/16	17:00	MKA	NBC	S	18:50	2	1	C	0	0	E	
7/8/16	17:00	DEJ	SB	S	17:05	1	0	C	1	0	E	
7/8/16	17:00	DEJ	SP	S	17:10	1	0	C	0	0	E	
7/8/16	17:00	EWW	WBN	GP	17:00	2	2	C	0	0	G	Camera shift, not covering near end of beach.
7/8/16	17:00	MKA	WM	S	17:00	2	3	C	0	0	E	
7/9/16	14:00	DEJ	BC	S	14:32	3	1	C	0	0	E	
7/9/16	14:00	DEJ	CG	S	14:29	3	1	C	0	0	E	
7/9/16	14:00	MKA	FB	S	14:25	2	1	C	11	0	E	
7/9/16	14:00	MKA	FP	S	14:37	2	1	C	0	0	E	
7/9/16	14:00	DEJ	FR	S	14:38	3	1	C	1	0	E	
7/9/16	14:00	DEJ	MB	S	14:49	3	1	C	33	0	G	
7/9/16	14:00	DEJ	NBC	S	14:45	3	1	C	0	0	E	
7/9/16	14:00	MKA	SB	S	14:41	2	1	C	0	0	E	
7/9/16	14:00	MKA	SP	S	14:46	2	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/9/16	14:00	EWW	WBN	GP	14:00	3	1	C	0	0	G	Camera shift, not covering near end of beach.
7/9/16	14:00	RPM	WM	GP	14:00	3	2	C	0	0	E	
7/10/16	9:00	DEJ	BC	S	9:42	4	2	C	0	0	E	
7/10/16	9:00	DEJ	CG	S	9:39	4	1	C	0	0	E	
7/10/16	9:00	BMH	FB	S	9:31	3	1	C	5	1	E	
7/10/16	9:00	BMH	FP	S	9:37	3	1	C	0	0	E	
7/10/16	9:00	DEJ	FR	S	9:49	4	2	C	0	0	E	
7/10/16	9:00	DEJ	MB	S	10:01	4	2	C	1	0	G	
7/10/16	9:00	DEJ	NBC	S	9:57	4	2	C	0	2	E	
7/10/16	9:00	BMH	SB	S	9:40	3	1	C	0	0	E	
7/10/16	9:00	BMH	SP	S	9:44	3	1	C	0	0	E	
7/10/16	9:00	EWW	WBN	GP	9:00	4	3	C	0	0	G	Camera shift, not covering near end of beach.
7/10/16	9:00	RPM	WM	GP	9:00	4	3	C	0	0	E	
7/11/16	14:00	BMH	BC	S	14:44	4	2	C	0	0	E	
7/11/16	14:00	BMH	CG	S	14:42	4	2	C	0	0	E	
7/11/16	14:00	MKA	FB	S	14:50	2	1	C	15	0	E	
7/11/16	14:00	MKA	FP	S	15:18	2	1	C	0	0	E	
7/11/16	14:00	BMH	FR	S	14:52	4	2	C	0	0	E	
7/11/16	14:00	BMH	MB	S	15:02	4	1	C	5	0	G	
7/11/16	14:00	BMH	NBC	S	14:59	4	2	C	0	0	E	
7/11/16	14:00	MKA	SB	S	15:23	2	1	C	5	0	E	
7/11/16	14:00	MKA	SP	S	15:35	2	1	C	0	0	E	
7/11/16	14:00	EWW	WBN	GP	14:00	4	1	C	0	0	G	Camera shift, not covering near end of beach.
7/11/16	14:00	BMH	WM	S	16:01	4	2	C	0	0	E	
7/12/16	17:00	MKA	BC	S	17:35	2	1	C	0	1	E	
7/12/16	17:00	MKA	CG	S	17:20	2	1	C	0	0	E	
7/12/16	17:00	DEJ	FB	S	17:22	3	0	C	18	0	E	
7/12/16	17:00	DEJ	FP	S	17:19	3	0	C	0	1	E	
7/12/16	17:00	MKA	FR	S	17:48	2	1	C	0	0	E	
7/12/16	17:00	MKA	MB	S	18:00	2	1	C	22	0	G	
7/12/16	17:00	MKA	NBC	S	17:55	2	1	C	0	0	E	
7/12/16	17:00	DEJ	SB	S	17:13	2	0	C	4	1	E	
7/12/16	17:00	DEJ	SP	S	17:10	2	0	C	0	0	E	
7/12/16	17:00	EWW	WBN	GP	17:00	2	0	C	0	0	G	Camera shift, not covering near end of beach.

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/12/16	17:00	RPM	WM	GP	17:00	2	1	C	0	0	E	
7/13/16	9:00	BMH	BC	S	9:12	2	1	C	0	0	E	
7/13/16	9:00	BMH	CG	S	9:10	2	1	C	0	0	E	
7/13/16	9:00	MKA	FB	S	9:26	2	2	C	9	0	E	
7/13/16	9:00	MKA	FP	S	9:39	2	2	C	0	0	E	
7/13/16	9:00	BMH	FR	S	9:18	2	1	C	0	0	E	
7/13/16	9:00	BMH	MB	S	9:27	2	1	C	29	0	G	
7/13/16	9:00	BMH	NBC	S	9:25	2	1	C	0	0	E	
7/13/16	9:00	MKA	SB	S	9:44	2	2	C	0	0	E	
7/13/16	9:00	MKA	SP	S	9:55	2	2	C	0	0	E	
7/13/16	9:00	EWW	WBN	GP	9:00	2	0	C	0	0	G	Camera shift, not covering near end of beach.
7/13/16	9:00	RPM	WM	GP	9:00	2	1	C	0	0	E	
7/14/16	17:00	MKA	BC	S	17:28	2	2	C	0	0	E	
7/14/16	17:00	MKA	CG	S	17:20	2	2	C	0	0	E	
7/14/16	17:00	BMH	FB	S	17:35	2	2	C	27	0	E	
7/14/16	17:00	BMH	FP	S	17:33	2	2	C	0	0	E	
7/14/16	17:00	MKA	FR	S	17:34	2	2	C	0	0	E	
7/14/16	17:00	MKA	MB	S	17:45	2	2	C	41	1	G	
7/14/16	17:00	MKA	NBC	S	17:36	2	2	C	0	0	E	
7/14/16	17:00	BMH	SB	S	17:24	2	2	C	0	0	E	
7/14/16	17:00	BMH	SP	S	17:21	2	2	C	0	0	E	
7/14/16	17:00	EWW	WBN	GP	17:00	1	0	C	0	0	G	Camera shift, not covering near end of beach.
7/14/16	17:00	RPM	WM	GP	17:00	1	0	C	0	0	E	
7/15/16	17:00	BMH	BC	S	17:06	4	1	C	0	0	E	
7/15/16	17:00	BMH	CG	S	17:04	4	1	C	0	0	E	
7/15/16	17:00	MKA	FB	S	17:25	4	2	C	12	0	E	
7/15/16	17:00	MKA	FP	S	17:40	4	2	C	0	0	E	
7/15/16	17:00	BMH	FR	S	17:15	3	1	C	0	0	E	
7/15/16	17:00	BMH	MB	S	17:23	3	1	C	25	1	G	
7/15/16	17:00	BMH	NBC	S	17:20	3	0	C	0	0	E	
7/15/16	17:00	MKA	SB	S	17:45	4	2	C	0	0	E	
7/15/16	17:00	MKA	SP	S	17:51	4	2	C	0	0	E	
7/15/16	17:00	EWW	WBN	GP	17:00	1	1	C	0	0	G	Camera shift, not covering near end of beach.
7/15/16	17:00	RPM	WM	GP	17:00	1	1	C	0	0	E	
7/16/16	14:00	MKA	BC	S	14:25	1	0	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/16/16	14:00	MKA	CG	S	14:15	1	0	C	0	0	E	
7/16/16	14:00	BMH	FB	S	14:31	1	1	C	12	1	E	
7/16/16	14:00	BMH	FP	S	14:28	1	1	C	0	0	E	
7/16/16	14:00	MKA	FR	S	14:34	1	0	C	3	1	E	
7/16/16	14:00	MKA	MB	S	14:48	1	0	C	25	2	G	
7/16/16	14:00	MKA	NBC	S	14:45	1	0	C	0	0	E	
7/16/16	14:00	BMH	SB	S	14:21	1	1	C	0	0	E	
7/16/16	14:00	BMH	SP	S	14:18	1	1	C	0	0	E	Carcass seen floating
7/16/16	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	Camera shift, not covering near end of beach.
7/16/16	14:00	RPM	WM	GP	14:00	1	0	C	0	0	E	
7/17/16	9:00	DEJ	BC	S	9:39	1	1	C	0	0	E	
7/17/16	9:00	DEJ	CG	S	9:34	1	1	C	0	0	E	
7/17/16	9:00	MKA	FB	S	9:30	1	1	C	16	0	E	
7/17/16	9:00	MKA	FP	S	9:47	1	1	C	0	0	E	
7/17/16	9:00	DEJ	FR	S	9:50	1	1	C	2	0	E	
7/17/16	9:00	DEJ	MB	S	10:08	1	0	C	14	4	E	Carcass on Main Beach
7/17/16	9:00	DEJ	NBC	S	10:03	1	1	C	0	2	E	
7/17/16	9:00	MKA	SB	S	9:50	1	1	C	0	0	E	
7/17/16	9:00	MKA	SP	S	9:55	1	1	C	0	0	E	
7/17/16	9:00	EWW	WBN	GP	9:00	2	1	P	0	0	G	Camera shift, not covering near end of beach.
7/17/16	9:00	BMH	WM	S	13:20	2	1	C	0	0	E	
7/18/16	14:00	MKA	BC	S	14:30	3	2	C	0	0	E	
7/18/16	14:00	MKA	CG	S	14:22	3	2	C	0	0	E	
7/18/16	14:00	BMH	FB	S	14:13	3	1	C	36	0	E	
7/18/16	14:00	BMH	FP	S	14:30	3	1	C	0	0	E	
7/18/16	14:00	MKA	FR	S	14:33	3	2	C	0	0	E	
7/18/16	14:00	MKA	MB	S	14:50	3	2	C	0	0	E	
7/18/16	14:00	MKA	NBC	S	14:46	3	2	C	0	0	E	
7/18/16	14:00	BMH	SB	S	14:33	3	1	C	0	0	E	
7/18/16	14:00	BMH	SP	S	14:35	3	1	C	0	0	E	
7/18/16	14:00	EWW	WBN	GP	14:00	3	3	P	0	0	G	Camera shift, not covering near end of beach.
7/18/16	14:00	RPM	WM	GP	14:00	3	3	C	0	0	E	
7/19/16	9:00	BMH	BC	S	9:17	3	2	C	0	0	E	
7/19/16	9:00	BMH	CG	S	9:15	3	2	C	0	0	E	
7/19/16	9:00	MKA	FB	S	9:22	3	1	C	50	2	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/19/16	9:00	MKA	FP	S	9:40	3	1	C	0	0	E	
7/19/16	9:00	BMH	FR	S	9:23	3	2	C	0	0	E	
7/19/16	9:00	BMH	MB	S	9:30	3	2	C	4	0	G	
7/19/16	9:00	BMH	NBC	S	9:28	3	2	C	0	0	E	
7/19/16	9:00	MKA	SB	S	9:44	3	1	C	0	0	E	
7/19/16	9:00	MKA	SP	S	9:55	3	1	C	0	0	E	
7/19/16	9:00	EWW	WBN	GP	9:00	3	2	P	0	0	G	Camera shift, not covering near end of beach.
7/19/16	9:00	BMH	WM	O	17:45	3	2	C	0	0	E	
7/20/16	17:00	MKA	BC	S	17:30	3	1	C	0	0	E	
7/20/16	17:00	MKA	CG	S	17:25	3	1	C	0	0	E	
7/20/16	17:00	BMH	FB	S	17:20	3	1	C	47	4	E	
7/20/16	17:00	BMH	FP	S	17:28	3	1	C	0	0	E	
7/20/16	17:00	MKA	FR	S	17:36	3	1	C	0	0	E	
7/20/16	17:00	MKA	MB	S	17:49	3	1	C	4	0	G	
7/20/16	17:00	MKA	NBC	S	17:45	3	1	C	0	0	E	
7/20/16	17:00	BMH	SB	S	17:31	3	1	C	0	0	E	
7/20/16	17:00	BMH	SP	S	17:45	3	1	C	0	0	E	
7/20/16	17:00	EWW	WBN	GP	17:00	3	3	P	0	0	G	Camera shift, not covering near end of beach.
7/20/16	17:00	MKA	WM	GP	17:00	3	3	C	0	0	E	
7/21/16	14:00	MKA	BC	S	14:35	2	1	C	0	0	E	
7/21/16	14:00	MKA	CG	S	14:30	2	1	C	0	0	E	
7/21/16	14:00	RPM	FB	S	14:18	2	1	C	39	0	E	
7/21/16	14:00	RPM	FP	S	14:29	2	1	C	0	0	E	
7/21/16	14:00	MKA	FR	S	14:42	2	1	C	0	0	E	
7/21/16	14:00	MKA	MB	S	15:04	2	1	C	5	1	G	
7/21/16	14:00	MKA	NBC	S	14:57	2	1	C	0	0	E	
7/21/16	14:00	RPM	SB	S	14:32	2	1	C	0	0	E	
7/21/16	14:00	RPM	SP	S	14:39	2	1	C	0	0	E	
7/21/16	14:00	EWW	WBN	GP	14:00		3	C	0	0	G	Camera shift, not covering near end of beach.
7/21/16	14:00	RPM	WM	GP	14:00	3	3	C	0	0	E	
7/22/16	9:00	RPM	BC	S	9:17	3	1	C	0	1	E	
7/22/16	9:00	RPM	CG	S	9:12	3	1	C	0	0	E	
7/22/16	9:00	MKA	FB	S	9:54	3	1	C	50	3	E	
7/22/16	9:00	MKA	FP	S	9:45	3	1	C	0	0	E	
7/22/16	9:00	RPM	FR	S	9:23	3	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/22/16	9:00	RPM	MB	S	9:31	3	1	C	20	2	G	
7/22/16	9:00	RPM	NBC	S	9:29	3	1	C	0	0	E	
7/22/16	9:00	MKA	SB	S	9:40	3	1	C	0	0	E	
7/22/16	9:00	MKA	SP	S	9:22	3	1	C	0	0	E	
7/22/16	9:00	EWW	WBN	GP	9:00	3	2	C	0	0	G	Camera shift, not covering near end of beach.
7/22/16	9:00	RPM	WM	GP	9:00	3	2	C	0	0	E	
7/23/16	9:00	MKA	BC	S	9:42	3	1	C	0	0	E	
7/23/16	9:00	MKA	CG	S	9:30	3	1	C	0	0	E	
7/23/16	9:00	RPM	FB	S	9:30	3	1	C	28	5	E	
7/23/16	9:00	RPM	FP	S	9:39	3	1	C	0	0	E	
7/23/16	9:00	MKA	FR	S	9:52	3	1	C	0	0	E	
7/23/16	9:00	MKA	MB	S	10:12	3	1	C	18	0	G	
7/23/16	9:00	MKA	NBC	S	10:10	3	1	C	0	0	E	
7/23/16	9:00	RPM	SB	S	9:41	3	1	C	0	1	E	
7/23/16	9:00	RPM	SP	S	9:47	3	1	C	0	2	E	
7/23/16	9:00	EWW	WBN	GP	9:00	3	3	C	0	0	G	Camera shift, not covering near end of beach.
7/23/16	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	
7/24/16	17:00	RPM	BC	S	17:22	3	1	C	0	0	E	
7/24/16	17:00	RPM	CG	S	17:18	3	1	C	0	0	E	
7/24/16	17:00	MKA	FB	S	16:41	3	1	C	32	2	E	
7/24/16	17:00	MKA	FP	S	16:49	3	1	C	0	0	E	
7/24/16	17:00	RPM	FR	S	17:30	3	1	C	0	0	E	
7/24/16	17:00	RPM	MB	S	17:40	3	1	C	27	0	G	
7/24/16	17:00	RPM	NBC	S	17:37	3	1	C	0	0	E	
7/24/16	17:00	MKA	SB	S	16:52	3	1	C	0	0	E	
7/24/16	17:00	MKA	SP	S	17:15	3	1	C	0	0	E	
7/24/16	17:00	EWW	WBN	GP	17:00	3	3	C	0	0	G	Camera shift, not covering near end of beach.
7/24/16	17:00	RPM	WM	GP	17:00	3	3	C	0	0	E	
7/25/16	9:00	MKA	BC	S	9:36	2	1	C	0	0	E	
7/25/16	9:00	MKA	CG	S	9:28	2	1	C	0	1	E	
7/25/16	9:00	RPM	FB	S	9:17	2	1	C	27	8	E	
7/25/16	9:00	RPM	FP	S	9:24	2	1	C	0	0	E	
7/25/16	9:00	MKA	FR	S	9:58	2	1	C	0	1	E	
7/25/16	9:00	MKA	MB	S	10:10	2	1	C	30	5	G	
7/25/16	9:00	MKA	NBC	S	10:05	2	1	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/25/16	9:00	RPM	SB	S	9:26	2	1	C	0	0	E	
7/25/16	9:00	RPM	SP	S	9:34	2	1	C	0	0	E	
7/25/16	9:00	EWW	WBN	GP	9:00	2	2	C	0	0	G	Camera shift, not covering near end of beach.
7/25/16	9:00	RPM	WM	GP	9:00	2	2	C	0	0	E	
7/26/16	17:00	RPM	BC	S	17:20	1	1	C	0	0	E	
7/26/16	17:00	RPM	CG	S	17:17	1	1	C	0	2	E	
7/26/16	17:00	MKA	FB	S	17:00	2	2	C	30	0	E	
7/26/16	17:00	MKA	FP	S	16:57	2	2	C	0	0	E	
7/26/16	17:00	RPM	FR	S	17:26	1	1	C	4	0	E	
7/26/16	17:00	RPM	MB	S	17:37	1	1	C	357	2	G	
7/26/16	17:00	RPM	NBC	S	17:34	1	1	C	0	0	E	
7/26/16	17:00	MKA	SB	S	16:50	2	2	C	26	0	E	
7/26/16	17:00	MKA	SP	S	16:43	2	2	C	0	0	E	
7/26/16	17:00	EWW	WBN	GP	17:00	1	1	C	0	0	G	Camera shift, not covering near end of beach.
7/26/16	17:00	RPM	WM	GP	17:00	1	1	C	1	0	E	
7/27/16	17:00	MKA	BC	S	17:31	1	0	C	0	1	E	
7/27/16	17:00	MKA	CG	S	17:10	1	0	C	0	2	E	
7/27/16	17:00	RPM	FB	S	17:17	1	0	C	71	2	E	
7/27/16	17:00	RPM	FP	S	17:29	1	0	C	0	0	E	
7/27/16	17:00	MKA	FR	S	17:44	1	0	C	3	1	E	
7/27/16	17:00	MKA	MB	S	18:00	1	0	C	216	12	G	
7/27/16	17:00	MKA	NBC	S	17:58	1	0	C	0	0	E	
7/27/16	17:00	RPM	SB	S	17:32	1	0	C	22	0	E	
7/27/16	17:00	RPM	SP	S	17:40	1	0	C	0	0	E	
7/27/16	17:00	EWW	WBN	GP	17:00	1	0	C	0	0	G	Camera shift, not covering near end of beach.
7/27/16	17:00	RPM	WM	GP	17:00	1	0	C	0	0	E	
7/28/16	9:00	RPM	BC	S	9:23	2	1	C	0	4	E	
7/28/16	9:00	RPM	CG	S	9:20	2	1	C	1	1	E	
7/28/16	9:00	MKA	FB	S	9:30	1	1	C	84	2	E	
7/28/16	9:00	MKA	FP	S	9:01	1	1	C	0	0	E	
7/28/16	9:00	RPM	FR	S	9:27	2	1	C	10	2	E	
7/28/16	9:00	RPM	MB	S	9:40	2	1	C	130	10	G	
7/28/16	9:00	RPM	NBC	S	9:35	2	1	C	0	3	E	
7/28/16	9:00	MKA	SB	S	9:54	1	1	C	66	1	E	
7/28/16	9:00	MKA	SP	S	10:18	1	1	C	0	1	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/28/16	9:00	EWW	WBN	GP	9:00	2	1	C	0	0	G	Camera shift, not covering near end of beach.
7/28/16	9:00	RPM	WM	GP	9:00	2	1	C	0	0	E	
7/29/16	14:00	MKA	BC	S	14:30	2	1	C	0	0	E	
7/29/16	14:00	MKA	CG	S	14:19	2	1	C	0	0	E	
7/29/16	14:00	RPM	FB	S	14:30	3	1	C	53	4	E	
7/29/16	14:00	RPM	FP	S	14:42	3	1	C	0	0	E	
7/29/16	14:00	MKA	FR	S	14:38	2	1	C	0	1	E	
7/29/16	14:00	MKA	MB	S	14:55	2	1	C	23	1	E	
7/29/16	14:00	MKA	NBC	S	14:51	2	1	C	0	0	E	
7/29/16	14:00	RPM	SB	S	14:45	3	1	C	7	1	E	
7/29/16	14:00	RPM	SP	S	14:54	3	1	C	0	0	E	
7/29/16	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	Camera shift, not covering near end of beach.
7/29/16	14:00	RPM	WM	GP	14:00	2	2	C	0	0	E	
7/30/16	17:00	RPM	BC	S	17:11	3	1	C	0	0	E	
7/30/16	17:00	RPM	CG	S	17:08	3	1	C	0	0	E	
7/30/16	17:00	MKA	FB	S	17:08	3	1	C	22	1	E	
7/30/16	17:00	MKA	FP	S	17:16	3	1	C	0	0	E	
7/30/16	17:00	RPM	FR	S	17:17	3	1	C	0	0	E	
7/30/16	17:00	RPM	MB	S	17:30	3	1	C	27	0	G	
7/30/16	17:00	RPM	NBC	S	17:26	3	1	C	0	0	E	
7/30/16	17:00	MKA	SB	S	17:19	3	1	C	0	0	E	
7/30/16	17:00	MKA	SP	S	17:30	3	1	C	0	0	E	
7/30/16	17:00	EWW	WBN	GP	17:00	3	3	C	0	0	G	Camera shift, not covering near end of beach.
7/30/16	17:00	RPM	WM	GP	17:00	3	3	C	0	0	E	
7/31/16	14:00	MKA	BC	S	14:36	2	1	C	0	0	E	
7/31/16	14:00	MKA	CG	S	14:30	2	1	C	0	0	E	
7/31/16	14:00	RPM	FB	S	14:17	2	1	C	4	0	E	
7/31/16	14:00	RPM	FP	S	14:29	2	1	C	0	0	E	
7/31/16	14:00	MKA	FR	S	14:48	2	1	C	0	2	E	
7/31/16	14:00	MKA	MB	S	15:02	2	1	C	1	1	G	
7/31/16	14:00	MKA	NBC	S	15:00	2	1	C	0	0	E	
7/31/16	14:00	RPM	SB	S	14:32	2	1	C	0	0	E	
7/31/16	14:00	RPM	SP	S	14:44	2	1	C	0	0	E	
7/31/16	14:00	EWW	WBN	GP	14:00	2	3	C	0	0	G	Camera shift, not covering near end of beach.

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
7/31/16	14:00	RPM	WM	S	14:00	2	3	C	0	0	E	
8/1/16	17:00	RPM	BC	S	17:13	2	1	C	0	0	E	
8/1/16	17:00	RPM	CG	S	17:09	2	1	C	0	0	E	
8/1/16	17:00	MKA	FB	S	17:10	2	1	C	66	1	E	
8/1/16	17:00	MKA	FP	S	17:26	2	1	C	0	0	E	
8/1/16	17:00	RPM	FR	S	17:18	2	1	C	0	0	E	
8/1/16	17:00	RPM	MB	S	17:28	2	1	C	0	0	E	
8/1/16	17:00	RPM	NBC	S	17:25	2	1	C	0	0	E	
8/1/16	17:00	MKA	SB	S	17:29	2	1	C	0	0	E	
8/1/16	17:00	MKA	SP	S	17:40	2	1	C	0	0	E	
8/1/16	17:00	EWW	WBN	GP	17:00	2	1	C	0	0	G	Camera shift, not covering near end of beach.
8/1/16	17:00	RPM	WM	GP	17:00	2	2	C	0	0	E	
8/2/16	9:00	MKA	BC	S	9:32	3	1	C	0	0	E	
8/2/16	9:00	MKA	CG	S	9:20	3	1	C	0	0	E	
8/2/16	9:00	RPM	FB	S	9:13	3	1	C	91	2	E	
8/2/16	9:00	RPM	FP	S	9:26	3	1	C	0	0	E	
8/2/16	9:00	MKA	FR	S	9:42	3	1	C	0	0	E	
8/2/16	9:00	MKA	MB	S	9:55	3	1	C	70	4	G	
8/2/16	9:00	MKA	NBC	S	9:52	3	1	C	0	0	E	
8/2/16	9:00	RPM	SB	S	9:28	3	1	C	0	0	E	
8/2/16	9:00	RPM	SP	S	9:37	3	1	C	0	0	E	
8/2/16	9:00	EWW	WBN	GP	9:00	3	2	C	0	0	G	Camera shift, not covering near end of beach.
8/2/16	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	
8/3/16	17:00	RPM	BC	S	17:40	2	1	C	0	0	E	
8/3/16	17:00	RPM	CG	S	17:37	2	1	C	0	0	E	
8/3/16	17:00	MKA	FB	S	17:45	2	1	C	83	3	E	
8/3/16	17:00	MKA	FP	S	18:03	2	1	C	0	0	E	
8/3/16	17:00	RPM	FR	S	17:49	2	1	C	0	0	E	
8/3/16	17:00	RPM	MB	S	18:00	2	1	C	102	0	G	
8/3/16	17:00	RPM	NBC	S	17:57	2	1	C	0	0	E	
8/3/16	17:00	MKA	SB	S	18:07	2	1	C	0	1	E	
8/3/16	17:00	MKA	SP	S	18:16	2	1	C	0	0	E	
8/3/16	17:00	EWW	WBN	GP	17:00	2	1	C	0	0	G	Camera shift, not covering near end of beach.
8/3/16	17:00	RPM	WM	GP	17:00	2	1	C	0	0	E	
8/4/16	14:00	MKA	BC	S	14:36	3	1	C	0	1	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
8/4/16	14:00	MKA	CG	S	14:30	3	1	C	0	0	E	
8/4/16	14:00	RPM	FB	S	14:20	3	1	C	4	2	E	
8/4/16	14:00	RPM	FP	S	14:32	3	1	C	0	0	E	
8/4/16	14:00	MKA	FR	S	14:45	3	1	C	2	1	E	
8/4/16	14:00	MKA	MB	S	14:59	3	1	C	65	2	G	
8/4/16	14:00	MKA	NBC	S	14:56	3	1	C	0	1	E	
8/4/16	14:00	RPM	SB	S	14:35	3	1	C	0	0	E	
8/4/16	14:00	RPM	SP	S	14:44	3	1	C	0	0	E	
8/4/16	14:00	RPM	WM	GP	14:00	3	2	C	0	0	E	
8/5/16	17:00	MKA	BC	S	17:12	3	2	C	1	1	E	
8/5/16	17:00	MKA	CG	S	17:07	3	2	C	0	0	E	
8/5/16	17:00	RPM	FB	S	17:05	4	3	C	0	0	E	
8/5/16	17:00	RPM	FP	S	17:01	4	3	C	0	1	E	
8/5/16	17:00	MKA	FR	S	17:24	3	2	C	2	0	E	
8/5/16	17:00	MKA	MB	S	17:36	3	2	P	63	0	P	
8/5/16	17:00	MKA	NBC	S	17:31	3	2	C	0	0	E	
8/5/16	17:00	RPM	SB	S	16:55	4	3	C	0	0	E	
8/5/16	17:00	RPM	SP	S	16:50	4	3	C	0	0	E	
8/5/16	17:00	RPM	WM	GP	17:00	3	2	C	0	0	E	
8/6/16	14:00	MKA	BC	S	16:30	3	1	C	0	0	E	
8/6/16	14:00	MKA	CG	S	16:20	3	1	C	0	0	E	
8/6/16	14:00	RPM	FB	S	16:23	3	2	C	0	0	E	
8/6/16	14:00	RPM	FP	S	16:31	3	2	C	0	0	E	
8/6/16	14:00	MKA	FR	S	16:44	3	1	C	0	0	E	
8/6/16	14:00	MKA	MB	S	16:58	3	1	C	57	2	G	
8/6/16	14:00	MKA	NBC	S	16:55	3	1	C	0	0	E	
8/6/16	14:00	RPM	SB	S	16:33	3	2	C	0	0	E	
8/6/16	14:00	RPM	SP	S	16:43	3	2	C	0	0	E	
8/6/16	14:00	RPM	WM	GP	14:00	3	3	C	0	0	E	
8/7/16	17:00	RPM	BC	S	17:11	2	2	C	0	0	E	
8/7/16	17:00	RPM	CG	S	17:07	2	2	C	0	0	E	
8/7/16	17:00	MKA	FB	S	16:08	2	2	C	0	0	E	
8/7/16	17:00	MKA	FP	S	16:18	2	2	C	0	0	E	
8/7/16	17:00	RPM	FR	S	17:19	2	2	C	0	0	E	
8/7/16	17:00	RPM	MB	S	17:32	2	2	C	16	0	G	
8/7/16	17:00	RPM	NBC	S	17:27	2	2	C	0	0	E	
8/7/16	17:00	MKA	SB	S	16:21	2	2	C	0	0	E	
8/7/16	17:00	MKA	SP	S	16:35	2	2	C	0	0	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
8/7/16	17:00	RPM	WM	GP	17:00	3	3	C	0	0	E	
8/8/16	9:00	MKA	BC	S	9:20	2	1	C	0	0	E	
8/8/16	9:00	MKA	CG	S	9:12	2	1	C	0	0	E	
8/8/16	9:00	RPM	FB	S	9:20	2	1	C	0	3	E	
8/8/16	9:00	RPM	FP	S	9:30	2	1	C	0	0	E	
8/8/16	9:00	MKA	FR	S	9:29	2	1	C	0	0	E	
8/8/16	9:00	MKA	MB	S	9:39	2	1	C	27	1	G	
8/8/16	9:00	MKA	NBC	S	9:36	2	1	C	0	0	E	
8/8/16	9:00	RPM	SB	S	9:32	2	1	C	0	0	E	
8/8/16	9:00	RPM	SP	S	9:45	2	1	C	0	0	E	
8/8/16	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	
8/9/16	9:00	RPM	BC	S	9:34	2	1	C	0	0	E	
8/9/16	9:00	RPM	CG	S	9:29	2	1	C	0	0	E	
8/9/16	9:00	MKA	FB	S	9:56	2	1	C	0	0	E	
8/9/16	9:00	MKA	FP	S	10:09	2	1	C	0	0	E	
8/9/16	9:00	RPM	FR	S	9:40	2	1	C	0	0	E	
8/9/16	9:00	RPM	MB	S	9:50	2	1	C	18	3	G	
8/9/16	9:00	RPM	NBC	S	9:47	2	1	C	0	1	E	
8/9/16	9:00	MKA	SB	S	10:12	2	1	C	0	0	E	
8/9/16	9:00	MKA	SP	S	10:22	2	1	C	0	0	E	
8/9/16	9:00	RPM	WM	S	11:00	2	1	C	0	0	E	
8/10/16	14:00	MKA	BC	S	14:33	2	0	C	0	0	E	
8/10/16	14:00	MKA	CG	S	14:25	2	0	C	0	0	E	
8/10/16	14:00	RPM	FB	S	14:14	1	0	C	0	0	E	
8/10/16	14:00	RPM	FP	S	14:23	1	0	C	0	1	E	
8/10/16	14:00	MKA	FR	S	14:43	2	0	C	0	0	E	
8/10/16	14:00	MKA	MB	S	14:58	2	0	C	20	9	G	
8/10/16	14:00	MKA	NBC	S	14:50	2	0	C	0	3	E	
8/10/16	14:00	RPM	SB	S	14:25	1	0	C	0	3	E	
8/10/16	14:00	RPM	SP	S	14:36	1	0	C	0	0	E	
8/10/16	14:00	RPM	WM	GP	14:00	2	1	C	0	0	E	
8/11/16	14:00	RPM	BC	S	14:04	1	0	C	0	0	E	
8/11/16	14:00	RPM	CG	S	14:00	1	0	C	0	0	E	
8/11/16	14:00	MKA	FB	S	14:56	1	1	C	0	0	E	
8/11/16	14:00	MKA	FP	S	14:53	1	1	C	0	0	E	
8/11/16	14:00	RPM	FR	S	14:11	1	0	C	0	0	E	
8/11/16	14:00	RPM	MB	S	14:23	1	0	C	56	3	G	
8/11/16	14:00	RPM	NBC	S	14:18	1	0	C	0	1	E	

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
8/11/16	14:00	MKA	SB	S	14:48	1	1	C	0	0	E	
8/11/16	14:00	MKA	SP	S	14:41	1	1	C	0	0	E	
8/11/16	14:00	RPM	WM	S	15:30	1	1	C	0	1	E	
8/12/16	9:00	MKA	BC	S	9:40	2	1	C	0	0	E	
8/12/16	9:00	MKA	CG	S	9:36	2	1	C	0	0	E	
8/12/16	9:00	RPM	FB	S	9:30	2	2	C	0	0	E	
8/12/16	9:00	RPM	FP	S	9:37	2	2	C	0	0	E	
8/12/16	9:00	MKA	FR	S	9:50	2	1	C	0	0	E	
8/12/16	9:00	MKA	MB	GP	10:55	2	1	C	112	0	G	Fog rolls in after photo
8/12/16	9:00	MKA	NBC	S	9:59	2	1	C	0	0	E	
8/12/16	9:00	RPM	SB	S	9:39	2	2	C	0	0	E	
8/12/16	9:00	RPM	SP	S	9:45	2	2	C	0	0	E	
8/12/16	9:00	RPM	WM	GP	9:00	2	2	C	0	0	E	
8/13/16	17:00	RPM	BC	S	16:40	3	3	C	0	0	E	
8/13/16	17:00	RPM	CG	S	16:37	3	2	C	0	0	E	
8/13/16	17:00	MKA	FB	S	17:03	3	2	C	0	0	E	
8/13/16	17:00	MKA	FP	S	16:56	3	2	C	0	0	E	
8/13/16	17:00	RPM	FR	S	16:47	3	3	C	0	0	E	
8/13/16	17:00	RPM	MB	S	19:05	3	3	P	41	0	G	
8/13/16	17:00	RPM	NBC	S	19:02	3	3	C	0	0	E	
8/13/16	17:00	MKA	SB	S	16:48	3	2	C	0	0	E	
8/13/16	17:00	MKA	SP	S	16:42	3	2	C	0	0	E	
8/13/16	17:00	RPM	WM	S	19:59	3	3	C	0	0	E	
8/14/16	9:00	MKA	BC	S	9:23	2	1	C	0	0	E	
8/14/16	9:00	MKA	CG	S	9:20	2	1	C	0	0	E	
8/14/16	9:00	RPM	FB	S	9:30	2	1	C	1	0	E	
8/14/16	9:00	RPM	FP	S	9:39	2	1	C	0	0	E	
8/14/16	9:00	MKA	FR	S	9:31	2	1	C	0	0	E	
8/14/16	9:00	MKA	MB	S	9:43	2	1	C	77	7	G	
8/14/16	9:00	MKA	NBC	S	9:40	2	1	C	0	3	E	
8/14/16	9:00	RPM	SB	S	9:41	2	1	C	0	0	E	
8/14/16	9:00	RPM	SP	S	9:50	2	1	C	0	0	E	
8/15/16	17:00	RPM	BC	O	8:33	2	1	C	0	0	E	
8/15/16	17:00	RPM	CG	O	8:31	2	1	C	0	0	E	
8/15/16	17:00	MKA	FB	O	9:21	2	1	C	0	0	E	
8/15/16	17:00	MKA	FP	O	9:28	2	1	C	0	0	E	
8/15/16	17:00	RPM	FR	O	8:39	2	1	C	0	0	E	
8/15/16	17:00	RPM	MB	O	11:15	2	1	C	60	0	P	From boat

Date	Sched time	Observ[a]	Beach[b]	Method[c]	Start time	BSS[d]	Beach cond.	Visibility[e]	Land count	Water count	Count quality[f]	Comments[g]
8/15/16	17:00	RPM	NBC	O	11:14	2	1	C	0	0	G	From boat
8/15/16	17:00	MKA	SB	O	9:30	2	1	C	0	0	E	
8/15/16	17:00	MKA	SP									No count

[a] BMH = Benjamin M. Histand; DEJ = Dianna E. Johnson; EWW = Edward E. Weiss; MKA = Margaret K. Archibald; NB = Neil Barten; RPM = Ryan P. Morrill.
[b] BC = Boat Cove; CG = Campground; FB = First Beach; FP = First Prime; FR = Flat Rock; MB = Main Beach; NBC = North Boat Cove; SB = Second Beach; SP = Second Prime; WBN = West Beach North; WM = West Main.
[c] A = aerial survey; GP = ground photo; O = opportunistic; S = field survey.
[d] BSS = Bering Sea State.
[e] C = clear; O = obscurred; P = partially obscurred.
[f] E = excellent; F = fair; G = good; N = no survey; P = poor.
[g] PAWA = Pacific walrus; TLC = time lapse camera.

Appendix C. Walrus monitoring count variability summary, Round Island, Alaska, 2016.

Date	Beach	Observer Count		Photo Count		Mean of all Counts	RPM Observer Difference from Photo Count or Mean Count	MKA Observer Difference from Photo Count or Mean Count
		RPM	MKA	RPM	MKA			
4/24/2016	MB	737		687		712	7.28%	
4/29/2016	WM	272	290		289	284	-4.11%	0.35%
5/1/2016	MB	520		553	560	544	-5.97%	
5/1/2016	WM	139	141		141	140	-0.95%	0.00%
5/2/2016	MB		586	675	681	647		-13.95%
5/4/2016	MB		337		332	335		1.51%
5/8/2016	MB	591	448		771	603	-2.04%	-41.89%
5/13/2016	MB	430		491		461	-12.42%	
5/15/2016	MB		800	824	820	815		-2.44%
5/16/2016	MB	987		854		921	15.57%	
5/17/2016	MB		444		425	435		4.47%
5/23/2016	MB		95		106	101		-10.38%
5/25/2016	MB		410		405	408		1.23%
6/2/2016	MB		162	155		159		4.52%
6/3/2016	MB	452		426		439	6.10%	
6/7/2016	MB		19		21	20		-9.52%
6/12/2016	MB	459			382	421	9.16%	
6/23/2016	MB		118		116	117		1.72%
6/25/2016	MB		61		67	64		-8.96%
7/26/2016	MB	359		347		353	3.46%	
7/27/2016	MB		228		222	225		2.70%
8/2/2016	MB		64		71	68		-9.86%
8/12/2016	MB		70		112	91		-37.50%

Beach: MB = Main Beach; WM = West Main.
Observers: RPM = Ryan P. Morrill; MKA = Margaret K. Archibald.

Appendix D. Anthropogenic and disturbance events, Round Island, Alaska, 2016.

Date	Start time	End time	Source ID[a]	Stimuli type A/V/O[b]	BMPs[c]/ regs violation	Closest approach (m)	Altitude (mAGL[d])	Beach ID[e]	Walrus # on beach	# Walrus disturbed	ND[f]	HR[g]	OR[h]	DS[i]
3/23/16	17:38	17:45	HEL	A/V	No	1,400	300	MB	250	0	250	0	0	0
3/23/16	17:38	17:45	HEL	A/V	No	1,500	300	WM	25+	0	25	0	0	0
3/23/16	21:15	21:24	HEL	A/V	No	1,400	300	MB	250	0	250	0	0	0
3/25/16	16:40	17:00	HEL	A/V	No	1,400	300	MB	282	0	282	0	0	0
3/25/16	18:57	19:04	HEL	A/V	No	1,400	300	MB	282	0	282	0	0	0
3/25/16	18:57	19:04	HEL	A/V	No		300	WM	68	0	68			0
3/25/16	20:26	20:35	HEL	A/V	No	1,400	300	MB	282	0	282	0	0	0
3/25/16	20:26	20:35	HEL	A/V	No		300	WM	68	0	68			0
3/26/16	16:00	16:07	HEL	A/V	No	1,400	300	MB	120	0	120	0	0	0
3/26/16	17:05	17:15	HEL	A/V	No	600	300	MB	120	30	120	0	0	30
3/26/16	17:05	17:15	HEL	A/V	No	600	300	WM	0	0	0	0	0	0
3/26/16	17:44	18:00	HEL	A/V	No	75	250	MB	90	90	0	0	0	90
3/26/16	18:25	18:35	HEL	A/V	No	75	250	MB	0	0	0	0	0	0
3/26/16	17:44	18:00	HEL	A/V	No		250	WM	0	0	0	0	0	0
3/26/16	18:25	18:35	HEL	A/V	No		250	WM	0	0	0	0	0	0
3/27/16	10:15	10:20	HEL	A/V	No	1,400	300	MB	9	0	9	0	0	0
3/29/16	19:30	19:40	HEL	A/V	No	1,400	300	MB	92	0	92	0	0	0
3/29/16	20:10	20:20	HEL	A/V	No	266	30	MB	92	92	0	0	0	92
3/29/16	20:10	20:20	HEL	A/V	No		30	WM	0	0	0	0	0	0
3/29/16	21:30	21:45	HEL	A/V	No	266	30	MB	0	0	0	0	0	0
3/31/16	10:45	10:55	HEL	A/V	No	1,400	300	MB	10	0	10	0	0	0
3/31/16	11:15	11:40	HEL	A/V	No	266	300	MB	10	10	0	0	0	10
3/31/16	11:15	11:40	HEL	A/V	No	150	300	WM	40	40	0	0	0	40
3/31/16	15:30	15:45	HEL	A/V	No	266	30	MB	0	0	0	0	0	0
3/31/16	16:15	16:25	HEL	A/V	No	266	30	MB	0	0	0	0	0	0
3/31/16	16:55	17:15	HEL	A/V	No	266	30	MB	0	0	0	0	0	0
3/31/16	15:30	15:45	HEL	A/V	No		30	WM	47	47	0		27	20
3/31/16	16:15	16:25	HEL	A/V	No		30	WM	43		43			0
3/31/16	16:55	17:15	HEL	A/V	No		30	WM	45		45			0
3/31/16	19:23	19:30	HEL	A/V	No	1,400	300	MB	0	0	0	0	0	0
4/1/16	9:00	9:05	HEL	A/V	No	1,400	300	MB	0	0	0	0	0	0
4/1/16	9:30	9:25	HEL	A/V	No	1,400	300	MB	0	0	0	0	0	0
4/20/16	17:02	17:12	HEL	A/V	No	1,400	300	MB	100	0	100	0	0	0
4/21/16	17:09	-	BOAT	A	No	7,408	0	MB	207	0	207	0	0	0
4/22/16	12:52	12:57	HEL	A/V	No	1,400	300	MB	370	0	370	0	0	0
4/22/16	14:14	14:19	HEL	A/V	No	1,400	300	MB	370	0	370	0	0	0
4/22/16	17:03	17:10	HEL	A/V	No	1,400	300	MB	370	0	370	0	0	0
4/26/16	13:20	13:35	HEL	A/V	No	2,400	300	MB	0	0	0	0	0	0

Date	Start time	End time	Source ID[a]	Stimuli type A/V/O[b]	BMPs[c]/ regs violation	Closest approach (m)	Altitude (mAGL[d])	Beach ID[e]	Walrus # on beach	# Walrus disturbed	ND[f]	HR[g]	OR[h]	DS[i]
4/26/16	13:20	13:35	HEL	A/V	No		300	WM	41	41	0	9	20	12
4/26/16	18:55	19:03	HEL	A/V	No	2,400	300	MB	0	0	0	0	0	0
4/26/16	18:55	19:03	HEL	A/V	No	2,400	300	WM	40	40	0	0	0	0
4/27/16	10:46	10:49	BOAT	A	No	7,408	0	MB	0	0	0	0	0	0
4/27/16	15:51	15:59	BOAT	A	No	7,223	0	MB	0	0	0	0	0	0
5/1/16	14:35	14:36	AIR	A	No	UNK	34,000	MB	483	0	483	0	0	0
5/1/16	15:12	15:40	BOAT	A	No	8,519	0	MB	483	0	483	0	0	0
5/5/16	8:35	8:40	BOAT	A	No	7,778	0	MB	170	0	170	0	0	0
5/8/16	9:30	9:33	BOAT	A	No	8,890	0	MB	591	0	591	0	0	0
5/8/16	13:38	13:40	AIR	A	No	UNK	34,000	MB	591	0	591	0	0	0
5/12/16	11:14	11:15	BOAT	A	No	9,816	0	MB	390	0	390	0	0	0
5/12/16	19:53	19:59	BOAT	A	No	13,149	0	MB	390	0	390	0	0	0
5/13/16	15:56	16:20	BOAT	A	No	5,556+	0	MB	UNK	UNK	UNK	UNK	UNK	UNK
5/13/16	17:04	17:32	BOAT	A	No	5,556+	0	MB	430	0	430	0	0	0
5/14/16	11:01	11:09	BOAT	A	No	10,742	0	MB	400	0	400	0	0	0
5/15/16	10:07	10:11	BOAT	A	No	8,334	0	MB	800	0	800	0	0	0
5/15/16	17:15	17:16	AIR	A	No	UNK	34,000	MB	800	0	800	0	0	0
5/25/16	19:00	21:30	WW	A	No	90	135	FB	0	0	0	0	0	0
5/27/16	12:00	13:45	WW	A	No	100	180	FB	2	0	2	0	0	0
5/28/16	15:30	17:00	WW	A	No	180	150	FB	1	0	1	0	0	0
5/29/16	18:00	18:30	WW	A	No	250	300	FB	0	0	0	0	0	0
5/30/16	16:00	17:00	WW	A	No	180	200	FB	0	0	0	0	0	0
5/31/16	16:00	16:30	WW	A	No	250	300	FB	0	0	0	0	0	0
5/31/16	17:30	18:30	WW	A	No	250	300	FB	0	0	0	0	0	0
6/1/16	17:32	17:35	AIR	A	No	UNK	34,000	MB	20	0	20	0	0	0
6/1/16	19:06	19:09	BOAT	A	No	7,408	0	MB	20	0	20	0	0	0
6/3/16	15:43	15:45	AIR	A	No	UNK	34,000	FR	6	0	6	0	0	0
6/3/16	17:15	17:30	BOAT	A	No	9,260	0	MB	450	0	450	0	0	0
6/4/16	20:00	22:00	BOAT	A/V	No	402	0	MB	204	0	204	0	0	0
6/5/16	10:39	10:48	BOAT	A	No	6,852	0	MB	69	0	69	0	0	0
6/7/16	20:00	21:00	WW	A	No	180	150	FB	0	0	0	0	0	0
6/8/16	15:35	15:36	AIR	A	No	UNK	34,000	FB	5	0	5	0	0	0
6/8/16	16:05	16:06	AIR	A	No	UNK	34,000	FB	5	0	5	0	0	0
6/8/16	17:39	17:40	AIR	A	No	UNK	34,000	FB	5	0	5	0	0	0
6/8/16	19:00	20:30	WW	A	No	180	150	CG	0	0	0	0	0	0
6/9/16	18:00	20:00	WW	A	No	884	750	MB	70	0	70	0	0	0
6/9/16	17:34	17:37	BOAT	A	No	6,852	0	MB	73	0	73	0	0	0
6/10/16	9:55	10:15	BOAT	A/V	No	1,400	0	MB	160	0	160	0	0	0
6/10/16	10:25	10:45	BOAT	A/V	No	1,400	0	MB	160	0	160	0	0	0

Date	Start time	End time	Source ID[a]	Stimuli type A/V/O[b]	BMPs[c]/ regs violation	Closest approach (m)	Altitude (mAGL[d])	Beach ID[e]	Walrus # on beach	# Walrus disturbed	ND[f]	HR[g]	OR[h]	DS[i]
6/10/16	15:20	15:22	AIR	A	No	UNK	34,000	MB	180	0	180	0	0	0
6/10/16	15:20	15:22	AIR	A	No	UNK	34,000	MB	180	0	180	0	0	0
6/11/16	14:27	14:28	AIR	A	No	UNK	34,000	MB	700	0	700	0	0	0
6/11/16	15:44	15:45	AIR	A	No	UNK	34,000	MB	700	0	700	0	0	0
6/11/16	15:54	15:55	AIR	A	No	UNK	34,000	MB	700	0	700	0	0	0
6/11/16	15:55	15:56	AIR	A	No	UNK	34,000	MB	700	0	700	0	0	0
6/11/16	17:16	17:17	AIR	A	No	UNK	34,000	MB	700	0	700	0	0	0
6/12/16	14:13	14:14	BOAT	A	No	11,112	0	MB	376	0	376	0	0	0
6/14/16	14:30	18:30	WW	A	No	280	280	MB	2	0	2	0	0	0
6/15/16	11:15	11:30	BOAT	A/V	No	1,400	0	MB	12	0	12	0	0	0
6/15/16	11:36	11:50	BOAT	A/V	No	1,400	0	MB	12	0	12	0	0	0
6/15/16	17:00	18:00	WW	A	No	1,400	150	MB	20	0	20	0	0	0
6/16/16	17:17	17:20	UNK	UNK	UNK	UNK	UNK	FB	22	6	16	1	1	4
6/17/12	14:14	14:14	BOAT	A	No	14,446	0	MB	67	0	67	0	0	0
6/18/16	9:25	9:45	BOAT	A/V	No	1,400	0	MB	40	0	40	0	0	0
6/18/16	9:50	10:10	BOAT	A/V	No	1,400	0	MB	40	0	40	0	0	0
6/18/16	16:00	17:00	BURN	O	No	90	135	FB	0	0	0	0	0	0
6/19/16	13:00	14:00	WW	A	No	50	100	CG	0	0	0	0	0	0
6/21/16	15:30	17:30	WW	A	No	50	100	CG	0	0	0	0	0	0
6/22/16	17:30	20:00	BOAT	A/V	No	400	0	MB/FB	387	0	387	0	0	0
6/23/16	15:30	15:31	AIR	A	No	UNK	34,000	MB	118	0	118	0	0	0
6/24/16	18:39	18:40	AIR	A	No	UNK	34,000	MB	140	0	140	0	0	0
6/25/16	20:17	20:18	AIR	A	No	UNK	34,000	MB	61	0	61	0	0	0
6/26/16	9:15	9:35	BOAT	A/V/O	No	50	0	FR	6	6	0	0	0	6
6/26/16	9:40	10:00	BOAT	A/V/O	No	50	0	FR	0	0	0	0	0	0
6/26/16	16:00	16:02	AIR	A	No	UNK	34,000	MB	52	0	52	0	0	0
6/27/16	11:03	11:23	BOAT	A/V	No	50	0	FR	1	0	1	0	0	0
6/27/16	11:31	11:51	BOAT	A/V	No	50	0	FR	1	0	1	0	0	0
6/28/16	15:24	15:25	AIR	A	No	UNK	34,000	MB	36	0	36	0	0	0
6/30/16	15:20	15:21	AIR	A	No	UNK	34,000	MB	20	0	20	0	0	0
6/30/16	12:30	14:00	BOAT	A/V	No	400	0	MB	79	0	79	0	0	0
6/30/16	15:55	15:56	AIR	A	No	UNK	34,000	MB	20	0	20	0	0	0
7/1/16	8:05	8:06	BOAT	A	No	6,667	0	MB	15	0	15	0	0	0
7/2/16	11:18	11:25	BOAT	A	No	7,038	0	MB	20	0	20	0	0	0
7/2/16	12:30	12:31	AIR	A	No	UNK	34,000	MB	20	0	20	0	0	0
7/2/16	11:18	11:37	BOAT	A/V	No	1,400	0	MB	20	0	20	0	0	0
7/2/16	11:42	12:00	BOAT	A/V	No	50	0	FR	1	0	1	0	0	0
7/2/16	16:03	16:04	AIR	A	No	UNK	34,000	MB	20	0	20	0	0	0
7/2/16	13:00	17:00	BOAT	A/V	No	50	0	FR	1	0	1	0	0	0

Date	Start time	End time	Source ID[a]	Stimuli type A/V/O[b]	BMPs[c]/ regs violation	Closest approach (m)	Altitude (mAGL[d])	Beach ID[e]	Walrus # on beach	# Walrus disturbed	ND[f]	HR[g]	OR[h]	DS[i]
7/3/16	10:00	12:30	WW	A/O	No	50	100	CG	0	0	0	0	0	0
7/4/16	10:00	11:00	BURN	O	No	90	135	FB	0	0	0	0	0	0
7/4/16	11:20	11:40	BOAT	A/V	No	50	0	FR	2	0	2	0	0	0
7/4/16	11:50	12:10	BOAT	A/V	No	50	0	FR	2	0	2	0	0	0
7/5/16	15:48	15:49	AIR	A	No	UNK	34,000	MB	40	0	40	0	0	0
7/7/16	9:35	9:45	AIR	A/V	Yes		750–1,000	FR	3	3	0	0	0	0
7/8/16	17:49	17:50	AIR	A	No	UNK	34,000	MB	59	0	59	0	0	0
7/9/16	7:30	7:50	BOAT	A/V	No	50	0	FR	1	0	1	0	0	0
7/9/16	8:10	8:30	BOAT	A/V	No	50	0	FR	1	0	1	0	0	0
7/11/16	13:58	13:59	AIR	A	No	UNK	34,000	MB	5	0	5	0	0	0
7/11/16	18:18	18:19	AIR	A	No	UNK	34,000	MB	5	0	5	0	0	0
7/12/16	15:35	15:36	BOAT	A	No	5,556+	0	MB	22	0	22	0	0	0
7/13/16	16:42	16:43	AIR	A	No	UNK	34,000	MB	29	0	29	0	0	0
7/18/16	17:00	17:30	BOAT	A/V	No	50	0	FB	36	0	36	0	0	0
7/18/16	20:30	21:00	BOAT	A/V	No	50	0	FB	36	0	36	0	0	0
7/19/16	16:49	16:53	BOAT	A/V	No	5,741	0	FB	50	0	50	0	0	0
7/20/16	14:02	14:09	HEL	A/V	No	50	200	FB	68	68	0	0	44	24
7/27/16	14:15	14:17	AIR	UNK		UNK	UNK	MB	300	0	0	0	150	150
7/27/16	16:48	16:50	AIR	A	No	UNK	UNK	MB	216	0	216	0	0	0
7/27/16	18:38	18:39	BOAT	A	No	5,556+	0	MB	216	0	216	0	0	0
7/28/16	10:26	10:27	AIR	A	No	UNK	UNK	MB	130	0	130	0	0	0
7/28/16	11:10	11:10	AIR	A	No	UNK	34,000	MB	130	0	130	0	0	0
8/3/16	14:00	17:15	BOAT	A/V	No	1,400	0	MB	102	0	102	0	0	0
8/5/16	12:00	13:30	BURN	O	No	120	135	FR	2	0	2	0	0	0
8/7/16	18:15	21:25	BURN	O	No	120	135	FR	0	0	0	0	0	0
8/15/16	10:45	10:55	BOAT	A/V	No	1,400	0	MB	60	0	60	0	0	0
8/15/16	11:10	11:20	BOAT	A/V	No	1,400	0	MB	60	0	60	0	0	0

[a] AIR = fixed wing; BOAT = boat; BURN = burn barrel smoke; HEL = helicopter; WW = weed whacker.
[b] A = auditory; O = olfactory; UNK = unknown; V = visual.
[c] BMP = best management practices.
[d] mAGL = meters above ground level.
[e] CG = Campground; FB = First Beach; FR = Flat Rock; MB = Main Beach; WM = West Main.
[f] ND = no disturbance.
[g] HR = head raises.
[h] OR = reorient.
[i] DS = dispersal.

Appendix E. Steller sea lion daily count data, Round Island, Alaska, 2016.

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
03/27/16	19:20	20:10	RPM	37.4	NE	S	O	5	A863	N		12	110
03/27/16									A420	N			
03/28/16	18:45	19:45	RPM	22.2	E	N	O	2	A420	N		37	268
03/28/16									A737	N			
03/28/16									A863	N			
04/20/16	21:56	22:40	RPM	10	E	N	B	1	A291	Y		412	404
04/20/16									A420	Y			
04/20/16									A870	N			
04/20/16									T2$$	Y	50-T278		
04/21/16	11:04	12:40	NB	7.5	E	N	F	0.66	A554	Y		519	519
04/21/16									A637	Y			
04/21/16									A745	Y			
04/21/16									A713	Y			
04/21/16									A230	Y			
04/21/16									A737	Y			
04/21/16									A870	Y			
04/21/16									T388	Y			
04/21/16									A291	Y			
04/21/16	18:40	19:45	RPM	14.1	SE	N	F	3	A745	Y		389	456
04/21/16									A729	Y			
04/21/16									A737	Y			
04/21/16									$$78	Y	50-T278		
04/21/16									A230	Y			
04/22/16	10:39	11:30	NB	5	NE	N	C	0.5	A729	Y		529	
04/22/16									E146	Y			
04/22/16									A905	Y			
04/22/16									A870	Y			
04/22/16									A420	Y			
04/22/16									A462	Y			
04/22/16									A19	Y			
04/22/16									A809	N			
04/22/16	21:30	22:00	RPM	9	W	N	B	0	A415	Y		388	401
04/22/16									A420	Y			

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
04/22/16									A583	Y			
04/22/16									A462	Y			
04/22/16									$$09	Y	50-A809		
04/23/16	15:45	17:00	RPM	5	E	N	O	0	A745	Y		440	510
04/23/16									T278	Y			
04/23/16									A291	Y			
04/23/16									A870	Y			
04/23/16									E146	Y			
04/23/16									A462	Y			
04/24/16	10:38	11:40	NB	8.8	NE	N	C	0.5	A19	Y		664	
04/24/16									A415	Y			
04/24/16									A58$	Y	75-A583		
04/24/16									A870	Y			
04/24/16									E146	Y			
04/24/16									A230	Y			
04/24/16									A554	Y			
04/24/16									T278	Y			
04/24/16	19:10	21:00	RPM	7.2	N	N	C	0.5	A905	Y		455	517
04/24/16									A868	Y			
04/24/16									A745	Y			
04/24/16									T388	Y			
04/24/16									A583	Y			
04/24/16									A870	Y			
04/25/16	13:45	15:00	RPM	57.4	E	N	O	3	T388	Y		245	397
04/25/16									A745	Y			
04/25/16									A809	Y			
04/26/16	21:30	22:15	RPM	3.2	W	N	C	0.75	A420	Y		495	651
04/26/16									A870	Y			
04/26/16									A745	Y			
04/26/16									A19	Y			
04/26/16									A63$	Y	75-A637		
04/26/16									A868	Y			
04/26/16									T278	Y			
04/26/16									$905	Y	75-A905		

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
04/26/16									A809	Y			
04/26/16									A29$	Y	75-A291		
04/26/16									$521	Y	75-X521		
04/26/16									A230	Y			
04/26/16									A554	Y			
04/27/16	13:15	14:45	RPM	16.8	N	R	O	2	A745	Y		380	616
04/27/16									E146	Y			
04/27/16									A868	Y			
04/27/16									A713	Y			
04/27/16									T388	Y			
04/27/16									A462	Y			
04/27/16									A230	Y			
04/27/16									X521	Y			
04/27/16									A870	Y			
04/27/16									A291	Y			
04/27/16	21:15	22:00	RPM	17	E	R	O	1.5	A462	Y		293	397
04/27/16									A807	Y			
04/27/16									74	Y	50-A745		
04/27/16									A801	Y			
04/28/16	11:30	14:20	MKA	10	NNE	N	B	2	T388	Y		345	463
04/28/16									A19	Y			
04/28/16									A415	Y			
04/28/16									A583	Y			
04/28/16									A905	Y			
04/28/16									A745	Y			
04/28/16									A462	Y			
04/28/16									A801	Y			
04/28/16									T404	Y			
04/28/16									A291	Y			
04/28/16	20:15	21:00	RPM	13.9	NE	N	B	0.5	A809	Y		424	503
04/28/16									T404	Y			
04/28/16									A801	Y			
04/28/16									A462	N			
04/28/16									A420	Y			

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
04/28/16									A29$	Y	75-A291		
04/28/16									T388	Y			
04/28/16									A745	Y			
04/28/16									A$$2	Y	50-A462		
04/28/16									F1124	Y			
04/29/16	13:36	16:30	MKA	10	N	N	O	1	A420	Y		543	639
04/29/16									A291	Y			
04/29/16									A146	Y			
04/29/16									A637	Y			
04/29/16									A80$	Y	75-A801		
04/29/16									T388	Y			
04/29/16									A745	Y			
04/29/16									T$04	Y	75-T404		
04/29/16									A778	Y			
04/29/16									A637	Y			
04/29/16									A655	Y			
04/30/16	10:30	11:45	MKA	20	NW	N	O	0.5	A462	Y		434	533
04/30/16									A230	Y			
04/30/16	19:20	20:45	RPM	20	NW	N	O	1	A801	Y		505	628
04/30/16									A737	Y			
04/30/16									A655	Y			
04/30/16									E146	Y			
04/30/16									T278	Y			
04/30/16									$554	Y	75-A554		
05/01/16	13:30	15:23	MKA	0		N	C	0.5	A655	Y		438	577
05/01/16									A745	Y			
05/01/16									A905	Y			
05/01/16									A737	Y			
05/01/16									A870	Y			
05/01/16									A420	Y			
05/01/16									A637	Y			
05/01/16	20:30	22:30	MKA	20	W	N	O	0.5	X425	Y		459	608
05/01/16									A77$	Y	75-A778		
05/01/16									A637	Y			

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
05/01/16									T40$	Y	75-T404		
05/01/16									A420	Y			
05/01/16									A46$	Y	75-A460		
05/02/16	15:00	16:00	RPM	18.4	W	N	C	0	A230	Y		609	699
05/02/16									A280	Y			
05/02/16									X425	Y			
05/02/16									A778	Y			
05/02/16									A868	Y			
05/02/16									T404	Y			
05/02/16									A462	Y			
05/02/16									A809	Y			
05/02/16									$$M	Y	33-76M		
05/02/16									A65$	Y	75-A653		
05/02/16	19:00	21:00	MKA	12	E	N	O	0.5	E146	N		405	679
05/02/16									A230	N			
05/02/16									A778	N			
05/02/16									76M	N			
05/03/16	10:20	12:40	MKA	13	N	N	O	0.5	A420	Y		311	493
05/03/16									T404	Y			
05/03/16									A905	Y			
05/03/16									A462	Y			
05/03/16									T278	Y			
05/03/16									76M	Y			
05/03/16	19:00	20:00	RPM	9.6	NW	N	S	0.5	A420	Y		677	695
05/03/16									A554	Y			
05/03/16									A462	Y			
05/03/16									A905	Y			
05/03/16									A868	Y			
05/03/16									A745	Y			
05/03/16									T388	Y			
05/03/16									T278	Y			
05/04/16	12:00	13:02	MKA	9	N	N	C	0.5	A778	Y		318	456
05/04/16									A230	Y			
05/04/16									A420	Y			

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
05/04/16									A460	Y			
05/04/16	20:20	21:10	RPM	10.5	NNW	N	C	0.5	A905	Y		548	587
05/04/16									T404	Y			
05/04/16									A420	Y			
05/04/16									A196	Y			
05/04/16									E146	Y			
05/04/16									A745	N			
05/04/16									T278	Y			
05/04/16									A868	Y			
05/05/16	12:39	14:07	MKA	38	N	R	O	1.5	A905	Y		332	622
05/05/16									A146	Y			
05/05/16									T404	Y			
05/05/16									Я761	Y			
05/05/16									A230	Y			
05/05/16									A291	Y			
05/05/16	19:25	20:20	RPM	32.2	N	N	O	1	A905	Y		309	542
05/05/16									T278	Y			
05/05/16									76M	Y			
05/05/16									A737	Y			
05/05/16									E146	Y			
05/05/16									A14$	Y	75-A146		
05/06/16	12:30	13:50	RPM	6.6	NNE	N	C	0.5	A378	Y		404	573
05/06/16									A420	Y			
05/06/16									A146	Y			
05/06/16									A905	Y			
05/06/16									A291	Y			
05/06/16									T278	Y			
05/06/16									A809	Y			
05/06/16	17:30	19:00	MKA	18	N	N	O	0	A905	Y		560	695
05/06/16									A737	Y			
05/06/16									A809	Y			
05/06/16									T404	Y			
05/06/16									A378	Y			
05/06/16									T388	Y			

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
05/06/16									A291	Y			
05/06/16									A196	Y			
05/06/16									42	Y	50-A420		
05/06/16									14	Y	50-A146		
05/07/16	10:20	11:30	MKA	15	N	N	O	0	Я761	Y		554	633
05/07/16									A905	Y			
05/07/16									A146	Y			
05/07/16									A868	Y			
05/07/16									T388	Y			
05/07/16									A291	Y			
05/07/16									A420	Y			
05/07/16	20:30	21:20	RPM	13	W	R	O	1	A230	Y		482	600
05/07/16									A14$	Y	75-A146		
05/07/16									T404	Y			
05/07/16									A291	Y			
05/07/16									A420	Y			
05/08/16	11:32	13:17	MKA	15	E	R	O	0.75	76M	Y		396	564
05/08/16									A905	Y			
05/08/16									$868	Y	75-A868		
05/08/16									A637	Y			
05/08/16	18:30	19:30	RPM	13.3	SW	R	O	1.5	A870	Y		441	477
05/08/16									A905	Y			
05/08/16									Я761	Y			
05/09/16	13:00	14:15	MKA	18	N	R	O	0.5	A637	Y		385	631
05/09/16									A230	Y			
05/09/16									T404	Y			
05/09/16									A870	Y			
05/09/16									A746	Y			
05/09/16									A905	Y			
05/09/16									$291	Y	75-A291		
05/09/16									A$$$	Y	25-A653		
05/09/16									A42$	Y	75-A420		
05/09/16	20:20	21:12	RPM	13	W	R	O	1	A230	Y		361	685
05/09/16									T404	Y			

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
05/09/16									A146	N			
05/09/16									A291	N			
05/09/16									A420	Y			
05/09/16									A870	Y			
05/09/16									A809	Y			
05/09/16									T2$8	Y	75-T278		
05/09/16									A460	Y			
05/09/16									A462	Y			
05/09/16									A74$	Y	75-A746		
05/10/16	10:25	11;25	RPM	23.3	S	R	O	2	A746	Y		209	426
05/10/16									T404	Y			
05/10/16	17:15	18:15	MKA	33	E	R	O	1.5	A905	Y			507
05/10/16									A737	Y			
05/11/16	12:30	13:50	MKA	12	E	N	O	0.5	76M	Y		300	494
05/11/16									Я761	Y			
05/11/16									A291	Y			
05/11/16									A801	Y			
05/11/16									A42$	Y	75-A420		
05/11/16									A905	N			
05/11/16									A7$$	Y	50-A778		
05/11/16	18:14	20:41	RPM	2.4	SE	N	O	0.75	T388	Y		277	581
05/11/16									$$05	Y	50-A905		
05/11/16									A554	Y			
05/11/16									76M	Y			
05/11/16									Я761	Y			
05/11/16									A420	Y			
05/11/16									A737	Y			
05/11/16									A146	Y			
05/11/16									A801	Y			
05/11/16									A291	Y			
05/11/16									A746	Y			
05/11/16									A778	Y			
05/12/16	13:15	14:45	RPM	1.7	SE	N	O	0.5	A554	Y		520	663
05/12/16									A905	Y			

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
05/12/16									T404	Y			
05/12/16									A420	Y			
05/12/16									A196	Y			
05/12/16									A230	Y			
05/12/16									A146	Y			
05/12/16									A801	Y			
05/12/16									A462	Y			
05/12/16									Я761	Y			
05/12/16									76M	Y			
05/12/16	18:45	21:00	MKA	12	E	N	O	0.5	A462	Y		426	516
05/12/16									A230	Y			
05/12/16									A146	Y			
05/12/16									T388	Y			
05/12/16									A830	Y			
05/12/16									A420	Y			
05/12/16									A460	Y			
05/13/16	13:33	14:55	RPM	8	NE	N	B	0	A809	Y		450	-
05/13/16									76M	Y			
05/13/16									A9$$	Y	50-A905		
05/13/16									A7$$	N			
05/14/16	15:20	16:20	RPM	12.7	S	N	B	0	A420	Y		497	565
05/14/16									A554	Y			
05/14/16									A737	Y			
05/14/16									A905	Y			
05/14/16									T404	Y			
05/14/16									A291	Y			
05/14/16									A462	Y			
05/14/16									A830	Y			
05/14/16									A809	Y			
05/14/16	20:00	21:30	MKA	0		N	B	0.25	A809	Y		488	528
05/14/16									A737	Y			
05/14/16									A230	Y			
05/14/16									A420	Y			
05/14/16									A291	Y			

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
05/14/16									T404	Y			
05/14/16									A460	Y			
05/15/16	14:05	15:30	RPM	0		N	C	0	T404	Y		414	519
05/15/16									76M	Y			
05/15/16									A230	Y			
05/15/16	20:00	22:00	MKA	0		N	C	0	A146	Y		412	543
05/15/16									T4$$	Y	50-T404		
05/15/16									A462	Y			
05/15/16									A830	Y			
05/15/16									A230	Y			
05/16/16	15:20	16:43	MKA	13	NE	N	F	0	A291	Y		526	541
05/16/16									T404	Y			
05/16/16									A778	Y			
05/17/16	9:50	10:30	RPM	19	N	N	S	0.5	A291	Y		294	316
05/17/16									A737	Y			
05/17/16									A778	Y			
05/17/16	19:14	20:30	MKA	8	S	N	B	1	A230	N		413	394
05/17/16									A291	Y			
05/17/16									A42$	Y	75-A420		
05/18/16	12:00	13:15	MKA	35	S	N	B	1	A778	Y		207	247
05/18/16									A196	Y			
05/19/16	18:00	18:50	RPM	8	E	R	O	0.75	A460	Y		317	368
05/19/16									A230	Y			
05/19/16									A291	Y			
05/20/16	18:02	19:00	MKA	12	N	R	O	0.5	A737	Y		284	327
05/20/16									A146	Y			
05/21/16	15:00	16:00	RPM	27	SE	N	S	1	A460	Y		330	400
05/21/16									$420	Y	75-A420		
05/21/16									A146	Y			
05/22/16	10:10	11:08	MKA	44	SE	R	O	1.5	A230	Y		179	248
05/23/16	15:50	17:30	MKA	11	SE	R	O	0.5	A737	Y		330	412
05/23/16									A196	Y			
05/23/16									A4$$	Y	50-A420		
05/24/16	10:05	11:30	MKA	12	S	N	O	0.5	A460	Y		295	336

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
05/25/16	16:55	18:00	RPM	24	SE	N	O	0.25	A420	Y		325	334
05/25/16									A196	Y			
05/25/16									A230	Y			
05/26/16	14:20	16:07	MKA	10	N	N	B	0.5	A737	Y		307	325
05/26/16									A230	Y			
05/26/16									A196	Y			
05/27/16	13:45	14:30	RPM	11	NE	N	C	0.5	A460	Y		284	
05/28/16	16:50	17:50	MKA	21	S	N	C	1	A420	Y		223	221
05/28/16									A460	Y			
05/29/16	15:00	16:00	RPM	5	SE	N	C	0.5	A196	Y		242	
05/30/16	15:30	16:30	MKA	25	SE	N	O	0.5	A196	Y		223	229
05/30/16									A729	Y			
05/31/16	16:30	17:30	RPM	16	NE	N	B	2				131	
06/01/16	18:30	20:20	MKA	5	N	N	F	0.5	A420	Y		263	
06/01/16									A460	Y			
06/02/16	12:45	14:45	RPM	5	E	N	B	0.25	A460	Y		187	190
06/02/16									A196	Y			
06/03/16	15:50	17:30	MKA	30	S	N	F	0.5	A420	Y		213	
06/04/16	21:20	22:00	RPM	0		N	B	0				229	
06/05/16	10:40	11:40	MKA	15	N	N	F	0	A460	Y		172	
06/05/16									A420	Y			
06/06/16	15:10	16:10	MKA	20	S	N	F	0.5				139	
06/07/16	15:20	16:20	RPM	27	SSE	N	F	0.5				166	
06/08/16	15:25	16:16	MKA	25	E	N	C	0.5	A$$$	Y	25-A420	174	
06/08/16									A801	Y			
06/09/16	15:00	15:30	RPM	6	E	R	O	1.5				76	
06/10/16	16:00	17:00	MKA	17	S	N	O	1	A885	Y		196	
06/11/16	20:30	21:20	MKA	12	E	N	S	1	A420	N		180	
06/12/16	17:57	18:45	MKA	35	NW	N	F	1	A801	Y		200	
06/13/16	15:19	16:20	MKA	26	NW	N	S	1	A801	Y		180	
06/14/16													
06/15/16	16:44	17:45	MKA	16	E	N	C	0.5				186	
06/16/16	14:40	16:45	MKA	15	NE	R	O	1				87	
06/17/16	10:07	10:50	RPM	22	SE	N	O	0.75	$$20	Y	50-A420	230	

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
06/17/16									A801	Y			
06/18/16	15:00	15:35	MKA	28	SE	R	O	1.5				41	
06/19/16	16:10	16:55	RPM	31	SE	N	O	1				201	
06/20/16	15:10	16:40	MKA	17	SE	N	S	1				317	
06/21/16	18:10	18:50	RPM	20	SE	F	N	0.25				228	
06/22/16	15:00	16:15	MKA	15	E	RF	O	0.5	76M	Y		269	
06/22/16									A420	Y			
06/23/16	17:50	18:35	RPM	22	SE	R	O	1.5	76M	Y		236	
06/23/16									A729	Y			
06/24/16	18:20	19:30	MKA	0		RF	O	1.5	A830	Y		215	
06/24/16									A420	Y			
06/25/16	19:00	20:00	RPM	7	SE	N	C	1	A830	Y		236	
06/26/16	18:10	19:20	MKA	0		N	F	0.5				273	
06/27/16	15:07	16:32	BMH	14.3	S	N	S	0.5	A729	Y		230	
06/27/16									76M	Y			
06/27/16									A420	Y			
06/28/16	15:30	16:46	MKA	10	SE	N	F	0.5				283	
06/29/16	16:00	17:17	DEJ	12.4	S	N	C	0.25	A729	Y		237	
06/29/16									76M	Y			
06/29/16									A420	Y			
06/30/16	16:15	17:10	MKA	5	SE	N	F	0.5	A729	Y		333	
06/30/16									76M	Y			
07/01/16	17:40	18:45	MKA	15	N	N	S	0.5	A420	Y		344	
07/01/16									A729	Y			
07/02/16	9:42	10:42	BMH	5.8	VAR	N	B	0.5	A830	Y	75-A830	262	
07/02/16									76M	Y			
07/03/16	17:35	18:15	MKA	23		N	F	1				353	
07/04/16	14:40	15:45	DEJ	12	S	R	O	1.75	A420	Y		278	
07/04/16									76M	Y			
07/05/16	17:19	18:10	MKA	10	S	N	O	0.5	76M	Y		304	
07/05/16									A729	Y			
07/06/16	16:56	18:00	BMH	12	S	N	S	1	A420	Y		248	
07/07/16	18:00	18:45	MKA	20	SE	N	O	0.5	$$M	Y	33-76M	298	
07/08/16	17:15	18:20	DEJ	3.2	S	N	O	0.25	A729	Y		256	

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
07/08/16									A420	Y			
07/08/16									A830	Y			
07/08/16									76M	N			
07/09/16	15:10	15:57	MKA	6	VAR	N	S	0.5	A420	Y		291	
07/10/16	13:55	16:22	DEJ	6	S	N	S	0.75	A729	Y		267	
07/10/16									A830	Y			
07/10/16									76M	Y			
07/11/16	17:15	18:15	MKA	10	NE	N	S	0.5	A729	Y		326	
07/12/16	14:04	15:44	BMH	4	S	N	C	0	A729	Y		238	
07/12/16									A420	Y			
07/13/16	16:10	17:10	MKA	20	SE	N	F	0.5				310	
07/14/16	15:40	17:06	BMH	5	E	N	B	1.5	76M	Y		279	
07/15/16	20:00	21:00	MKA	1	VAR	N	F	1	A420	Y		291	
07/16/16	12:25	13:50	DEJ	3	N	N	C	0.5	A830	Y		348	
07/17/16	11:30	12:30	MKA	5	VAR	N	C	0.5	A420	Y		364	
07/17/16									A83$	Y	75-A830		
07/18/16	17:30	18:30	DEJ	11	N	N	O	0.25				330	
07/19/16	16:00	17:15	MKA	16	SE	N	S	0.5	A729	Y		396	
07/20/16	18:10	19:00	MKA	28	S	R	O	0.5	A729	N		238	
07/20/16									A420	Y	50-A420		
07/21/16	15:00	15:45	RPM	8.2	E	N	O	1	A868	Y		292	
07/22/16	13:30	14:30	MKA	10	N	R	O	1	A729	Y		308	
07/23/16	17:00	17:45	RPM	24	SE	R	O	1				121	
07/24/16	17:30	18:45	MKA	10	SE	N	B	1				251	
07/25/16	17:30	18:30	RPM	3		N	B	0.5	A729	Y		230	
									A420	Y			
07/26/16	15:45	16:30	MKA	14	E	R	O	1	A868	Y		209	
07/27/16	13:00	14:10	RPM	11	SE	N	S	1	A868	Y		290	
									A420	Y			
07/28/16	11:25	12:45	MKA	4	SE	R	F	0.5	A729	Y		293	
									A6	Y	75-A868		
07/29/16	17:45	18:40	MKA	34	SE	N	O	1	A42$	Y	75-A420	264	
07/30/16	17:45	18:25	MKA	31	SE	R	O	1				191	

Date	Start time	End time	Obs.[a]	Wind km/hr	Wind direction	Precip[b]	Cloud cover[c]	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4)[d]	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5)[d]
07/31/16	15:00	15:45	RPM	33	SE	N	O	1.5				231	
08/01/16	18:00	19:30	MKA	21	SE	N	O	0.5				261	
08/02/16	10:00	10:40	RPM	15	E	N	S	0.5				267	
08/03/16	18:30	19:15	MKA	14	NE	R	O	1				148	
08/04/16	14:55	15:35	RPM	24	S	R	O	1				241	
08/05/16	15:55	16;30	RPM	29	SE	R	O	1.5	A830	Y		179	
08/06/16	17:00	17:40	RPM	20	S	N	O	1.75				182	
08/07/16	16:50	17:20	MKA	29	S	R	O	1				185	
08/08/16	16:15	17:30	RPM	24	SE	N	O	1				194	
08/09/16	10:44	11:35	MKA	26	SE	N	O	0.5	A729	Y		200	
08/10/16	15:50	16:40	RPM	21	SE	N	F	0.25				231	
08/11/16	13:00	14:15	MKA	6		N	S	0.5	A830	Y		259	
08/12/16	17:00	17:40	RPM	9	E	N	O	1.5				183	
08/13/16	12:20	13:05	MKA	27,8	NE	R	O	2	A83$	Y	75-A830	138	

[a] Observers: BMH = Benjamin M. Histand; DEJ = Diana E. Johnson; MKA = Margaret K. Archibald; NB = Neil Barten; RPM = Ryan P. Morrill.
[b] Precipitation: F = fog; N = none; R = rain; S = snow.
[c] B = broken; C = clear; F = fog; O = overcast; S = scattered.
[d] Viewpoints = V1, V2, V3, V4, V5, V1E, V1L, and V1W.

Appendix F. Pelagic cormorant productivity data, cabin, First Prime, and Observation Point Index plots, 2016, Round Island, Alaska.

2016 Pelagic Cormorant Productivity Cabin North A

Date / Nest#	
start time	
end time	
1	NONE
2	
3	
4	
5	

2016 Pelagic Cormorant Productivity Cabin North B

Date / Nest#	
start time	
end time	
1	NONE
2	
3	
4	
5	

2016 Pelagic Cormorant Productivity OP Plot 3

Date / Nest#	5/7	5/9	5/11
start time			
end time			
1	E	E	N
2		E	N
3			
4			
5			

2016 Pelagic Cormorant Productivity First Prime Pinnacle North

Date / Nest#	
start time	
end time	
1	NONE
2	
3	
4	
5	

N=empty nest and is used when the egg or chick that was in the nest has been lost and the adult was not present.
B= Bird, Adult bird occupying a site, with no egg or chick present. Used when observer is sure the bird has no egg or chick.
P= Bird, present and don't know if egg or chick present (this is recommended by Byrd and Dragoo but not found in the above report).
E= Egg, Egg present, with no adult. If the egg is obviously damaged, record it as Eded (dead egg).
C= Chick, Chick present. C3 (three chicks) C3+ (three chicks plus possibly more).
F= Chick fledged (chick left the nest, survival unknown)
BP= Brooding posture
IP= Incubating posture

Appendix G. Black-legged kittiwake productivity data, Observation Point index plots, Round Island, Alaska, 2016.

2016 BLKI Productivity Plot 2 - Observation Point	Date / Nest#	6/13	6/16	6/18	6/19	6/23	6/26	6/29	7/2	7/5	7/9	7/11	7/12	7/16	7/19	7/24	7/27	8/3	8/6	8/10
	start time		17:20	15:02	17:35	15:35	17:25	17:35	10:00	15:00	14:50	15:05	18;00	15:05	9:35		18:20	18:07	17:05	14:56
	end time		17:30	15:30	19:16	16:50	17:26	17:40	10:55	15:08	14:55	15:10	18:10	15:10	9:58		19:10	18:30	17:35	14:57
	1							E	N	N	N	N	N	N	N	N	N	N	N	N
	2																			
	3																			
	4																			
	5																			

2016 BLKI Productivity Plot 3 - Observation Point	Date / Nest#	6/13	6/16	6/18	6/19	6/23	6/26	6/29	7/2	7/5	7/9	7/11	7/12	7/16	7/19	7/24	7/27	8/3	8/6	8/10
	start time		17:20	15:02	17:35	15:35	17:25	17:40	10:00	15:00	14:50	15:05	18;00	15:05	9:35		18:20	18:07	17:05	14:57
	end time		17:30	15:30	19:16	16:50	17:26	17:44	10:55	15:08	14:55	15:10	18:10	15:10	9:58		19:10	18:30	17:35	14:58
	1	E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2																			
	3																			
	4																			
	5																			

2016 BLKI Productivity Plot 4 - Observation Point	Date / Nest#	6/13	6/16	6/18	6/19	6/23	6/26	6/29	7/2	7/5	7/9	7/11	7/12	7/16	7/19	7/25	7/27	8/3	8/6	8/10
	start time		17:30	15:02	17:35	15:35	17:25	17:50	10:00	15:00	14:50	15:05	18;00	15:05	9:35	10:10	18:20	18:07	17:05	15:09
	end time		17:50	15:30	19:16	16:50	17:26	18:00	10:55	15:08	14:55	15:10	18:10	15:10	9:58	10:20	19:10	18:30	17:35	15:12
	1	E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2		E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	3				E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	4				E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	5				E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	6				E	IP	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	7							E	N	N	N	N	N	N	N	N	N	N	N	N
	8																			

N=empty nest and is used when the egg or chick that was in the nest has been lost and the adult was not present.

B= Bird, Adult bird occupying a site, with no egg or chick present. Used when observer is sure the bird has no egg or chick.

P= Bird, present and don't know if egg or chick present (this is recommended by Byrd and Dragoo but not found in the above report).

E= Egg, Egg present, with no adult. If the egg is obviously damaged, record it as Eded (dead egg).

C= Chick, Chick present. C3 (three chicks) C3+ (three chicks plus possibly more).

F= Chick fledged (chick left the nest, survival unknown)

BP= Brooding posture

IP= Incubating posture

Appendix H. Common murre productivity data, Observation Point index plots, Round Island, Alaska, 2016.

2016 COMU Productivity Plot 1 - Observation Point	Date / Nest#	6/13	6/16	6/18	6/19	6/23	6/26	6/29	7/2	7/5	7/9	7/11	7/12	7/16	7/19	7/24	7/27	8/3	8/6	8/10
	start time		17:20	15:02	17:35	15:35	17:25	17:35	10:00											
	end time		17:30	15:30	19:16	16:50	17:26	17:40	10:55											
	1	E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2					E	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	3																			
	4																			
	5																			

2016 COMU Productivity Plot 2 - Observation Point	Date / Nest#		6/16	6/18	6/19	6/23	6/26	6/29	7/2	7/5	7/9	7/11	7/12	7/16	7/19	7/24	7/27	8/3	8/6	8/10
	start time		17:20	15:02	17:35	15:35	17:25	17:35	10:00	15:00	14:50	15:05	18;00	15:05	9:35		18:20	18:07	17:05	14:56
	end time		17:30	15:30	19:16	16:50	17:26	17:40	10:55	15:08	14:55	15:10	18:10	15:10	9:58		19:10	18:30	17:35	14:57
	1																			
	2																			
	3																			
	4																			

2016 COMU Productivity Plot 4 - Observation Point	Date / Nest#	6/13	6/16	6/18	6/19	6/23	6/26	6/29	7/2	7/5	7/9	7/11	7/12	7/16	7/19	7/25	7/27	8/3	8/6	8/10
	start time		17:30	15:02	17:35	15:35	17:25	17:50	10:00	15:00	14:50	15:05	18;00	15:05	9:35	10:10	18:20	18:07	17:05	15:09
	end time		17:50	15:30	19:16	16:50	17:26	18:00	10:55	15:08	14:55	15:10	18:10	15:10	9:58	10:20	19:10	18:30	17:35	15:12
	1	E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2								E	N	N	N	N	N	N	N	N	N	N	N
	3								E	N	N	N	N	N	N	N	N	N	N	N
	4																			

2016 COMU Productivity Plot 5 - Observation Point	Date / Nest#		6/16	6/18	6/19	6/23	6/26	6/29	7/2	7/5	7/9	7/11	7/12	7/16	7/19	7/25	7/27	8/3	8/6	8/10
	start time		17:50	15:02	17:35	15:35	17:25		10:00	15:00	14:50	15:05	18;00	15:05	9:35	10:10	18:20	18:07	17:05	15:09
	end time		18:00	15:30	19:16	16:50	17:26		10:55	15:08	14:55	15:10	18:10	15:10	9:58	10:20	19:10	18:30	17:35	15:12
	1			E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2			IP	IP	IP	IP	IP	N	N	N	N	N	N	N	N	N	N	N	N
	3																			
	4																			

N=empty nest and is used when the egg or chick that was in the nest has been lost and the adult was not present.

B= Bird, Adult bird occupying a site, with no egg or chick present. Used when observer is sure the bird has no egg or chick.

P= Bird, present and don't know if egg or chick present (this is recommended by Byrd and Dragoo but not found in the above report).

E= Egg, Egg present, with no adult. If the egg is obviously damaged, record it as Eded (dead egg).

C= Chick, Chick present. C3 (three chicks) C3+ (three chicks plus possibly more).

F= Chick fledged (chick left the nest, survival unknown)

BP= Brooding posture

IP= Incubating posture

Appendix I. Population counts, Observation Point index plots, Round Island, Alaska, 2016.

Date	Count #	Start time	Finish time	# BLKI[a]	# BLKI nests	# COMU[b]	# PECO[c]	#PECO nests	# HOPU[d]	# TUPU[e]	Count type
2016 Population Count - Plot 1 - Observation Point											
5/7	1	18:06	18:08	0	0	0			0	0	Photo
5/8	1	17:02	17:05	2	1	9			0	0	Photo
5/23	1	15:00	15:15	1	1	55	0	0	2	0	Photo
6/11	1	14:39	14:55	12	10	5	0	0	0	0	Photo
6/19	1	17:35	19:16	11	9	0	0	0	0	0	Photo
6/23	1	15:35	16:50	12	10	35	0	0	0	0	Photo
6/26	1	17:25	17:26	7	5	0	0	0	0	0	Photo
6/29	1	17:29	17:30	0	0	0	0	0	0	0	Photo
7/2	1	10:00	10:55	0	0	0	0	0	0	0	Photo
7/5	1	15:00	15:30	0	0	0	0	0	0	0	Photo
7/6	1	9:46	9:50	0	0	0	0	0	0	0	Photo
7/9	1	15:00	15:30	0	0	44	0	0	0	0	Photo
7/11	1	15:05	15:10	0	0	35	0	0	0	0	Photo
7/12	1	18:10	18:20	0	0	0	0	0	0	0	Photo
7/16	1	15:00	15:30	6	2	34	0	0	0	0	Photo
7/19	1	9:35	9:36	0	0	0	0	0	0	0	Photo
7/24	1	17:30	17:32	0	0	0	0	0	0	0	Photo
7/27	1	18:20	19:10	6	2	6	0	0	0	0	Photo
8/3	1	18:07	18:30	0	0	0	0	0	0	0	Photo
8/6	1	17:05	17:30	0	0	0	0	0	0	0	Photo
8/10	1	14:55	14:56	0	0	0	0	0	0	0	Photo
2016 Population Count - Plot 2 - Observation Point											
5/7	1	18:09	18:10	18	16	0	0	0	0	0	Photo
5/8	1	17:08	17:18	69	15	0	0	0	0	0	Photo
5/23	1	15:15	15:30	64	16	36	0	0	0	0	Photo
6/11	1	14:39	14:55	53	36	0	0	0	0	0	Photo
6/19	1	17:35	19:16	73	22	0	3	0	0	0	Photo
6/23	1	15:35	16:50	70	45	11	0	0	0	0	Photo
6/26	1	17:25	17:26	68	40	0	0	0	0	0	Photo
6/29	1	17:35	17:37	13	11	0	0	0	0	0	Photo
7/2	1	10:00	10:55	0	0	0	0	0	0	0	Photo
7/5	1	15:00	15:30	0	0	0	0	0	0	0	Photo
7/6	1	9:46	9:50	0	0	0	0	0	0	0	Photo
7/9	1	15:00	15:30	0	0	0	0	0	0	0	Photo
7/11	1	15:05	15:10	10	0	60	0	0	0	0	Photo
7/12	1	18:10	18:20	5	4	0	0	0	0	0	Photo
7/16	1	15:00	15:30	60	25	30	0	0	0	0	Photo
7/19	1	9:38	9:41	50	0	56	0	0	0	0	Photo
7/24	1	17:33	17:37	44	23	17	0	0	0	0	Photo
7/27	1	18:20	19:10	61	31	0	0	0	0	0	Photo
8/3	1	18:07	18:30	1	0	0	0	0	0	0	Photo
8/6	1	17:05	17:30	8	6	0	0	0	0	0	Photo
8/10	1	14:56	14:57	1	1	0	0	0	0	0	Photo
2016 Population Count - Plot 3 - Observation Point											
5/7	1	18:10	18:11	13	9	0	12	8	0	0	Photo
5/8	1	17:18	17:33	48	20	0	16	13	0	0	Photo
5/23	1	15:30	15:40	42	7	2	0	0	0	0	Photo
6/11	1	14:39	14:55	47	30	2	0	0	0	0	Photo
6/19	1	17:35	19:16	72	31	0	0	0	0	0	Photo
6/23	1	15:35	16:50	50	37	0	0	0	0	0	Photo

Date	Count #	Start time	Finish time	# BLKI[a]	# BLKI nests	# COMU[b]	# PECO[c]	#PECO nests	# HOPU[d]	# TUPU[e]	Count type
6/26	1	17:25	17:26	45	31	0	0	0	0	0	Photo
6/29	1	17:38	17:42	30	21	0	0	0	0	0	Photo
7/2	1	10:00	10:55	2	1	0	0	0	0	0	Photo
7/5	1	15:00	15:30	0	0	0	0	0	0	0	Photo
7/6	1	9:46	9:50	0	0	0	0	0	0	0	Photo
7/9	1	15:00	15:30	0	0	0	0	0	0	0	Photo
7/11	1	15:05	15:10	15	0	0	0	0	0	0	Photo
7/12	1	18:10	18:20	3	3	0	0	0	0	0	Photo
7/16	1	15:00	15:30	55	16	5	0	0	0	0	Photo
7/19	1	9:41	9:42	37	0	3	0	0	0	0	Photo
7/24	1	17:37	17:42	22	9	7	0	0	0	0	Photo
7/27	1	18:20	19:10	35	12	0	0	0	0	0	Photo
8/3	1	18:07	18:30	0	0	0	0	0	0	0	Photo
8/6	1	17:05	17:30	13	9	0	0	0	0	0	Photo
8/10	1	14:57	14:58	5	3	0	0	0	0	0	Photo
2016 Population Count - Plot 4 - Observation Point											
5/7	1	18:15	18:16	15	12	0	0	0	0	0	Photo
5/8	1	5:35	18:07	82	49	49	2	2	0	0	Photo
5/23	1	15:40	16:00	109	35	294	0	0	0	0	Photo
6/11	1	14:39	14:55	77	55	12	0	0	0	0	Photo
6/19	1	17:35	19:16	77	32	0	0	0	0	0	Photo
6/23	1	15:35	16:50	78	17	20	0	0	0	0	Photo
6/26	1	17:32	17:40	67	55	0	0	0	0	0	Photo
6/29	1	17:50	18:05	41	26	1	0	0	2	0	Photo
7/2	1	10:00	10:55	2	1	206	0	0	0	0	Photo
7/5	1	15:00	15:30	0	0	0	0	0	0	0	Photo
7/6	1	9:46	9:50	0	0	0	0	0	0	0	Photo
7/9	1	15:00	15:30	0	0	9	1	0	0	0	Photo
7/12	1	18:10	18:20	6	4	0	0	0	0	0	Photo
7/16	1	15:00	15:30	56	29	239	0	0	1	0	Photo
7/19	1	9:47		52	0	314	1	0	0	0	Field
7/19	2		9:58	51	0	321	1	0	0	0	Field
7/22	1	9:56		77	45	301	0	0	0	0	Photo
7/24	1	17:45	17:52	42	19	0	0	0	0	0	Photo
7/27	1	18:20	19:10	64	40	0	0	0	1	0	Photo
8/3	1	18:07	18:30	2	0	0	0	0	0	0	Photo
8/6	1	17:05	17:30	18	13	0	0	0	1	0	Photo
8/10	1	15:09	15:12	27	20	0	0	0	0	0	Photo
2016 Population Count - Plot 5 - Observation Point											
5/7	1	18:12	18:13	2	3	0	0	0	0	0	Photo
5/8	1	17:05	17:08	9	3	0	0	0	0	0	Photo
5/23	1	16:00	16:17	24	2	111	0	0	0	0	Photo
6/11	1	14:39	14:55	20	17	53	0	0	0	0	Photo
6/19	1	17:35	19:16	13	7	7	0	0	0	0	Photo
6/23	1	15:35	16:50	12	9	14	0	0	0	0	Photo
6/26	1	15:30	15:32	5	3	2	0	0	0	0	Photo
6/29	1	17:43	17:50	4	3	2	0	0	0	0	Photo
7/2	1	10:00	10:55	4	3	93	0	0	0	0	Photo
7/5	1	15:00	15:30	0	0	0	0	0	0	0	Photo
7/6	1	9:46	9:50	0	0	0	0	0	0	0	Photo
7/9	1	15:00	15:30	0	0	7	0	0	0	0	Photo
7/12	1	18:10	18:20	1	1	0	1	0	0	0	Photo
7/16	1	15:00	15:30	12	4	0	0	0	0	0	Photo

Date	Count #	Start time	Finish time	# BLKI[a]	# BLKI nests	# COMU[b]	# PECO[c]	#PECO nests	# HOPU[d]	# TUPU[e]	Count type
7/19	1	9:45		13	0	59	0	0	0	0	Field
7/19	2		9:46	13	0	65	0	0	0	0	Field
7/24	1	17:55	18:00	15	3	34	0	0	0	0	Photo
7/27	1	18:20	19:10	12	4	0	0	0	0	0	Photo
8/3	1	18:07	18:30	1	0	0	0	0	0	0	Photo
8/6	1	17:05	17:30	8	5	0	0	0	0	0	Photo
8/10	1	15:06	15:07	2	2	0	0	0	0	0	Photo

[a] BLKI = black-legged kittiwake.
[b] COMU = common murre.
[c] PECO = pelagic cormorants.
[d] HOPU = horned puffin.
[e] TUPU = tufted puffin.

Appendix J. Daily wildlife observations, Round Island, Alaska, August 2015–August 2016.

Date	Species	Number	Location[a]	Comments[b]
8/15/15	Black-legged kittiwake		MB	PAWA, BLKI. TLC Data.
8/15/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/15/15	Pacific Walrus	1	FB	ONE PAWA HAULS OUT AFTER 1800. TLC Data.
8/15/15	Pacific Walrus		MB	PAWA, BLKI. TLC Data.
8/15/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/15/15	Steller Sea lion		EC	STSL, TUPU, HOPU, CORA, present. TLC Data.
8/16/15	Black-legged kittiwake		MB	PAWA, BLKI. TLC Data.
8/16/15	Black-legged kittiwake		WM	BLKI, PECO, CORA. TLC Data.
8/16/15	Common raven		WM	BLKI, PECO, CORA. TLC Data.
8/16/15	Pacific Walrus	1	FB	1 PAWA in water @ 1300, HOPU, BLKI. TLC Data.
8/16/15	Pacific Walrus		MB	PAWA, BLKI. TLC Data.
8/16/15	Pelagic Cormorant		WM	BLKI, PECO, CORA. TLC Data.
8/16/15	Steller Sea lion		EC	STSL, HOPU, BLKI, present. TLC Data.
8/17/15	Black-legged kittiwake		MB	PAWA, BLKI. TLC Data.
8/17/15	Black-legged kittiwake		WM	BLKI, PECO, COMU, CORA. TLC Data.
8/17/15	Common murre		WM	BLKI, PECO, COMU, CORA. TLC Data.
8/17/15	Common raven		WM	BLKI, PECO, COMU, CORA. TLC Data.
8/17/15	Horned Puffin		FB	HOPU. TLC Data.
8/17/15	Pacific Walrus		MB	PAWA, BLKI. TLC Data.
8/17/15	Pelagic Cormorant		WM	BLKI, PECO, COMU, CORA. TLC Data.
8/17/15	Steller Sea lion		EC	STSL, HOPU, present. TLC Data.
8/18/15	Black-legged kittiwake		FB	PAWA, BLKI. TLC Data.
8/18/15	Black-legged kittiwake		MB	PAWA, BLKI. TLC Data.
8/18/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/18/15	Pacific Walrus		FB	PAWA, BLKI. TLC Data.
8/18/15	Pacific Walrus		MB	PAWA, BLKI. TLC Data.
8/18/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/18/15	Steller Sea lion		EC	STSL, BLKI, present. TLC Data.
8/19/15	Black-legged kittiwake		EC	HOPU, BLKI, present. TLC Data.
8/19/15	Black-legged kittiwake		MB	PAWA, BLKI. TLC Data.
8/19/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/19/15	Pacific Walrus		FB	PAWA, PIGU. TLC Data.
8/19/15	Pacific Walrus		MB	PAWA, BLKI. TLC Data.
8/19/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/19/15	Pigeon Guillemot		FB	PAWA, PIGU. TLC Data.
8/20/15	Black-legged kittiwake		MB	BLKI, CORA. TLC Data.
8/20/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/20/15	Common raven		MB	BLKI, CORA. TLC Data.
8/20/15	Horned Puffin		EC	HOPU, present. TLC Data.
8/20/15	Horned Puffin		FB	PAWA, HOPU. TLC Data.
8/20/15	Pacific Walrus		FB	PAWA, HOPU. TLC Data.
8/20/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/21/15	Black-legged kittiwake		MB	BLKI, PECO. TLC Data.
8/21/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/21/15	Pacific Walrus		FB	PAWA. TLC Data.
8/21/15	Pelagic Cormorant		MB	BLKI, PECO. TLC Data.
8/21/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/21/15	Steller Sea lion		EC	STSL, present. TLC Data.
8/22/15	Black-legged kittiwake		MB	BLKI, PECO. TLC Data.
8/22/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/22/15	Horned Puffin		EC	HOPU, present. TLC Data.
8/22/15	Pacific Walrus		FB	PAWA. TLC Data.
8/22/15	Pelagic Cormorant		MB	BLKI, PECO. TLC Data.
8/22/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/23/15	Black-legged kittiwake		MB	BLKI, PECO. TLC Data.

Date	Species	Number	Location[a]	Comments[b]
8/23/15	Black-legged kittiwake		WM	BLKI, PECO, COMU. TLC Data.
8/23/15	Common murre		WM	BLKI, PECO, COMU. TLC Data.
8/23/15	Horned Puffin		FB	PAWA, HOPU. TLC Data.
8/23/15	Pacific Walrus		FB	PAWA, HOPU. TLC Data.
8/23/15	Pelagic Cormorant		EC	HOPU, PECO, present. TLC Data.
8/23/15	Pelagic Cormorant		MB	BLKI, PECO. TLC Data.
8/23/15	Pelagic Cormorant		WM	BLKI, PECO, COMU. TLC Data.
8/24/15	Black-legged kittiwake		MB	BLKI, PECO. TLC Data.
8/24/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/24/15	Horned Puffin		EC	HOPU, present. TLC Data.
8/24/15	Horned Puffin		FB	PAWA, HOPU. TLC Data.
8/24/15	Pacific Walrus		FB	PAWA, HOPU. TLC Data.
8/24/15	Pelagic Cormorant		MB	BLKI, PECO. TLC Data.
8/24/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/25/15	Black-legged kittiwake		MB	BLKI, PECO. TLC Data.
8/25/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/25/15	Pacific Walrus		FB	PAWA. TLC Data.
8/25/15	Pelagic Cormorant		MB	BLKI, PECO. TLC Data.
8/25/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/25/15	Steller Sea lion		EC	STSL, CORA, BLKI, present. TLC Data.
8/26/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/26/15	Pacific Walrus		FB	PAWA, PIGU. TLC Data.
8/26/15	Pelagic Cormorant		EC	UNPU, PECO, present. TLC Data.
8/26/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/26/15	Pigeon Guillemot		FB	PAWA, PIGU. TLC Data.
8/27/15	Black-legged kittiwake		WM	BLKI, PECO, CORA. TLC Data.
8/27/15	Common raven		WM	BLKI, PECO, CORA. TLC Data.
8/27/15	Pacific Walrus		FB	PAWA. TLC Data.
8/27/15	Pelagic Cormorant		WM	BLKI, PECO, CORA. TLC Data.
8/27/15	Steller Sea lion		EC	STSL, present. TLC Data.
8/28/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/28/15	Pacific Walrus		FB	PAWA. TLC Data.
8/28/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/28/15	Steller Sea lion		EC	STSL, HOPU, present. TLC Data.
8/29/15	Black-legged kittiwake		WM	BLKI, PECO. TLC Data.
8/29/15	Pacific Walrus		FB	PAWA. TLC Data.
8/29/15	Pacific Walrus		MB	PAWA. TLC Data.
8/29/15	Pelagic Cormorant		WM	BLKI, PECO. TLC Data.
8/29/15	Steller Sea lion		EC	STSL, present. TLC Data.
8/30/15	Black-legged kittiwake		WM	BLKI, PECO, CORA. TLC Data.
8/30/15	Black-legged kittiwake		EC	present 1730–1830. TLC Data.
8/30/15	Common raven		WM	BLKI, PECO, CORA. TLC Data.
8/30/15	Pacific Walrus		FB	PAWA. TLC Data.
8/30/15	Pelagic Cormorant		WM	BLKI, PECO, CORA. TLC Data.
8/31/15	Black-legged kittiwake		WM	BLKI, PECO, CORA, COMU. TLC Data.
8/31/15	Common murre		WM	BLKI, PECO, CORA, COMU. TLC Data.
8/31/15	Common raven		WM	BLKI, PECO, CORA, COMU. TLC Data.
8/31/15	Pacific Walrus		FB	PAWA, UNGU. TLC Data.
8/31/15	Pelagic Cormorant		WM	BLKI, PECO, CORA, COMU. TLC Data.
8/31/15	Steller Sea lion		EC	STSL, present. TLC Data.
8/31/15	Unknown gull		FB	PAWA, UNGU. TLC Data.
9/1/15	Common raven		MB	CORA. TLC Data.
9/1/15	Common raven		WM	CORA. TLC Data.
9/1/15	Horned Puffin		EC	HOPU, UNPU, present. TLC Data.
9/1/15	Pacific Walrus		FB	PAWA, UNGU. TLC Data.
9/1/15	Unknown gull		FB	PAWA, UNGU. TLC Data.

Date	Species	Number	Location[a]	Comments[b]
9/2/15	Common raven		MB	CORA. TLC Data.
9/2/15	Pacific Walrus		FB	PAWA. TLC Data.
9/2/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/3/15	Common raven		WM	CORA. TLC Data.
9/3/15	Pacific Walrus	3	FB	PAWA in water around central rock 1900–2030, UNGU @ 2100. TLC Data.
9/3/15	Red Fox	1	FB	REFO @ 1300. TLC Data.
9/3/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/4/15	Black-legged kittiwake		WM	CORA, BLKI, PECO, UNGU. TLC Data.
9/4/15	Common raven		MB	CORA. TLC Data.
9/4/15	Common raven		WM	CORA, BLKI, PECO, UNGU. TLC Data.
9/4/15	Pacific Walrus		FB	PAWA. TLC Data.
9/4/15	Pelagic Cormorant		WM	CORA, BLKI, PECO, UNGU. TLC Data.
9/4/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/4/15	Unknown gull		WM	CORA, BLKI, PECO, UNGU. TLC Data.
9/5/15	Common raven		WM	CORA, UNGU. TLC Data.
9/5/15	Pacific Walrus		FB	PAWA, UNGU. TLC Data.
9/5/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/5/15	Unknown gull		FB	PAWA, UNGU. TLC Data.
9/5/15	Unknown gull		WM	CORA, UNGU. TLC Data.
9/6/15	Pacific Walrus		FB	PAWA. TLC Data.
9/7/15	Common raven		MB	CORA. TLC Data.
9/7/15	Common raven		WM	CORA. TLC Data.
9/7/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/8/15	Common raven		MB	CORA. TLC Data.
9/8/15	Common raven		WM	CORA, UNGU. TLC Data.
9/8/15	Pacific Walrus	1	FB	ONE PAWA HAULED OUT IN VARIOUS PLACES ALONG BEACH 1430–1900. TLC Data.
9/8/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/8/15	Unknown gull		WM	CORA, UNGU. TLC Data.
9/9/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/10/15	Common raven		FB	CORA @ 0930. TLC Data.
9/10/15	Pelagic Cormorant		WM	PECO, UNGU. TLC Data.
9/10/15	Red Fox	1	FB	REFO @ 1830. TLC Data.
9/10/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/10/15	Unknown gull		WM	PECO, UNGU. TLC Data.
9/11/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/12/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/13/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/14/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/15/15	Red Fox	1	FB	REFO @ 1130. TLC Data.
9/15/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/16/15	Steller Sea lion		EC	Number of STSL really increases beginning at 1600 TLC Data.
9/17/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/17/15	Unknown gull		WM	UNGU. TLC Data.
9/18/15	Common raven		WM	CORA, UNGU. TLC Data.
9/18/15	Steller Sea lion		EC	Unsure of STSL lack of use; beautiful weather calm seas yet no use at V1 & TB these days. TLC Data.
9/18/15	Unknown gull		WM	CORA, UNGU. TLC Data.
9/19/15	Steller Sea lion		EC	1 STSL @ 2030 on V1. Unsure of STSL lack of use; beautiful weather calm seas yet no use at V1 & TB these days. TLC Data.
9/20/15	Bald Eagle	2	MB	1–2 BAEA 1330–1900. TLC Data.
9/20/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/20/15	Unknown gull		WM	UNGU. TLC Data.

Date	Species	Number	Location[a]	Comments[b]
9/21/15	Bald Eagle	1	MB	1 BAEA 1400–1900. TLC Data.
9/21/15	Red Fox	1	FB	REFO @ 1430. TLC Data.
9/21/15	Steller Sea lion		EC	1 STSL @ 2000 on V1. Unsure of STSL lack of use; beautiful weather calm seas yet no use at V1 & TB these days. TLC Data.
9/22/15	Bald Eagle	1	MB	BAEA 1600–1700. TLC Data.
9/22/15	Pacific Walrus		MB	PAWA. TLC Data.
9/22/15	Steller Sea lion		EC	Unsure of STSL lack of use; beautiful weather calm seas yet no use at V1 & TB these days. TLC Data.
9/23/15	Steller Sea lion		EC	Unsure of STSL lack of use; beautiful weather calm seas yet no use at V1 & TB these days. TLC Data.
9/24/15	Steller Sea lion		EC	few STSL thru day. TLC Data.
9/24/15	Unknown gull		FB	UNGU @ 1430. TLC Data.
9/24/15	Unknown gull		WM	UNGU. TLC Data.
9/25/15	Pacific Walrus	1	FB	1 PAWA stops by @ 1130. TLC Data.
9/25/15	Steller Sea lion		EC	few STSL thru day. Stormy TLC Data.
9/26/15	Steller Sea lion		EC	STSL use @ V1 increases beginning at 1600 TLC Data.
9/27/15	Pacific Walrus	1	FB	1 PAWA stops by @ 1400. TLC Data.
9/27/15	Steller Sea lion		EC	STSL numbers increase TLC Data.
9/28/15	Common raven		MB	CORA @ 1030 & 1630. TLC Data.
9/28/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/29/15	Bald Eagle	2	MB	2 BAEA @ 1530–1830, CORA @ 1530. TLC Data.
9/29/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/30/15	Bald Eagle	1	MB	1 BAEA @ 2000–2030. TLC Data.
9/30/15	Steller Sea lion		EC	STSL, present. TLC Data.
9/30/15	Unknown gull		WM	UNGU. TLC Data.
10/1/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/2/15	Common raven	1	MB	1 CORA @ 1330. TLC Data.
10/2/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/3/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/4/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/4/15	Unknown gull		WM	UNGU. TLC Data.
10/5/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/6/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/6/15	Unknown gull		FB	UNGU 0930–1000. TLC Data.
10/7/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/8/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/9/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/10/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/11/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/12/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/13/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/14/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/15/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/16/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/17/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/18/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/19/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/20/15	Steller Sea lion		EC	STSL, present. TLC Data.
10/21/15	Steller Sea lion		EC	STSL Starting to use Third Beach area also. TLC Data.
10/22/15	Steller Sea lion		EC	STSL Starting to use Third Beach area also. TLC Data.
10/23/15	Steller Sea lion		EC	STSL Using V1 & TB. TLC Data.
10/24/15	Steller Sea lion		EC	STSL Using V1 & TB. TLC Data.
10/25/15	Steller Sea lion		EC	STSL Using V1 & TB. TLC Data.
10/26/15	Steller Sea lion		EC	STSL Using V1 & TB. TLC Data.

Date	Species	Number	Location[a]	Comments[b]
10/27/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
10/28/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
10/29/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
10/30/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
10/31/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
11/1/15			EC	Wind & rain. TLC Data.
11/2/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
11/3/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
11/4/15	Steller Sea lion		EC	STSL using TB. TLC Data.
11/5/15	Steller Sea lion		EC	STSL using TB. TLC Data.
11/6/15	Steller Sea lion		EC	STSL using TB. TLC Data.
11/7/15	Steller Sea lion		EC	STSL using TB. TLC Data.
11/8/15	Steller Sea lion		EC	STSL using TB. Wind & Rain. TLC Data.
11/9/15	Steller Sea lion		EC	STSL using TB. Wind & Rain. TLC Data.
11/10/15			EC	Snow overnight TLC Data.
11/11/15	Steller Sea lion		EC	Snow overnight and during day. STSL using TB. TLC Data.
11/12/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
11/13/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
11/14/15	Pacific Walrus	1	WM	One PAWA hauls out at 1630. TLC Data.
11/14/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
11/15/15	Pacific Walrus	1	WM	One PAWA southern end of beach. TLC Data.
11/15/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
11/16/15	Bald Eagle	1	MB	BAEA @ 1130–1500. TLC Data.
11/16/15	Pacific Walrus	1	WM	One PAWA southern end of beach. TLC Data.
11/16/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
11/17/15	Steller Sea lion		EC	Snow overnight and during day. STSL using TB. TLC Data.
11/18/15	Steller Sea lion		EC	Snow overnight and during day. STSL using TB. TLC Data.
11/19/15	Common raven		MB	CORA @ 1630. TLC Data.
11/19/15			EC	Wind, rough seas & rain. TLC Data.
11/20/15	Steller Sea lion		EC	STSL mainly using TB. TLC Data.
11/21/15	Steller Sea lion		EC	Snow overnight. STSL mainly using TB, but some at V1 rx. TLC Data.
11/22/15	Steller Sea lion		EC	Snow overnight. STSL mainly using TB, but some at V1 rx. TLC Data.
11/23/15			EC	Wind, rough seas & rain. TLC Data.
11/24/15			EC	Wind, rough seas & rain calming later. TLC Data.
11/25/15	Common raven		MB	CORA @ 1630. TLC Data.
11/25/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
11/26/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
11/27/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
11/28/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
11/28/15	Unkown guillemot		FB	UNGI @ 1630. TLC Data.
11/29/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
11/29/15			FB	unknown mammal or gull @ 1200, center left in photo. TLC Data.
11/30/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/1/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/2/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/3/15			EC	Camera lens iced up, no data. TLC Data.
12/4/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/5/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/6/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/7/15	Steller Sea lion		EC	STSL using V1 & ?. TLC Data.

Date	Species	Number	Location[a]	Comments[b]
12/8/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/9/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/10/15	Steller Sea lion		EC	STSL using V1 & TB. BAEA @ 1330. TLC Data.
12/11/15	Steller Sea lion		EC	Snow overnight and thru day. STSL using V1 & ?. TLC Data.
12/12/15	Steller Sea lion		EC	STSL using V1 & TB. BAEA @ 1430. TLC Data.
12/13/15	Steller Sea lion		EC	Snow overnight and in AM; high seas, with ice pack moving in late afternoon. Only a few STSL visible on V1 early in day. TLC Data.
12/14/15			EC	High winds, rain, camera blurred most of day. TLC Data.
12/15/15			EC	High winds, rain, camera blurred most of day. TLC Data.
12/16/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/17/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/17/15	Unkown guillemot		FB	UNGI in AM. TLC Data.
12/18/15	Steller Sea lion		EC	STSL using V1 & TB. Snow overnight and thru day. TLC Data.
12/19/15			EC	Camera obscured by snow most of day. High seas. TLC Data.
12/20/15	Steller Sea lion		EC	STSL not discernable. TLC Data.
12/20/15	Steller Sea lion	1	FB	STSL @ 1700. TLC Data.
12/21/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/22/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/23/15			EC	Camera obscured by ice/snow. TLC Data.
12/24/15			EC	Camera obscured by ice/snow. TLC Data.
12/25/15	Steller Sea lion		EC	High seas, STSL not discernable. TLC Data.
12/26/15	Steller Sea lion		EC	Brash ice in morning, High seas later, STSL not discernable. TLC Data.
12/27/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/28/15	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
12/29/15	Steller Sea lion		EC	High seas, STSL not discernable. TLC Data.
12/30/15	Steller Sea lion		EC	High seas and camera blur, STSL not discernable. TLC Data.
12/31/15	Steller Sea lion		EC	Snow overnight. STSL mainly using TB, but some at V1 rx. TLC Data.
1/1/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/2/2016	Steller Sea lion		EC	High seas and camera blur, STSL not discernable. TLC Data.
1/3/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/4/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/5/2016	Steller Sea lion		EC	STSL using V1 & ??. Rain, high seas, camera blur; TB use undetermined TLC Data.
1/6/2016	Steller Sea lion		EC	STSL using V1 & TB. Light snow overnight. TLC Data.
1/6/2016	Unknown gull		FB	UNGU @ 1730. TLC Data.
1/7/2016	Steller Sea lion		EC	STSL using V1 & TB. Light snow overnight and during day. TLC Data.
1/8/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/9/2016	Steller Sea lion		EC	STSL using V1 TLC Data.
1/10/2016	Steller Sea lion		EC	STSL using V1 & ??. Snow overnight and thru day. TB use undiscernable. TLC Data.
1/11/2016	Steller Sea lion		EC	STSL using V1 & TB. Snow overnight and thru day , camera partially obscured. TLC Data.
1/12/2016	Steller Sea lion		EC	STSL using V1 & TB. Camera obscured by snow in AM. TLC Data.

Date	Species	Number	Location[a]	Comments[b]
1/13/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/14/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/15/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/16/2016	Common raven		MB	CORA @ 1830. TLC Data.
1/16/2016	Steller Sea lion		EC	STSL using V1 & TB. Seems like less use at TB last week or so. Overcast in evening. TLC Data.
1/17/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/18/2016	Pacific Walrus	1	MB	1 PAWA comes ashore stays the day. TLC Data.
1/18/2016	Steller Sea lion		EC	STSL using V1 & TB. Looks like more use today, waters calmer. TLC Data.
1/19/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/20/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/21/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/22/2016	Steller Sea lion		EC	STSL using V1 & TB. UNEA 1500–1600 (likely immature BAEA) TLC Data.
1/23/2016	Steller Sea lion		EC	STSL using V1 & ??. Snow overnight and thru day, camera partially obscured. TLC Data.
1/24/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/25/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/26/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/27/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
1/28/2016	Steller Sea lion		EC	STSL using V1 & TB. Snow overnight, Camera obscured by snow in AM. TLC Data.
1/29/2016	Steller Sea lion		EC	STSL using V1 & TB. Snow overnight, Camera obscured by snow until late afternoon. TLC Data.
1/30/2016	Steller Sea lion		EC	STSL using V1 & ??. Camera partially obscured by moisture; TB use undiscernable. TLC Data.
1/31/2016	Steller Sea lion		EC	high stormy seas, no use at V1, TB use undiscernable. TLC Data.
2/1/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/2/2016	Pacific Walrus	1	WM	1 PAWA RESTING ON NORTH END OF BEACH. TLC Data.
2/2/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/3/2016	Pacific Walrus	1	WM	1 PAWA resting at base of rock outcrop 1030–1100. TLC Data.
2/3/2016	Steller Sea lion		EC	STSL using V1 & ??. TLC Data.
2/4/2016	Bald Eagle	1	FB	BAEA @ 1230. TLC Data.
2/4/2016	Steller Sea lion		EC	STSL using V1 & ??. TLC Data.
2/5/2016	Pacific Walrus	1	WM	1 PAWA IN WATER OFFSHORE @ 1830. TLC Data.
2/5/2016	Steller Sea lion		EC	Snowed overnight. STSL using V1 & ??. TLC Data.
2/6/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/7/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/8/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/9/2016	Pacific Walrus	1	WM	One PAWA southern end of beach 1800 til dark. TLC Data.
2/9/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/10/2016	Pacific Walrus	1	WM	One PAWA southern end of beach until 1900. TLC Data.
2/10/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/11/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/11/2016	Unkown guillemot		FB	UNGI @ 1730. TLC Data.
2/12/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/13/2016	Steller Sea lion		EC	STSL using V1 & TB. Light snow night prior. TLC Data.
2/14/2016	Bald Eagle		EC	STSL using V1 & TB. CORA 1030 on rock. BAEA on

Date	Species	Number	Location[a]	Comments[b]
				hummock in backgroudn upper right 1130–1200 TLC Data.
2/14/2016	Common raven		EC	STSL using V1 & TB. CORA 1030 on rock. BAEA on hummock in backgroudn upper right 1130–1200 TLC Data.
2/14/2016	Pacific Walrus	3	WM	3 PAWA ON MID BEACH MOST OF DAY, 1 PAWA ON MID BEACH LATE DAY. TLC Data.
2/14/2016	Steller Sea lion		EC	STSL using V1 & TB. CORA 1030 on rock. BAEA on hummock in backgroudn upper right 1130–1200 TLC Data.
2/15/2016	Pacific Walrus	1	WM	1 PAWA ON MID BEACH MOST OF DAY; 1–2 IN WATER ALSO IN AFTERNOON. TLC Data.
2/15/2016	Steller Sea lion		EC	STSL using V1 & TB. Light snow night prior. TLC Data.
2/16/2016	Pacific Walrus	1	FB	ONE PAWA ON RIGHT PART OF BEACH. TLC Data.
2/16/2016	Steller Sea lion		EC	STSL using V1 & ??. Fog most of day, TB use undecernable. TLC Data.
2/17/2016	Steller Sea lion		EC	STSL using V1. Snow night prior and in a.m, camera obscured in morning. TLC Data.
2/18/2016	Steller Sea lion		EC	STSL using V1 & ??. High seas and tide; TB use undetermined. TLC Data.
2/19/2016	Steller Sea lion		EC	STSL using V1 & TB. UNEA on hummock in backgroudn upper right 1530 TLC Data.
2/20/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/21/2016	Steller Sea lion		EC	Snowed overnight. STSL using V1 & TB. TLC Data.
2/22/2016	Pacific Walrus	1	FB	ONE PAWA LAYING ON CENTER OF BEACH 0900–1530. TLC Data.
2/22/2016	Pacific Walrus	1	WM	1 PAWA ON MID BEACH. Moves up beach with tide all morning; rump just visible by rock outcrop @ 1400. TLC Data.
2/22/2016	Steller Sea lion		EC	Rained/Snowed overnight. STSL using V1 & TB. TLC Data.
2/23/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/24/2016	Steller Sea lion		EC	STSL using V1 & TB. TLC Data.
2/25/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
2/25/2016	Steller Sea lion		EC	STSL using V1. TLC Data.
2/26/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
2/26/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
2/27/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
2/27/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
2/28/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
2/28/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
2/29/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
2/29/2016	Steller Sea lion		EC	STSL mainly using V1 TLC Data.
3/1/2016	Bald Eagle		EC	Light snow overnight. STSL mainly @ VI. Mature BAEA @ 1200 on rock right side. TLC Data.
3/1/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/1/2016	Steller Sea lion		EC	Light snow overnight. STSL mainly @ VI. Mature BAEA @ 1200 on rock right side. TLC Data.
3/2/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/2/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/3/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/3/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/4/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/4/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.

Date	Species	Number	Location[a]	Comments[b]
3/5/2016	Bald Eagle		EC	STSL mainly using V1, but also TB. Immature BAEA on rock 1030, then on hummock in background 1100–1230; then back to rock @ 1630. Snow in evening. TLC Data.
3/5/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/5/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB. Immature BAEA on rock 1030, then on hummock in background 1100–1230; then back to rock @ 1630. Snow in evening. TLC Data.
3/6/2016	Bald Eagle		EC	Significant snow night prior. STSL primarily using V1, but some at TB. BAEA on rock 1300, then on hillside 1330–1930. TLC Data.
3/6/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/6/2016	Steller Sea lion		EC	Significant snow night prior. STSL primarily using V1, but some at TB. BAEA on rock 1300, then on hillside 1330–1930. TLC Data.
3/7/2016	Bald Eagle		EC	Significant snow night prior and during day, camera obscured in morning. STSL primarily using V1, but some at TB. Mature BAEA on hillside 1700–1800. TLC Data.
3/7/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/7/2016	Steller Sea lion		EC	Significant snow night prior and during day, camera obscured in morning. STSL primarily using V1, but some at TB. Mature BAEA on hillside 1700–1800. TLC Data.
3/8/2016	Pacific Walrus	1	FB	1 PAWA stops by @ 1300. TLC Data.
3/8/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/8/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/9/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/9/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB. Mature BAEA on hillock in background. 1130–1200. TLC Data.
3/9/2016	Unknown marine mammal	1	FB	UNMM @ 1530. TLC Data.
3/10/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/10/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/11/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/11/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/12/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/12/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/13/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/13/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/14/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/14/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/15/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/15/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/16/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/16/2016	Steller Sea lion		EC	STSL using V1, TB use undetermined snowing thru day camera gradually gets obscured. TLC Data.
3/17/2016	Pacific Walrus		WM	PAWA group present, see count data. Group size a lot smaller today. TLC Data.
3/17/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/18/2016	Bald Eagle		EC	STSL mainly using V1, but also TB. Mature BAEA on rock, 1230. Imm. BAEA on rock in background 1400–1500. TLC Data.
3/18/2016	Pacific Walrus	2	WM	PAWA group gone, but 2 PAWA offshore @ 1600. TLC Data.

Date	Species	Number	Location[a]	Comments[b]
3/18/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB. Mature BAEA on rock, 1230. Imm. BAEA on rock in background 1400–1500. TLC Data.
3/19/2016	Pacific Walrus	2	WM	2 PAWA OFFSHORE AT 1400, 1 ON BEACH 1500–2100. TLC Data.
3/19/2016	Steller Sea lion		EC	STSL using V1 and TB TLC Data.
3/20/2016	Bald Eagle		EC	STSL using V1 and TB. Imm. BAEA on rock 1130. TLC Data.
3/20/2016	Pacific Walrus	1	WM	1 PAWA ON UPPER BEACH ALL DAY, 1 IN WATER AT NORTH END 1700–1800. REFO @1530. TLC Data.
3/20/2016	Steller Sea lion		EC	STSL using V1 and TB. Imm. BAEA on rock 1130. TLC Data.
3/21/2016	Steller Sea lion		EC	Snow night prior, mixec snow/rain thru day. STSL using V1 and TB. TLC Data.
3/22/2016	Bald Eagle		EC	STSL using V1 and TB. Imm. BAEA on hummock in background 1500–1600. TLC Data.
3/22/2016	Pacific Walrus	2	WM	2 PAWA OFFSHORE AT NOON, 3 HAULED OUT AT NORTH END BY 1600, MORE HAULING OUT MID BEACH BY 1830. TLC Data.
3/22/2016	Steller Sea lion		EC	STSL using V1 and TB. Imm. BAEA on hummock in background 1500–1600. TLC Data.
3/23/2016	Gray Whale	12	RI	On Approach to RI. Benthic feeding mud clouds behind whales
3/23/2016	Harlequin Duck	20	BC	
3/23/2016	Pacific Walrus	240	MB	Viewed from air during approach
3/23/2016	Pacific Walrus		WM	PAWA GROUP MID BEACH GROWS THRU DAY. TLC Data.
3/23/2016	Steller Sea lion		EC	STSL using V1 and TB TLC Data.
3/23/2016	sparrow sp?	2	cabin	
3/24/2016	Pacific Walrus		WM	PAWA GROUP MID BEACH GROWS THRU DAY. SNOWING LATE AFTERNOON. TLC Data.
3/24/2016	Steller Sea lion		EC	STSL using V1 and TB TLC Data.
3/25/2016	Bald Eagle	1	BC	
3/25/2016	Bald Eagle		EC	STSL using V1 and TB. Imm. BAEA on rock 1900. TLC Data.
3/25/2016	Common Raven	2	cabin	
3/25/2016	Gray Whale	8	RI	On Approach to RI.
3/25/2016	Pacific Walrus		WM	PAWA group present, see count data. TLC Data.
3/25/2016	Red Fox	2	cabin	
3/25/2016	Steller Sea lion	20+	cabin	
3/25/2016	Steller Sea lion		EC	STSL using V1 and TB. Imm. BAEA on rock 1900. TLC Data.
3/26/2016	Gray Whale	25+	RI	On Approach to RI.
3/26/2016	Pacific Walrus		WM	FEWER PAWA TODAY; ALL PAWA LEAVE BETWEEN 1700 AND 1730. TLC Data.
3/26/2016	Steller Sea lion		EC	STSL using V1 and TB TLC Data.
3/27/2016	Glaucous Wing Gull	2	EC	
3/27/2016	Pelagic Cormorant	3	EC	
3/27/2016	Steller Sea lion		EC	STSL using V1 and TB. Snow thru afternoon/evening. RPM changes card 2000. TLC Data.
3/27/2016			RI	Storm rolls in hard, blizzard, 4" snow to sea. Check on DSLR camera
3/28/2016	Pacific Walrus	2	WM	2 PAWA ON BEACH IN AFTERNOON, 1 BY EVENING. TLC Data.
3/28/2016	Pigeon Guillemot	8	FB	

Date	Species	Number	Location[a]	Comments[b]
3/28/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/28/2016			RI	Woke up to ASH from Pavlof Volcano
3/29/2016	Common Murre	1	BC	
3/29/2016	Long-tailed Duck	4	cabin	
3/29/2016	Pacific Walrus		WM	NO PAWA TODAY. TLC Data.
3/29/2016	Steller Sea lion		EC	STSL mainly using V1, but also TB TLC Data.
3/29/2016	White-winged Scoter	12	MB	
3/30/2016	Gray Crowned Rosy Finch	1	NBC	
3/30/2016	Gray Whale	3	EC	
3/30/2016	Harbor Seal	1	CG	
3/30/2016	Pacific Walrus	4	WM	3–4 PAWA MID WAY ON BEACH, HERD GROWS THRU DAY. TLC Data.
3/30/2016	Snow Bunting	7	cabin	
3/30/2016	Steller Sea lion		EC	Snow overnight. STSL mainly mainly using V1, but also TB TLC Data.
3/30/2016	sparrow sp?	1	cabin	
3/30/2016			RI	Socked in bad weather, clean cabin
3/31/2016	Pacific Walrus		WM	PAWA SPOOKED OFF BY HELO ABOUT 1130, SOME STILL IN WATER OFFSHORE. START REHAULING BY NOON. HEARD GROWS THRU DAY. MAY HAVE BEEN SLIGHT DIST BETWEEN 1530–1600. TLC Data.
3/31/2016	Red Fox	3	MB	
3/31/2016	Steller Sea lion		EC	STSL mainly mainly using V1, but also TB TLC Data.
4/1/2016	Steller Sea lion		EC	STSL using V1 and TB TLC Data.
4/2/2016	Common raven		EC	STSL using V1 and TB. CORA on hummock behind rock @ 1430. TLC Data.
4/2/2016	Steller Sea lion		EC	STSL using V1 and TB. CORA on hummock behind rock @ 1430. TLC Data.
4/3/2016	Common raven		EC	STSL using V1 and TB. Stormy seas. CORA on rock at 1630. TLC Data.
4/3/2016	Steller Sea lion		EC	STSL using V1 and TB. Stormy seas. CORA on rock at 1630. TLC Data.
4/4/2016	Steller Sea lion		EC	STSL using V1 and TB. UNGU over TB @ 2000 TLC Data.
4/4/2016	Unknown gull		EC	STSL using V1 and TB. UNGU over TB @ 2000 TLC Data.
4/5/2016	REd Fox		EC	STSL using V1 and TB. REFO on hillside @ @ 1930 TLC Data.
4/5/2016	Steller Sea lion		EC	STSL using V1 and TB. REFO on hillside @ @ 1930 TLC Data.
4/6/2016	Steller Sea lion		EC	STSL using V1 and TB. UNGU @ 1100 TLC Data.
4/6/2016	Unknown gull		EC	STSL using V1 and TB. UNGU @ 1100 TLC Data.
4/7/2016	Pacific Walrus	1	FB	1 PAWA on beach 0730–2200. TLC Data.
4/7/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/8/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/9/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/10/2016	Bald Eagle		EC	TLC data. BAEA immature perched on rock 1700. BLKI 0900–0930.
4/10/2016	Black-legged kittiwake		EC	TLC data. BAEA immature perched on rock 1700. BLKI 0900–0930.
4/10/2016	Steller Sea lion		EC	STSL present. TLC Data.
4/11/2016	Black-legged kittiwake		EC	TLC data.
4/11/2016	Pacific Walrus	1	FB	1 PAWA 2000–dark. TLC Data.
4/11/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.

Date	Species	Number	Location[a]	Comments[b]
4/12/2016	Black-legged kittiwake		EC	More BLKI in. STSL using V1 and TB. CORA on rock 1330. TLC Data.
4/12/2016	Common raven		EC	More BLKI in. STSL using V1 and TB. CORA on rock 1330. TLC data.
4/12/2016	Steller Sea lion		EC	More BLKI in. STSL using V1 and TB. CORA on rock 1330. TLC Data.
4/13/2016	Black-legged kittiwake		EC	TLC data.
4/13/2016	Pelagic Cormorant		EC	TLC data.
4/13/2016	Pelagic Cormorant	2	FB	PECO @ 0900. TLC Data.
4/13/2016	Pigeon Guillemot		FB	Multiple PIGU 0830–1100. TLC Data.
4/13/2016	Steller Sea lion		EC	STSL using V1 and TB. BLKI and PECO in AM. TLC Data.
4/13/2016	Unknown gull	1	FB	UNGU @ 1100. TLC Data.
4/14/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/15/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/16/2016	Pacific Walrus	1	FB	1 PAWA 1200–1730. TLC Data.
4/16/2016	Steller Sea lion		EC	STSL using V1 and TB. Distant BAEA and REFO @ 1130 TLC Data.
4/17/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/18/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/19/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/20/2016	Black Legged Kittiwake	100+	MB	Nesting on cliffs along MB, Plots 1–5
4/20/2016	Gray Whale	3	EC	
4/20/2016	Red Fox	2	cabin	
4/20/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/21/2016	Gray Whale	1	EC	
4/21/2016	Lapland Longspur	2	EC	
4/21/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/21/2016	bitter cress	lots	EC	blooming abundantly (confusion abt which "cress")
4/21/2016	marsh violet	lots	FB	blooming abundantly
4/22/2016	Red Fox	1	EC	
4/22/2016	Rough Legged Hawk	1	cabin	
4/22/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/23/2016	Bald Eagle		EC	TLC data.
4/23/2016	Gray Whale	lots	RI	nearshore offshore of EC & cabin, all over
4/23/2016	Parakeet Auklet		cabin	
4/23/2016	Pigeon Guillemot	2		photos
4/23/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/23/2016	marsh violet			photo, blooming
4/23/2016	marsh violet			photo, blooming
4/24/2016	Gray Whale	1	cabin	
4/24/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/24/2016	willow	1	EC	blooming
4/24/2016	wooly lousewort	1	EC	starting to bloom
4/25/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/25/2016			RI	STORM
4/25/2016	arctic dock	1	EC	blooming
4/25/2016	corydalis	1	EC	blooming
4/26/2016	Bald Eagle		EC	TLC data.
4/26/2016	Steller Sea lion		EC	STSL using V1 and TB. Mature BAEA on rock 2030–2100 TLC Data.
4/27/2016	American Pipit	1		photos
4/27/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/27/2016	lupine			photo, blooming
4/27/2016	purple lupine	1	EC	blooming

Date	Species	Number	Location[a]	Comments[b]
4/27/2016	rose root	1	EC	blooming
4/27/2016	wooly lousewort		EC	photo, blooming
4/28/2016	Bald Eagle	1	cabin	Juvenile
4/28/2016	Gray Crowned Rosy Finch	1		photo
4/28/2016	Grey Crowned Rosy Finch	1	MB	
4/28/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/28/2016	sparrow?		EC	
4/28/2016	coltsfoot	1	EC	starting to bloom
4/28/2016	forget-me-not	lots	EC	blooming
4/28/2016	wooly lousewort		EC	photo, blooming
4/29/2016	American Tree Sparrow		cabin	
4/29/2016	Short Eared Owl		BC	
4/29/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/29/2016	forget-me-not			photo, blooming
4/29/2016	ground willow	lots	EC	blooming
4/29/2016	spring beauty	1	EC	blooming
4/30/2016	American Pipit	1		photos
4/30/2016	Bald Eagle	1		photo
4/30/2016	Gray Whale		EC	
4/30/2016	Parakeet Auklet	15		photos
4/30/2016	Steller Sea lion		EC	STSL using V1 and TB. TLC Data.
4/30/2016	arctic dock	1		flower heads forming
4/30/2016	bearing chickweed	lots	EC	blooming
4/30/2016	bitter cress			photo, blooming
4/30/2016	cloudberry	lots	EC	blooming
4/30/2016	cuckoo flower		SB	blooming
4/30/2016	narcissus flowered anemone	lots	EC	blooming
5/1/2016	American Pipit	1	EC	
5/1/2016	Bald Eagle	1	CG	adult
5/1/2016	Gray Crowned Rosy Finch	1		photo
5/1/2016	Gray Whale	1	FB	
5/1/2016	Northern Harrier	1	cabin	Male
5/1/2016	Rough Legged Hawk	1		Photos
5/1/2016	Savannah Sparrow	2	cabin	photos
5/1/2016	wooly lousewort		EC	photo, blooming
5/1/2016	yellow anemone		FB	blooming
5/2/2016	Aleutian Heather	1	EC	blooming
5/2/2016	forget-me-not			photo, blooming
5/2/2016	Garden sorrel			photo, budding
5/2/2016	narcissus flowered anemone			photo, blooming
5/3/2016	American Pipit	1		photos
5/3/2016	Gray Whale	1	EC	
5/3/2016	corydalis			photo, blooming
5/3/2016	forget-me-not			photo, blooming
5/4/2016	American Pipit	1		photos
5/4/2016	Gray Whale	3	EC	Grey Whale playing with STSL
5/4/2016	Harlequin Duck	5		photo
5/5/2016	Common Raven	1		photo
5/5/2016	Alaska violet			photo, blooming
5/5/2016	black oxytrope	1	EC	blooming
5/5/2016	black oxytrope	1		blooming

Date	Species	Number	Location[a]	Comments[b]
5/5/2016	cuckoo flower			photo, blooming
5/5/2016	marsh violet			photo, blooming
5/6/2016	American Pipit	1		photos
5/6/2016	Gray Whale	2	EC	Grey Whale playing with STSL
5/6/2016	Harlequin Duck	3		photo, 2 female 1 male
5/6/2016	Pigeon Guillemot	10		photos
5/6/2016	black oxytrope	1		blooming
5/7/2016	Golden Crowned Sparrow	1	EC	
5/7/2016	Harlequin Duck	2		photo, pair
5/7/2016	Parakeet Auklet	20		photos
5/7/2016	Pelagic Cormorant	1	MB	First Egg!
5/7/2016	Pigeon Guillemot	2		photos
5/8/2016	Northern Harrier	1	cabin	Female
5/8/2016	Tufted Puffin	1	MB	
5/8/2016	Winter Cress	lots	EC	blooming
5/9/2016	Golden Crowned Sparrow	1	EC	photo
5/9/2016	Red Fox	1	EC	TLC data. Red fox @ 1400.
5/9/2016	Tufted Puffin		EC	TLC data. Tufted puffins show up at East Cape, 1000.
5/10/2016	Golden Crowned Sparrow	1		photo
5/10/2016	purple cress	1	BC	blooming
5/10/2016	rose root			photo, blooming
5/11/2016	American Pipit	1		photos
5/11/2016	Hermit Thrush	1		photo,
5/11/2016	sparrow sp?	1	EC	
5/11/2016	Alaska violet			photo, blooming
5/11/2016	arctic dock	1		blooming
5/11/2016	black oxytrope	1		blooming
5/11/2016	cuckoo flower			photo, blooming
5/11/2016	forget-me-not			photo, blooming
5/11/2016	lupine			photo, blooming
5/11/2016	marsh violet			photo, blooming
5/11/2016	narcissus flowered anemone			photo, blooming
5/11/2016	wild geranium			photo, blooming
5/11/2016	willow			blooming
5/11/2016	wooly lousewort		EC	photo, blooming
5/11/2016	yellow anemone			photo, blooming
5/11/2016	yellow violet			photo, blooming
5/12/2016	American Pipit	1		photos
5/12/2016	Gray Crowned Rosy Finch	1		photo
5/12/2016	Golden Crowned Sparrow	2	cabin	Trying to get into cabin. Hollering, Possibly nesting.
5/12/2016	Gray Whale	1	EC	interacting with STSL
5/12/2016	Humpback Whale	1	cabin	? Non-grey whale? Small hooked dorsal fin no photo
5/12/2016	Horned Puffin	4	cabin	
5/12/2016	Hoary Redpoll	1	EC	
5/12/2016	Parakeet Auklet	2		photos, on nesting cliffs
5/12/2016	Pigeon Guillemot	11		photos
5/12/2016	Sandhill Crane (lesser)	2	EC	Flying over island
5/12/2016	bitter cress			photo, blooming
5/12/2016	black oxytrope	1		blooming
5/12/2016	dwarf dogwood		EC	blooming

Date	Species	Number	Location[a]	Comments[b]
5/12/2016	rose root			photo, blooming
5/13/2016	Bald Eagle	2	SLP	courting, SeaLion Point
5/13/2016	Common Raven	1		photo
5/13/2016	Common Raven	1		photo
5/13/2016	Gray Crowned Rosy Finch	1		photo
5/13/2016	Golden Crowned Sparrow	1		photo
5/13/2016	Northern Harrier	1		photo, past East Cape on way to Sea Lion Pt.
5/13/2016	Pacific Walrus	1	MB	3 tusks
5/13/2016	Savannah Sparrow			Photos
5/13/2016	White Crowned Sparrow	1	EC	
5/13/2016	cinquefoil	1	EC	blooming
5/13/2016	coltsfoot			photo, blooming
5/13/2016	wild geranium	1	EC	blooming
5/14/2016	Bald Eagle	1		photo
5/14/2016	Gray Whale	1	cabin	
5/14/2016	Savannah Sparrow			Photos
5/14/2016	White-winged Scoter	10	EC	
5/14/2016	black oxytrope	1		blooming
5/14/2016	bog rosemary			photo, blooming
5/14/2016	brook saxifrage	1	EC	blooming
5/14/2016	chocolate lily	many	EC	blooming
5/14/2016	dwarf dogwood			photo, blooming
5/14/2016	Labrador tea	lots	EC	blooming
5/14/2016	Tall Jacobs ladder	1	EC	blooming
5/15/2016	Dark eyed Junco	1	EC	no photo
5/15/2016	Horned Puffin	1		photo
5/15/2016	Tall Jacobs ladder			photo, blooming
5/15/2016	wedge leaved primrose	1	TT	blooming
5/16/2016	American Pipit	1		photos
5/16/2016	Bald Eagle	1		photo
5/16/2016	Golden Crowned Sparrow	1		photo
5/16/2016	Gray Whale	1	NBC	calf or juvenile (smaller)
5/16/2016	Horned Puffin	2		photo
5/16/2016	Northern Harrier	1	EC	female
5/16/2016	Pacific Walrus	1	MB	young walrus
5/16/2016	Savannah Sparrow			Photos
5/16/2016	Tree Swallow	2	cabin	male and female
5/16/2016	Wandering tattler	1	FB	
5/16/2016	White Crowned Sparrow	1	FB	photos. FB power stand, and adjacent willows.
5/16/2016	Cloud berry	1	EC	blooming
5/16/2016	pink plumes	1	EC	blooming
5/16/2016	star flower	1	EC	blooming
5/17/2016	Common Raven	1		photo
5/17/2016	Gray Crowned Rosy Finch	1		photo
5/17/2016	Grey Crowned Rosy Finch	1	EC	
5/17/2016	Savannah Sparrow			Photos
5/17/2016	rock jasmine	1	NBC	
5/18/2016	Glaucous Wing Gull	1		photo
5/18/2016	Harbor Seal	1	MB	dead, decomposed, pictures taken, not ssl

Date	Species	Number	Location[a]	Comments[b]
5/19/2016	Peregrine Falcon	2	cabin	small ones "not positive" bad photos
5/19/2016	Dark Morph Rough legged hawk	1	BC	no photo not positive, checked against photo from 2015
5/19/2016	Savannah Sparrow			Photos
5/19/2016	Savannah Sparrow			Photos
5/21/2016	Gray Crowned Rosy Finch	1		photo
5/21/2016	Gray Crowned Rosy Finch	1		photo
5/21/2016	Northern Pintail	1	FB	flushed male out of willows
5/21/2016	Savannah Sparrow			Photos
5/21/2016	Wandering tattler	2	SB	pretty call
5/22/2016	Common Murre	lots	MB	on plots and numerous rafts
5/22/2016	Common Raven	1	MB	eating an adult kittiwake
5/23/2016	American Pipit	1		photos
5/23/2016	Golden Crowned Sparrow	1		photo
5/23/2016	Horned Puffin	2	BC	photo
5/23/2016	Parakeet Auklet	6		photos, on rocky shoreline
5/23/2016	Red Fox	1	cabin	mother with visible teats
5/23/2016	Red Fox	1	FP/SB	eating an adult auklet
5/23/2016	rock jasmine			photo, blooming
5/23/2016	star flower			photo, blooming
5/24/2016	Golden Crowned Sparrow	1	FB	photo, along trail near FB
5/24/2016	Hermit Thrush	1		first photo, identified later
5/24/2016	Horned Puffin	2		photo
5/24/2016	Orange Crowned Warbler	1	FP	in the willows
5/24/2016	Parakeet Auklet	6		photos, 2–4 in multiple photos.
5/24/2016	Savannah Sparrow			Photos
5/24/2016	bog rosemary	1	EC	
5/24/2016	valerian	1	EC	V1 ledge
5/25/2016	Bald Eagle	1		photo
5/25/2016	Horned Puffin	3		photo, 3 on cliffs with 6 TUPU
5/25/2016	Pacific Walrus	1	FB	injury - photo
5/26/2016	American Pipit	1		photos
5/26/2016	Common Redpoll	1	cabin	photo
5/26/2016	Common Redpoll	1	EC	V1 ledge
5/26/2016	Golden Crowned Sparrow	1		photo
5/26/2016	Gray Whale	1	FB	Last gray whale seen
5/26/2016	Savannah Sparrow			Photos
5/26/2016	Wilson's Warbler	1	FB	
5/26/2016	Alaska violet			photo, blooming
5/26/2016	black and orange moth	1	EC	V1 ledge
5/26/2016	chocolate lily			blooming
5/26/2016	langsdorff's lousewort	1	SP	blooming
5/27/2016	Common Redpoll	1	CAMP	photo
5/28/2016	Montane Shrew	1	CG	dead on trail CG
5/28/2016	Gray Crowned Rosy Finch	1		photo
5/28/2016	Harlequin Duck	1		photo, female
5/28/2016	Pacific Wren	1	EC	photo
5/28/2016	Savannah Sparrow			Photos
5/28/2016	Alaska poppy	1	NBC	blooming

Date	Species	Number	Location[a]	Comments[b]
5/28/2016	chocolate lily			blooming
5/28/2016	goldenrod			photo, blooming
5/28/2016	pink plumes			photo, blooming
5/28/2016	valerian			photo, blooming
5/28/2016	Whorled Lousewort	3	FB	blooming, may have been for a while
5/28/2016	wild geranium			photo, blooming
5/29/2016	Surfbirds	30+	EC	flock flew by
5/29/2016	Alaska poppy			blooming, photo
5/30/2016	Golden Crowned Sparrow	1		photo
5/30/2016	Savannah Sparrow			Photos
5/30/2016	arctic daisy		EC	blooming
5/30/2016	blueberry		EC	blooming
5/30/2016	goldenrod		EC	V1 ledge blooming
5/30/2016	Lapland diapensia		EC	blooming
5/30/2016	lingon berry		EC	blooming
5/30/2016	wild geranium			photo, blooming
5/31/2016	cuckoo flower			photo, blooming
5/31/2016	green saxifrage		CG	blooming
5/31/2016	grove sandwort		CG	blooming
5/31/2016	hairy milk vetch		FR	blooming
5/31/2016	maydells oxytrope		TT	blooming, Explore NBC repeater station
5/31/2016	Mountain Avens		NBC	blooming @ Relay Station above NBC overlook
5/31/2016	pink plumes			photo, blooming
5/31/2016	saxifrage rivulus		WM	blooming first record
5/31/2016	spring beauty			blooming
5/31/2016	star flower			photo, blooming
5/31/2016	wooly lousewort		EC	photo, blooming
6/1/2016	Steller Sea lion	1	EC	V1 ledge. Young of the year pup alone, screaming for mommy
6/1/2016	Warbler (sp?)		CG	Arctic Warbler, poor photo, uncertain
6/1/2016	Cow Parsnip	3	EC	
6/1/2016	green saxifrage			photo, blooming
6/1/2016	grove sandwort			photo, blooming
6/1/2016	Iris	lots	EC	blooming
6/1/2016	Labrador tea	lots		photo, blooming
6/1/2016	Northern Asphodel	1	SP	
6/1/2016	yarrow	1	EC	
6/2/2016	Harlequin Duck	2		photo, 2 males
6/2/2016	Horned Puffin	10		photos, about 10 on cliffs near nesting burrows.
6/2/2016	Pacific Wren	1	EC	singing, sometimes called "winter wren". V1 viewpoint
6/2/2016	Savannah Sparrow		cabin	Photos, on tool shed roof.
6/2/2016	Savannah Sparrow			Photos
6/2/2016	Steller Sea lion	1	EC	V3. Young of the year pup reunited with mom, sounds like "baaa"
6/2/2016	alpine milk vetch	1	EC	Blooming
6/2/2016	dandelion sp?	1	EC	Blooming
6/2/2016	forget-me-not			photo, blooming
6/2/2016	lupine		EC	photo, blooming
6/2/2016	mustard sp?	1	EC	winter cress, some uncertainty about yellow mustards?
6/2/2016	spirea	1	EC	Blooming
6/3/2016	Bald Eagle	1		photo
6/3/2016	Hermit Thrush	1		photo,
6/3/2016	angelica			photos, wild celery blooming
6/3/2016	avens sp?	1	TT	Blooming
6/3/2016	dandelion sp?	1	TT	Blooming

Date	Species	Number	Location[a]	Comments[b]
6/3/2016	lovage	1	EC	V3
6/3/2016	sea beach sandwort	1	EC	V3. uncertain
6/3/2016	yarrow			photo, blooming
6/4/2016	Common Raven	1		photo
6/4/2016	common raven chicks	2	CG	in nest on cliffs down hill in front of cabin
6/4/2016	Hermit Thrush	1	SP	
6/4/2016	Horned Puffin	2		photo,
6/4/2016	Pigeon Guillemot	2		photos
6/4/2016	bog rosemary			photo, blooming
6/4/2016	chocolate lily			blooming
6/4/2016	lovage			photo, budding
6/4/2016	new beach plant sp?	1	BC	several mixed beach greens, unsure which is which see photos
6/4/2016	saxifrage rivulus	many	BC	
6/5/2016	American Pipit	1		photos
6/5/2016	Bald Eagle	1		photo
6/5/2016	Parakeet Auklet	6		photos
6/5/2016	angelica	1	CG	wild celery blooming
6/5/2016	arctic dock	1		blooming
6/5/2016	Garden sorrel			photo, blooming
6/6/2016	common raven chicks	4	CG	2 adults, 2 chicks in nest on cliffs down hill in front of cabin per staff photos.
6/6/2016	Golden Crowned Sparrow	1		photo
6/6/2016	Harlequin Duck	3		photos, 2 males 1 female
6/6/2016	Savannah Sparrow			Photos
6/6/2016	song sparrow	1	SP	uncertain, confirmed with photos 6/7
6/6/2016	angelica			photos, wild celery blooming
6/6/2016	cleavers	1	EC	Blooming
6/6/2016	cotton grass	lots	BC	in bloom
6/6/2016	valerian			photo, blooming
6/6/2016	yellow rattle (eyebright)	1	cabin	Blooming
6/7/2016	Common Raven	1		photo
6/7/2016	Golden Crowned Sparrow	1		photo
6/7/2016	Horned Puffin	1		photo,
6/7/2016	Pigeon Guillemot	2		photos
6/7/2016	Savannah Sparrow			Photos
6/7/2016	song sparrow	1	SP	photos dated 6/7
6/7/2016	cinquefoil			photo, blooming
6/7/2016	dandelions	5+	NBC	blooming & budding, @ Relay Station above NBC overlook
6/7/2016	Garden sorrel			photo, blooming
6/7/2016	Hornmans Fireweed	4	CG	Blooming
6/7/2016	langsdorff's lousewort			photo, blooming
6/7/2016	melandrium	1	NBC	Unknown Melandrium blooming
6/7/2016	Mountain Avens			photo, blooming
6/7/2016	Pearlwort	1	WM	Blooming fairly certain
6/7/2016	Whorled Lousewort			photo, blooming
6/8/2016	Bald Eagle	1		photo
6/8/2016	Golden Crowned Sparrow	1		photo
6/8/2016	Savannah Sparrow			Photos, on Explore power stand above First Beach.
6/8/2016	arctic daisy			photo, blooming
6/8/2016	arctic dock	1		blooming
6/8/2016	Artemisia/arctic	5	EC	budding

Date	Species	Number	Location[a]	Comments[b]
	wormwood			
6/8/2016	Burnet	1	EC	V1ledge. budding
6/8/2016	dragonfly	1	EC	V1ledge
6/8/2016	Dwarf Arctic Bitterweed	3	EC	Blooming
6/8/2016	Fireweed	3	EC	V1ledge. Budding
6/8/2016	Garden sorrel			photo, blooming
6/8/2016	Hornmans Fireweed			photo, blooming
6/8/2016	langsdorff's lousewort			photo, blooming
6/8/2016	Lessing's arnica			photo, blooming
6/8/2016	Whorled Lousewort			photo, blooming
6/9/2016	Alpine Bistort	4	FR	Blooming
6/10/2016	Bald Eagle	1		photo
6/10/2016	Common Raven	1		photo
6/10/2016	Pacific Wren	1	EC	photo
6/10/2016	Savannah Sparrow			Photos
6/10/2016	Dwarf Fireweed/River Beauty	1	SB	Budding
6/11/2016	Spotted Saxifrage	10+	TT	Blooming
6/11/2016	star flower			photo, blooming
6/12/2016	Savannah Sparrow			Photos
6/13/2016	Bald Eagle	1		photo
6/13/2016	blki eggs	2	OP	plot3,4
6/13/2016	comu eggs	2	OP	egg on plot 1 abandoned, plot 1,4
6/13/2016	Savannah Sparrow			Photos
6/13/2016	Mountain Harebell	1	SP	Blooming
6/14/2016	Common Raven	1		photo
6/14/2016	Golden Crowned Sparrow	1		photo
6/14/2016	Savannah Sparrow			Photos
6/14/2016	Mountain Avens			photo, budding
6/14/2016	Yellow Spotted Saxifrage	8	TT	Blooming, NBC Explore repeater site
6/15/2016	Common Redpoll	1		photo
6/15/2016	Golden Crowned Sparrow	1		photo
6/15/2016	Horned Puffin	2		photo,
6/15/2016	Savannah Sparrow			Photos
6/15/2016	cotton grass	lots		in bloom
6/15/2016	Cow Parsnip			photo blooming
6/15/2016	Dwarf Fireweed/River Beauty			photo, blooming
6/15/2016	Iris	lots		photo, blooming
6/15/2016	Monkshood	1	EC	blooming, V1
6/15/2016	potentilla, marsh	lots	FB	blooming
6/15/2016	yarrow			photo, blooming
6/16/2016	Parakeet Auklet	6		photos
6/16/2016	Burnet	1	FB	Blooming
6/16/2016	goldenrod			photo, blooming
6/16/2016	Lessing's arnica	4	SP	Blooming
6/17/2016	Golden Crowned Sparrow	1		photo
6/17/2016	Pacific Wren	1	EC	photo
6/17/2016	Savannah Sparrow			Photos
6/19/2016	blki eggs	4	OP	plot 4
6/19/2016	Glaucous Wing Gull	4		photo

Date	Species	Number	Location[a]	Comments[b]
6/19/2016	Parakeet Auklet	1		photos
6/19/2016	Savannah Sparrow			Photos
6/19/2016	Cow Parsnip			photo blooming
6/19/2016	grass of Parnassus	1 clump	CG	Budding
6/19/2016	Stallaria	many	MB	
6/19/2016	Tall Jacobs ladder			photo, blooming
6/19/2016	Whorled Lousewort			photo, blooming
6/20/2016	Crested Auklet	14	NBC	photos
6/21/2016	Golden Crowned Sparrow	1	cabin	photo, perched on Satellite dish guide wire
6/21/2016	Pacific Wren	1	cabin	photo, perched on towel outside cabin
6/21/2016	Dwarf Arctic Bitterweed			photo, blooming
6/21/2016	Lessing's arnica			photo, blooming
6/21/2016	swamp willow herb	few	BC	blooming
6/21/2016	Yellow Spotted Saxifrage			photo, blooming
6/22/2016	Hermit Thrush	1		photo,
6/22/2016	Parakeet Auklet	18		photos
6/22/2016	Pigeon Guillemot	4		photos
6/22/2016	Mountain Avens			photo, blooming
6/23/2016	Peregrine Falcon	1	OP	OP terrorizing kittiwakes
6/23/2016	Grass of Parnassus	1	CG	Blooming
6/23/2016	hemlock parsley	1	OP	budding
6/24/2016	Hermit Thrush	1		photo,
6/24/2016	Pacific Wren	1	BC	photo
6/24/2016	Savannah Sparrow			Photos
6/24/2016	Agaricus campisetrus		SP	fruiting
6/24/2016	Stallaria			photo, blooming
6/24/2016	Water Blinks	4	BC	Blooming
6/25/2016	Alaska poppy			blooming, photo
6/25/2016	Grass of Parnassus	1		photo, blooming
6/25/2016	langsdorff's lousewort			photo, blooming
6/25/2016	lovage			photo, blooming
6/25/2016	Water Blinks			photo blooming
6/25/2016	Whorled Lousewort			photo, blooming
6/25/2016	Yellow Spotted Saxifrage			photo, blooming
6/26/2016	Pacific Wren	1	BC	photo
6/26/2016	Alaska poppy			blooming, photo
6/26/2016	fireweed		EC	Blooming some kind of blight on leaves
6/27/2016	American Pipit	1		photos
6/28/2016	crowberries	lots	SP	ripe
6/29/2016	Pacific Wren	1	BC	photo, perched on boat chain at BC
6/29/2016	unknown sand piper	1	CG	scampering. Originally ID'd unknown sand piper. ID'd post season from photos.
6/29/2016	Hornmans Fireweed			photo, blooming
6/29/2016	yellow monkey flower	lots	OP	blooming, plot4
6/30/2016	Common Redpoll	1		photo
6/30/2016	Gray Crowned Rosy Finch	1		photo
6/30/2016	Horned Puffin	2		photo,
6/30/2016	Pacific Wren	1	EC	photo
7/1/2016	pelagic cormorant	2	SLP	at least 2 nests with chicks, SeaLion Point
7/1/2016	fireweed	lots	EC	blooming abundantly healthy, V1
7/2/2016	common Murre	1	OP	in non breeding plumage, plot5

Date	Species	Number	Location[a]	Comments[b]
7/2/2016	common raven chicks	2	CG	Nest in front of cabin. Gone, appear to have fledged
7/2/2016	Glaucous Wing Gull	3		photo
7/2/2016	Pacific Wren	1		photo,
7/2/2016	red fox	1	MB	stealing eggs on cliffs at plot 4 later passed us with 2 eggs while on MB
7/2/2016	red fox	1	OP	stealing eggs on cliffs at plot 4 later passed us with 2 eggs while on MB
7/2/2016	salmon smolts	2	SP	looked like 2 small salmonids swimming in shallow water near sp
7/2/2016	unknown beach green	lots	MB	much confusion about beach greens
7/2/2016	yellow monkey flower			photo, blooming
7/4/2016	Horned Puffin	1		photo,
7/4/2016	Arctic Sandwort			blooming
7/4/2016	Mountain sorrel	2		budding, summit trail
7/4/2016	twinflower	lots		blooming, has been for a while. First sighting. summit trail
7/4/2016	unidentified gilled mushrooms	few		fruiting, on summit
7/5/2016	BLKI, COMU, PECO	0	OP	kittiwakes, common murres, pelagic cormorants. No birds nesting or resting on plot 1–5 or any on cliffs between obs. pt. and dragon spire. No eggs
7/5/2016	BLKI, COMU, PECO	0	OP	kittiwakes, common murres, pelagic cormorants. No birds nesting or resting on plot 1–5 or any on cliffs between obs.pt. and dragon spire. No eggs
7/5/2016	golden crowned sparrow	1	cabin	Fledgling!
7/5/2016	Horned Puffin	1		photo,
7/5/2016	BLKI, COMU, PECO	0	OP	kittiwakes, common murres, pelagic cormorants. No birds nesting or resting on plot 1–5 or any on cliffs between obs.pt. and dragon spire. No eggs
7/5/2016	red fox	1	EC	summer coat complete
7/5/2016	yellow bolete	1	ec	fruiting
7/6/2016	BLKI, COMU, PECO	0	OP	kittiwakes, common murres, pelagic cormorants. no birds nesting or resting on plot 1–5 or any on cliffs between obs.pt. and dragon spire. No eggs
7/6/2016	BLKI, COMU, PECO	0	OP	kittiwakes, common murres, pelagic cormorants. no birds nesting or resting on plot 1–5 or any on cliffs between obs.pt. and dragon spire. No eggs
7/6/2016	BLKI, COMU, PECO	0	OP	kittiwakes, common murres, pelagic cormorants. no birds nesting or resting on plot 1–5 or any on cliffs between obs.pt. and dragon spire. No eggs
7/6/2016	Monkshood			photo, blooming
7/7/2016	common murre	15–20	OP	after several days of zero birds, plot 2
7/7/2016	golden crowned sparrow fledgling	1	CABIN	drowned in laundry water J@ shower.
7/7/2016	Alaska poppy			seed head, photo
7/7/2016	bog rosemary			photo, blooming
7/7/2016	Hornmans Fireweed			photo, blooming
7/7/2016	purple cress			photo, blooming
7/7/2016	spring beauty			blooming
7/7/2016	swamp willow herb			photo, blooming
7/7/2016	wandering tick	1		on pants, collected for Ed
7/8/2016	Harlequin Duck	2		photo,
7/8/2016	Horned Puffin	2		photo,
7/8/2016	Cloud berries	5+	TT	Ripe
7/9/2016	shrew		BC	DEAD

Date	Species	Number	Location[a]	Comments[b]
7/9/2016	rock cress, Arabis lyrata	1	EC	blooming, new cress
7/10/2016	blueberries	lots	EC	Ripe
7/10/2016	blueberry			photos, Berries ripe.
7/10/2016	bunchberries (dwarf Dogwood)	lots	EC	Ripe
7/11/2016	Pelagic Cormorant	45	FR	
7/11/2016	dwarf dogwood			photo, blooming
7/11/2016	Pearlwort			photo, blooming
7/12/2016	Gray Crowned Rosy Finch	1		photo
7/12/2016	Parakeet Auklet	1		photos
7/12/2016	Fox Kits	3	CABIN	fox den up by cabin cistern
7/12/2016	Rock Sandpiper	1	CG	Originally ID'd Least sand piper, not 100% certain of ID. ID'd post season from photos.
7/13/2016	Black Legged Kittiwake	2+	SLP	chicks, Sea Lion Point
7/13/2016	common murre	2	SLP	eggs, Sea Lion Point
7/13/2016	Crested Auklet	5–6	NBC	photos
7/13/2016	harlequin ducks	12	BC	mixed flock
7/13/2016	Pelagic Cormorant	2	SLP	chicks, Sea Lion Point
7/14/2016	Black Legged Kittiwake	1	EC	Juvenile, or non breeding plumage.
7/14/2016	Common Redpoll	1		photo
7/14/2016	Red Fox	1	cabin	eating crowberries, up by den behind cabin
7/14/2016	Red Fox Kits	3	cabin	eating HOPU, up by den behind cabin
7/15/2016	Pacific Wren	1		photo,
7/15/2016	Short Tailed Shearwater	1	EC	possibly damaged flight feathers, did not successfully fly
7/15/2016	blueberry			photos, with ripe berries
7/16/2016	American Pipit	1		photos
7/16/2016	Common Raven	3		photo, eating herring eggs
7/16/2016	Pacific Walrus	1	EC	Dead and floating
7/16/2016	Pigeon Guillemot	2		photos
7/16/2016	Wandering tattler	1		photos
7/16/2016	Yellow Warbler	3+	FB	male, female and fledgling
7/16/2016	Mountain Harebell			photo, blooming
7/17/2016	Pacific Walrus	1	MB	Dead on MB
7/17/2016	spider	1		Extensive web across trail
7/18/2016	American Pipit	1		photos
7/18/2016	Parakeet Auklet	18		photos
7/18/2016	Short Tailed Shearwater	1	NBC	Swimming and flying
7/18/2016	Yellow Warbler	3	FB	male, female and fledgling
7/18/2016	maggots	Lots	MB	possibly 2 species, as well as many fly eggs and flies on walrus carcass on beach
7/19/2016	Parakeet Auklet	4		photos
7/19/2016	Pacific Walrus	1	FB	very young walrus, arrive and stay off and on 2 weeks (Buddy)
7/19/2016	BLKI, COMU, PECO		OP	no eggs or chicks, plots 1–5
7/19/2016	leaches	lots	camp	lots of tiny leaches (planaria?), Camp Ground Creek
7/20/2016	Wilsons Warbler		FB	apparently both Wilsons and yellows use FB
7/22/2016	common murre egg	1	EC	Freshly opened, blood inside
7/22/2016	shrew	1	cabin	dead, weird growth on head
7/22/2016	Red Fox	1	EC	Feces, visibly consisting of mostly blue and crow berry skins and seeds
7/23/2016	Common Murres	lots	NBC	Huge rafts
7/23/2016	Harbor Seal	1	BC	uncertain of species, cute, elusive

Date	Species	Number	Location[a]	Comments[b]
7/24/2016	Black Legged Kittiwake	4	EC	young of year? (non breeding plumage)
7/24/2016	Horned Puffin	3		photo,
7/24/2016	Wandering tattler	1		photos
7/24/2016	Yellow Warbler Fledgling	1	FB	
7/24/2016	grove sandwort			photo, blooming
7/25/2016	Golden Crowned sparrow fledgling	1	FB	
7/25/2016	leaches	12	CG	collected 12 samples of leaches from campers creek
7/26/2016	Bald Eagle	1		photo
7/26/2016	Common Murre	1	CG	carcass, complete with fox teeth marks
7/26/2016	Short Tailed Shearwater	1	FP	Head Only, found on trail
7/26/2016	unidentified passerine fledgling	1	FB	unidentified passerine fledgling, likely American pipit
7/26/2016	Yellow Warbler Fledgling	1	FB	
7/26/2016	yellow warblers	3	fb	Adults feeding young
7/27/2016	Black Legged Kittiwakes	lots		dense knots, excited aggregations, offshore in front of cabin
7/27/2016	Cormorant	1	FR	Possibly Non-Breeding plumage, Young of Year, or non pelagic
7/27/2016	beetles, black and orange	lots	CG	Swarming site where COMU carcass was yesterday. Also husks of bees and beetles
7/27/2016	Gadits, juvenile	lots	CG	swimming, 1"–2" gadits, aggregating in intertidal zone. Visible in very clear water
7/28/2016	passerine Fledglings	2	FB	Unknown passerine Fledglings
7/28/2016	Dragonflies	2	SB	Big, Black and green
7/29/2016	Grey Crowned Rosy Finch	3+	FB	songbirds and GCRF foraging below high line
7/29/2016	Horned Puffin	6		photo,
7/29/2016	blueberry			photos, with ripe berries
7/30/2016	Birch Bolete	1	SP	Wilson warbler at FB
7/31/2016	Grey Crowned Rosy Finch		NBC	Grey Crowned Rosy Finches Flocking, group of >15
7/31/2016	Horned Puffin	6		photo, on nesting cliffs
7/31/2016	Pelagic Cormorant	67	FR	PECOs spending lots of time at FR lately
7/31/2016	yellow monkey flower			photo, blooming
8/1/2016	Humpback whale		cabin	spout, and possible glimpse of sm dorsal. Not 100% certain species.
8/1/2016	Fox Kits	3	cabin	Kits spending time under cabin
8/1/2016	blueberry			photos, with ripe berries
8/2/2016	rain			persistent rain
8/2/2016	Plantain	1	FR	Plantain Blooming
8/3/2016	Black legged Kittiwake	1	west side	Dead, Floating
8/3/2016	Harbor Seal	1	BC	Young Harbor Seal
8/3/2016	Pelagic Cormorant	1	SLP	Dead. Dying on beach, tried to launch and drowned. Neck covered in engorged ticks. Sea Lion Point Beach
8/3/2016	juvenile salmon	1		Dead, headless below bird nests
8/4/2016	Harbor Seal	1	BC	Young Harbor Seal
8/4/2016	Horned Puffin	4		photo
8/8/2016	grove sandwort			photo, blooming
8/8/2016	wooly lousewort		EC	photo, second blooming?
8/9/2016	Fox Kits	3	cabin	Fox kits moved down to cabin area, eyes changed from puppy blue-grey to adult amber-brown
8/9/2016	yellow warblers	0	FB	Yellow warblers gone from first beach

Date	Species	Number	Location[a]	Comments[b]
8/9/2016	bolete mushrooms	3	SP	Delicious
8/9/2016	lingon berry		FB	ripe lingon berries
8/10/2016	Belted Kingfisher	1	SB	on rock
8/10/2016	Humpback whale	1	EC	HBWH, Breaching
8/10/2016	whale	1	cabin	HBWH maybe (noon)
8/10/2016	Fox Kits	4	CABIN	fourth fox kit seen playing with cabin three
8/10/2016	Wandering tattler	1		photos
8/11/2016	Belted Kingfisher	1	BC	perched on boat cable, fishing.
8/11/2016	Common Raven	1		photo
8/11/2016	Harbor Seal		MB	
8/11/2016	unknown sparrow fledglings	>10	SP	Flocking
8/11/2016	large green and yellow spiders	> 6	FB, FP,SP,EC	webs across trail
8/12/2016	Common Raven	1		photo
8/13/2016	Harbor Seal	1	BC	hauled out on rocks
8/13/2016	nagoon berries ripe	3	TT	
8/15/2016	humpback whale	1	cabin	
8/15/2016	Tufted Puffin		RI	Present through the season.
8/15/2016	unk black goose or duck	1	BC	unk black goose or duck while waiting for transport

[a] BC = Boat Cove; CG = Campground; EC = East Cape; FB = First Beach; FR = Flat Rock; MB = Main Beach; NBC = North Boat Cove; OP = Observation Point; RI = Round Island; SB = Second Beach; SLP = Sea Lion Point; SP = Second Prime; TT = Traverse Trail; WM = West Main.

[b] BAEA = bald eagle; BLKI = black-legged kittiwake; COMU = common murre; CORA = common raven; HBWH = humpback whale; HOPU = horned puffin; PAWA = Pacific walrus; PECO = pelagic cormorant; PIGU = pigeon guillimot; REFO = red fox; RI = Round Island; SLP = Sea Lion Point; STSL = Steller sea lion; TB = Third Beach; TLC = time lapse camera; TUPU = tufted puffin; UNEA = unidentified eagle; UNGU = unknown gull; UNPU = unknown puffin.

Appendix K. Daily weather observations, Round Island, Alaska, August 2015–August 2016.

Date	Time	Tide[a]	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover[b]	Precip[c]
8/15/2015	9:00						58.0	50.0	O	N
8/16/2015	9:00						52.0	50.0	O	N
8/17/2015	9:00						61.0	51.0	O	N
8/18/2015	17:00						72.0	50.0	S	N
8/19/2015	14:00						68.0	49.0	B	N
8/20/2015	14:00						74.0	45.0	B	N
8/21/2015	17:00						69.0	49.0	S	N
8/22/2015	17:00						61.0	49.0	S	N
8/23/2015	14:00						61.0	51.0	B	N
8/24/2015	14:00						63.0	50.0	B	N
8/25/2015	9:00						55.0	49.0	O	N
8/26/2015	14:00						55.0	52.0	O	RF
8/27/2015	17:00						56.0	49.0	B	N
8/28/2015	14:00						52.0	43.0	O	R
8/29/2015	17:00						59.0	45.0	B	RF
8/30/2015	17:00						54.0	40.0	B	N
8/31/2015	14:00						61.0	44.0	S	N
9/1/2015	14:00						59.0	45.0	C	N
9/2/2015	9:00						50.0	45.0	O	RF
9/3/2015	9:00						56.0	50.0	O	RF
9/4/2015	17:00						55.0	48.0	S	F
9/5/2015	14:00						57.0	49.0	O	N
9/6/2015	9:00						68.0	46.0	S	N
9/7/2015	17:00						61.0	48.0	O	N
9/8/2015	9:00						58.0	45.0	O	N
9/9/2015	17:00						51.0	45.0	O	N
9/10/2015	9:00						58.0	45.0	O	N
9/11/2015	14:00						53.0	41.0	B	N
9/12/2015	14:00						57.0	37.0	O	N
9/13/2015	17:00						47.0	45.0	O	R
9/14/2015	14:00						51.0	48.0	O	R
9/15/2015	17:00						51.0	47.0	O	N
9/16/2015	9:00						47.0	42.0	O	R
9/17/2015	9:00						53.0	38.0	S	N
9/18/2015	14:00						53.0	40.0	S	N
9/19/2015	17:00						47.0	36.0	B	N
9/20/2015	14:00						45.0	36.0	B	N
9/21/2015	17:00						45.0	35.0	S	N
9/22/2015	17:00						43.0	34.0	C	N
9/23/2015	14:00						46.0	31.0	B	N
9/24/2015	9:00						52.0	45.0	B	R
9/25/2015	14:00						49.0	45.0	O	R
9/26/2015	9:00						51.0	46.0	O	RF
9/27/2015	9:00						52.0	48.0	O	RF
9/28/2015	9:00						40.0	36.0	B	N
9/29/2015	17:00						40.0	32.0	C	N
9/30/2015	14:00						48.0	37.0	C	N
10/1/2015	9:00						45.0	37.0	O	F
10/2/2015	14:00						51.0	47.0	O	F
10/3/2015	17:00						51.0	44.0	B	R
10/4/2015	17:00						51.0	43.0	B	N
10/5/2015	14:00						49.0	43.0	O	N
10/6/2015	9:00						50.0	41.0	B	N
10/7/2015	14:00						44.0	36.0	S	

Date	Time	Tide[a]	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover[b]	Precip[c]
10/8/2015	17:00						50.0	42.0	B	R
10/9/2015	9:00						49.0	45.0	S	R
10/10/2015	17:00						50.0	41.0	B	
10/11/2015	17:00						44.0	40.0	O	
10/12/2015	9:00						45.0	36.0	S	
10/13/2015	14:00						43.0	35.0	B	
10/14/2015	14:00						44.0	39.0	S	
10/15/2015	17:00						47.0	41.0	C	
10/16/2015	14:00						45.0	40.0	O	
10/17/2015	14:00						45.0	38.0	O	
10/18/2015	14:00						46.0	39.0	B	
10/19/2015	14:00						44.0	40.0	B	
10/20/2015	14:00						47.0	41.0	B	
10/21/2015	14:00						49.0	42.0	O	
10/22/2015	14:00						45.0	38.0	O	R
10/23/2015	14:00						41.0	36.0	O	R
10/24/2015	14:00						45.0	41.0	B	
10/25/2015	14:00						44.0	41.0	O	
10/26/2015	14:00						45.0	44.0	O	R
10/27/2015	14:00						45.0	41.0	O	
10/28/2015	14:00						46.0	43.0	B	R
10/29/2015	14:00						41.0	31.0	B	
10/30/2015	14:00						29.0	26.0	C	
10/31/2015	14:00						35.0	26.0	C	
11/1/2015	14:00						43.0	38.0	B	
11/2/2015	14:00						44.0	37.0	O	
11/3/2015	14:00						41.0	35.0	S	
11/4/2015	14:00						41.0	37.0	O	R
11/5/2015	14:00						45.0	38.0	B	R
11/6/2015	14:00						37.0	35.0	S	
11/7/2015	14:00						40.0	32.0	B	
11/8/2015	14:00						44.0	35.0	B	R
11/9/2015	14:00						36.0	30.0	B	S
11/10/2015	14:00						33.0	29.0	B	S
11/11/2015	14:00						33.0	29.0	O	S
11/12/2015	14:00						27.0	22.0	B	
11/13/2015	14:00						26.0	22.0	S	
11/14/2015	14:00						23.0	20.0	O	S
11/15/2015	14:00						21.0	19.0	S	
11/16/2015	14:00						19.0	14.0	S	
11/17/2015	14:00						23.0	17.0	O	S
11/18/2015	14:00						26.0	15.0	O	S
11/19/2015	14:00						39.0	34.0	B	R
11/20/2015	14:00						37.0	27.0	O	
11/21/2015	14:00						28.0	26.0	B	S
11/22/2015	14:00						32.0	23.0	B	
11/23/2015	14:00						40.0	35.0	O	R
11/24/2015	14:00						38.0	32.0	O	
11/25/2015	14:00						31.0	25.0	S	
11/26/2015	14:00						29.0	22.0	O	S
11/27/2015	14:00						36.0	31.0	O	R
11/28/2015	14:00						34.0	30.0	B	
11/29/2015	14:00						31.0	30.0	O	F
11/30/2015	14:00						35.0	31.0	B	
12/1/2015	14:00						37.0	32.0	O	

Date	Time	Tide[a]	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover[b]	Precip[c]
12/2/2015	14:00						25.0	22.0	C	
12/3/2015	14:00						19.0	14.0	B	F
12/4/2015	14:00						18.0	14.0	C	
12/5/2015	14:00						24.0	15.0	B	
12/6/2015	14:00						28.0	26.0	B	
12/7/2015	14:00						29.0	27.0	O	
12/8/2015	14:00						33.0	30.0	B	
12/9/2015	14:00						24.0	17.0	S	
12/10/2015	14:00						16.0	14.0	O	F
12/11/2015	14:00						21.0	15.0	B	
12/12/2015	14:00						16.0	10.0	S	
12/13/2015	14:00						35.0	11.0	O	
12/14/2015	14:00						33.0	30.0	B	
12/15/2015	14:00						32.0	25.0	B	
12/16/2015	14:00						27.0	24.0	O	
12/17/2015	14:00						21.0	15.0	C	
12/18/2015	14:00						24.0	16.0	O	S
12/19/2015	14:00						33.0	29.0	B	
12/20/2015	14:00						31.0	23.0	O	
12/21/2015	14:00						21.0	19.0	O	
12/22/2015	14:00						29.0	24.0	B	
12/23/2015	14:00						26.0	17.0	O	
12/24/2015	14:00						28.0	21.0	O	S
12/25/2015	14:00						34.0	29.0	B	
12/26/2015	14:00						31.0	29.0	O	
12/27/2015	14:00						33.0	31.0	O	
12/28/2015	14:00						36.0	31.0	B	
12/29/2015	14:00						37.0	33.0	B	
12/30/2015	14:00						36.0	31.0	B	
12/31/2015	14:00						35.0	29.0	B	
1/1/2016	14:00						35.0	31.0	O	
1/2/2016	14:00						36.0	31.0	O	
1/3/2016	14:00						35.0	30.0	O	
1/4/2016	14:00						34.0	32.0	O	
1/5/2016	14:00						36.0	29.0	O	
1/6/2016	14:00						30.0	26.0	B	
1/7/2016	14:00						32.0	28.0	O	R
1/8/2016	14:00						38.0	33.0	O	
1/9/2016	14:00						37.0	31.0	O	
1/10/2016	14:00						32.0	30.0	O	S
1/11/2016	14:00						32.0	26.0	O	
1/12/2016	14:00						29.0	24.0	B	
1/13/2016	14:00						27.0	23.0	C	
1/14/2016	14:00						27.0	22.0	O	
1/15/2016	14:00						34.0	29.0	S	
1/16/2016	14:00						32.0	25.0	S	
1/17/2016	14:00						33.0	28.0	S	
1/18/2016	14:00						32.0	23.0	O	
1/19/2016	14:00						29.0	25.0	B	
1/20/2016	14:00						32.0	28.0	S	
1/21/2016	14:00						33.0	26.0	S	
1/22/2016	14:00						17.0	15.0	B	
1/23/2016	14:00						29.0	18.0	O	
1/24/2016	14:00						33.0	30.0	O	
1/25/2016	14:00						35.0	33.0	O	

Date	Time	Tide[a]	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover[b]	Precip[c]
1/26/2016	14:00						35.0	30.0	B	
1/27/2016	14:00						36.0	31.0	O	S
1/28/2016	14:00						32.0	27.0	O	S
1/29/2016	14:00						33.0	28.0	O	S
1/30/2016	14:00						36.0	32.0	O	
1/31/2016	14:00						36.0	32.0	O	
2/1/2016	14:00						35.0	28.0	C	F
2/2/2016	14:00						31.0	28.0	B	N
2/3/2016	14:00						35.0	33.0	B	N
2/4/2016	14:00						35.0	29.0	O	N
2/5/2016	14:00						33.0	27.0	O	N
2/6/2016	14:00		16.1	SE		1006.8	37.9	31.4	S	N
2/7/2016	14:00		8	NE	1004.3	998.2	36.6	31.7	S	N
2/8/2016	14:00		27.4	ENE	991.9	994.5	35.9	32.2	O	N
2/9/2016	14:00		22.5	ENE	1006.5	1005.6	36.8	32	B	N
2/10/2016	14:00		14.5	ENE	994.4	993.6	37.5	33.4	B	N
2/11/2016	14:00		20.9	SW	994.1	993.2	37.5	32.5	O	N
2/12/2016	14:00		19.3	ENE	990.5	987.9	35	32.9	S	N
2/13/2016	14:00		19.3	ENE	988.4	988.8	35.5	30.5	B	N
2/14/2016	14:00		3.2	S	988.5	992.7	36.8	32.4	O	N
2/15/2016	14:00		3.2	S	1000.9	1008.1	32.9	28	O	F
2/16/2016	14:00		17.7	E	1010.4	995.6	35.1	27.6		F
2/17/2016	14:00		43.5	W	982.4	987.1	35.5	29.7	O	N
2/18/2016	14:00		35.4	WNW	994.5	994	29.7	25.3	C	N
2/19/2016	14:00		16.1	NNE	988.5	983.8	33.4	23.2	B	N
2/20/2016	14:00		17.7	NE	983.2	982.2	34.3	29.1	O	N
2/21/2016	14:00		24.1	ENE	983.4	987.5	34.4	28.7	B	N
2/22/2016	14:00		24.1	S	998.3	1009	35.4	31.3	B	N
2/23/2016	14:00		19.3	NNE	1003.2	986.6	39	31.5	O	N
2/24/2016	14:00		22.5	ENE	979.2	981.8	37.1	34.1	O	N
2/25/2016	14:00		27.4	E	984.8	985.3	36.8	33.4	S	N
2/26/2016	14:00		17.7	ENE	983.4	982.3	40.9	33.9	B	N
2/27/2016	14:00		17.7	NE	982.1	976.7	40.6	34.1	O	N
2/28/2016	14:00		24.1	E	973.4	983.7	39.5	34.4	B	N
2/29/2016	14:00		37	ENE	991.9	995	38.3	32.6	B	N
3/1/2016	14:00		30.6	E	993.7	1005.7	38.2	32.4	B	N
3/2/2016	14:00		12.9	SSW	1009.3	1006.6	38.5	31.7	C	N
3/3/2016	14:00		11.3	NW	1002.3	999.6	40	32.9	C	N
3/4/2016	14:00		1.6	NNE	994.5	988.9	33.3	24.7	C	N
3/5/2016	14:00		4.8	NE	983.7	983.1	28	24	O	N
3/6/2016	14:00		16.1	E	984.4	987.5	36.1	27.9	B	N
3/7/2016	14:00		6.4	ESE	987.9	989.7	32.5	27.8	O	S
3/8/2016	14:00		19.3	NE	993	994.6	31.1	27.8	O	N
3/9/2016	14:00		17.7	W	995.5	991.5	30.8	27.7	C	N
3/10/2016	14:00		27.4	ENE	976.7	975.4	37.2	29.3	C	N
3/11/2016	14:00		6.4	NW	982.4	987.4	40.4	35.3	C	N
3/12/2016	14:00		12.9	SE	988.5	991.1	39.3	35.2	B	N
3/13/2016	14:00		16.1	S	992.7	993.7	38.8	32.6	S	N
3/14/2016	14:00		6.4	ESE	995.8	999	36.8	32.1	S	N
3/15/2016	14:00		22.5	ENE	1004.1	1013	36.8	25.9	S	S
3/16/2016	14:00		14.5	ENE	1023.4	1027.2	26.3	21.8	C	N
3/17/2016	14:00		9.7	NNE	1024.8	1019.8	31.8	20.5	S	N
3/18/2016	14:00		17.7	NNE	1014.9	1008.9	33.4	25.5	S	N
3/19/2016	14:00		9.7	E	1006.1	1002.1	25.7	16.7	C	N
3/20/2016	14:00		11.3	WNW	1001.6	1000	22.5	11.9	C	N

Date	Time	Tide[a]	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover[b]	Precip[c]
3/21/2016	14:00		8	WSW	998.8	996.8	36.9	21.4	O	S
3/22/2016	14:00		0		994.6	995.9	35.1	34.1	O	N
3/23/2016	19:00	F			997.6	999.4	35	21	O	N
3/24/2016	14:00		3.2	SE	1000.3	1000.9			O	S
3/25/2016	19:00	F	4.0	E	1000.7	1002.2	35.7	32.8	B	N
3/26/2016	17:00	H	14.5	S	1005	1003.9	37.3	31.5	B	N
3/27/2016	17:00	H	29.0	NE	996.8	994.9	32.9	29.9	O	S
3/28/2016	17:00	L	28.0	E	1000	1003.3	35.5	31	O	N
3/29/2016	11:00	F	15.0	NW	1012.9	1015.2	36.9	30.6	O	S
3/30/2016	14:00	F	19.3	E	1006	1007.7	38.7	32.5	O	F
3/31/2016	11:00	R	50.0	E			37	34	O	R
4/1/2016	9:00	R	73.0	W					O	R
4/2/2016	14:00									N
4/3/2016	17:00		37	E	1004.9	1001.7	38.5	35.9		R
4/4/2016	17:00		24.1	NE	995.5	991.5	40.3	35		R
4/5/2016	14:00		4.8	S	992.9	998.6	45.1	36.7		N
4/6/2016	9:00		6.4	NE	1003.9	1005.9	42	32.5		F
4/7/2016	17:00		11.3	SE	1005.5	1001.5	43	32.3		N
4/8/2016	14:00		27.4	ENE	997.1	993.6	39.1	33.9		R
4/9/2016	14:00		40.2	E	989.5	989.3	39.5	33.9		R
4/10/2016	17:00		16.1	ESE	992.6	992.8	40.8	35.1		N
4/11/2016	9:00		9.7	SSE	998.8	1000.4	43.7	34.8		N
4/12/2016	9:00		11.3	SW	1001.4	1005.3	48.9	38.2		N
4/13/2016	14:00		6.4	E	1006.9	1002.6	46.3	38.2		N
4/14/2016	14:00		8	SSW	999.7	997.2	46.5	37.3		N
4/15/2016	9:00		14.5	WNW	1000.3	1004	52.3	40.2		N
4/16/2016	17:00		20.9	SW	1009.5	1012	46.5	38.4		N
4/17/2016	9:00		16.1	E	1010.9	1005.4	41.2	34.7		N
4/18/2016	17:00		38.6	E	1003.1	1003.7	41	37.4		R
4/19/2016	9:00		48.3	E	1001.6	1003.6	40.9	38.6		R
4/20/2016	17:00	L	25.7	E	1004	1005.9	42.9	37.8	B	N
4/21/2016	14:00	F	25.7	ESE	1005.9	1002.7	45.1	39.6	F	N
4/22/2016	9:00	F	20.9	ENE	998.8	998.7	48.8	38.4	O	N
4/23/2016	14:00	H	17.7	SW	1001.9	1005.7	50.3	41.9	O	N
4/24/2016	9:00	F	20.9	ENE	1009.4	1001.5	49.9	39.7	C	N
4/25/2016	17:00	F	37.0	NE	993.7	992.9	46.8	40.5	O	N
4/26/2016	14:00	L	12.9	E	998.8	1000.7	45.6	38.3	F	N
4/27/2016	14:00	F	16.1	ESE	1000.3	996.4	47	37.8	O	R
4/28/2016	9:00	H	20.9	NE	997.3	997.6	46.9	39.7	O	R
4/29/2016	17:00	L	11.3	ESE	1000.6	1002.4	45.7	39.4	F	N
4/30/2016	9:00	R	9.7	ENE	1000.9	996.4	49.8	44	O	N
5/1/2016	9:00	R	17.7	W	1000.5	1003	53.1	41.8	O	N
5/2/2016	14:00	F	11.3	W	1004.3	1004.9	48.2	39.3	C	N
5/3/2016	9:00	R	16.1	E	1006.2	1004.1	45.9	35.9	O	N
5/4/2016	14:00	H	0.0	ENE	1006.6	1006.5	47.7	40.6	S	N
5/5/2016	17:00	F	19.3	NNE	1008.1	995.3	46.3	41.1	O	R
5/6/2016	14:00	H	6.4	NNW	997.1	1002.1	48.7	38.1	O	N
5/7/2016	9:00	F	14.5	SE	1009	1010.7	42.4	37.1	O	R
5/8/2016	14:00	R	22.5	E	1012.9	1015.1	44	42	O	R
5/9/2016	14:00	R	19.3	ESE	1019	1019	44.7	41.6	O	R
5/10/2016	9:00	F	25.7	E	1018.3	1016.7	45.2	42.2	O	N
5/11/2016	17:00	R	9.7	ESE	1019.7	1023.8	44.4	42.1	O	N
5/12/2016	17:00	R	6.4	WNW	1024.9	1028	45.7	42.1	O	N
5/13/2016	17:00	L	7.0	WNW	1029.2	1023.3	55.9	42.8	C	N
5/14/2016	9:00	H	9.7	W	1016.4	1011.5	62.8	47.2	F	N

Date	Time	Tide[a]	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover[b]	Precip[c]
5/15/2016	14:00	F	6.4	NW	1010.7	1007.9	63.2	47.2	C	N
5/16/2016	14:00	F	6.4	ESE	1005	1005.2	64.8	50.1	F	N
5/17/2016	9:00	R	9.7	NE	1006.4	1006	64.4	47.9	B	N
5/18/2016	14:00	H	12.9	NE	1013.8	1020.2	53.8	38.8	B	N
5/19/2016	17:00	F	19.3	E	1019.3	1013.2	46	41.4	O	R
5/20/2016	17:00	F	4.8	N	1005.3	999.4	46.7	43.2	O	R
5/21/2016	14:00	R	16.1	NNE	1012.9	1017.1	45	40	S	N
5/22/2016	9:00	R	41.8	ESE	1011.8	1018.3	44.3	41.2	O	R
5/23/2016	14:00	R	16.1	SE	1021.9	1022.7	45	41	O	N
5/24/2016	9:00	F	19.3	WNW	1025.7	1026	45.7	43.2	O	R
5/25/2016	9:00	H	12.9	SE	1025.9	1026.8	46	43.5	O	N
5/26/2016	9:00	H	0.0		1026.2	1024	63	44	O	N
5/27/2016	9:00	H	13.0	SE	1020.2	1014.6	63	50	C	N
5/28/2016	17:00	R	9.3	E			56	47	C	N
5/29/2016	14:00	L	37.0	SW			60	48	C	N
5/30/2016	14:00	F	18.5	ESE			57	44	O	N
5/31/2016	14:00	F	13.0	ESE			57	44	B	R
6/1/2016	17:00	L	13.0	NW			59	49	F	N
6/2/2016	9:00	R	9.3	NE			57	50	B	N
6/3/2016	17:00	F	35.2	SW			59	50	F	N
6/4/2016	9:00	L	18.5	E			55	45	O	F
6/5/2016	9:00	L	11.1	NE			57	49	F	N
6/6/2016	14:00	F	25.9	W			66	52	F	N
6/7/2016	14:00	R	18.5	SE			68	52	F	N
6/8/2016	14:00	L	0.0				64	51	C	N
6/9/2016	14:00	L	29.6	E			54	47	O	R
6/10/2016	14:00	L	13.0	SW			62	46	O	N
6/11/2016	17:00	R					68	46	C	N
6/12/2016	17:00	L	35.2	W			57	47	S	N
6/13/2016	14:00	F	22.2	NW			59	49	S	N
6/14/2016	9:00	R	22.2	W			63	49	S	N
6/15/2016	9:00	F	0.0				73	49	C	N
6/16/2016	17:00	F	29.6	E			63	49	O	R
6/17/2016	9:00	L	14.8	E			58	50	O	N
6/18/2016	14:00	H	33.3	E			52	48	O	R
6/19/2016	17:00	F	16.7	SE			51	48	O	R
6/20/2016	14:00	H	14.0	SE			67	48	S	N
6/21/2016	9:00	F	15	SE			75	52	B	N
6/22/2016	14:00	H	13.0	SW			63	52	O	RF
6/23/2016	14:00	F	18.5	SE			53	49	O	RF
6/24/2016	17:00	H	7.4	NW			66	48	O	N
6/25/2016	17:00	R	14.8	W			78	53	C	N
6/26/2016	17:00	R	7.4	S			77	57	S	N
6/27/2016	14:00	F	14.8	E			73	52	S	F
6/28/2016	17:00	L	13.0	E			61	50	C	N
6/29/2016	17:00	L	29.6	S	1018.6	1015.3	63	55	C	N
6/30/2016	14:00	F	5.6	N			80	51	F	N
7/1/2016	9:00	R	29.6	W			67	56	B	N
7/2/2016	9:00	R	20.4	W			61	54	O	N
7/3/2016	17:00	R	46.3	SW			59	51	S	N
7/4/2016	14:00	H	11.1	SE			56	50	O	RF
7/5/2016	14:00	R	11.0	S			66	51	O	N
7/6/2016	9:00	H	14.8	SE			63	50	O	RF
7/7/2016	17:00	H	17.0	SE			67.5	56.5	O	N
7/8/2016	17:00	R	3.7	SE			65	51	O	N

Date	Time	Tide[a]	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover[b]	Precip[c]
7/9/2016	14:00	L	11.1	W			64	51	B	N
7/10/2016	9:00	H	29.6	W			67.5	51	B	N
7/11/2016	14:00	F	29.6	W			73	52.5	S	N
7/12/2016	17:00	H	18.5	NW			80	50	C	N
7/13/2016	9:00	R	5.6	E			80.5	58	C	N
7/14/2016	17:00	H	14.8	SE			70.5	55	O	N
7/15/2016	17:00	F	16.7	E			77.5	52.5	C	N
7/16/2016	14:00	F	9.3	E			82.5	49	C	N
7/17/2016	9:00	L	3.2	WNW	1025.3	1027.7	65.2	55.3	C	N
7/18/2016	14:00	H	24.1	WNW	1029.3	1027.9	60.3	56.4	O	N
7/19/2016	9:00	L	27.4	W	1026.3	1024.5	60.7	56.8	B	N
7/20/2016	17:00	F	12.9	NW	1022.6	1016.7	59	55.3	O	R
7/21/2016	14:00	R	22.5	WNW	1019.7	1016.7	57.5	53.5	O	N
7/22/2016	9:00	F	20.9	W	1009.2	1011.3	58.4	54.3	O	N
7/23/2016	9:00	F	25.7	W	1013.9	1008.3	57.1	53.5	O	N
7/24/2016	17:00	R	27.4	W	1004.9	1002	60.2	54.5	B	N
7/25/2016	9:00	H	6.4	SSE	1003.3	1004.9	61.8	56.3	B	N
7/26/2016	17:00	R	17.7	ESE	1007.7	1007.6	59.1	54.5	O	R
7/27/2016	17:00	L	0.0		1008.6	1010.4	61.2	54.3	S	N
7/28/2016	9:00	R	19.3	W	1013.5	1018	60.7	54.4	O	F
7/29/2016	14:00	F	12.9	NE	1020.8	1021.2	57.3	54.3	O	N
7/30/2016	17:00	F	32.2	ESE	1018.2	1014.1	55.9	54.3	O	R
7/31/2016	14:00	F	16.1	SE	1010.6	1012.6	55.9	53.6	O	R
8/1/2016	17:00	F	16.1	NNW	1012.8	1014.3	56.5	52.9	O	N
8/2/2016	9:00	L	27.4	WNW	1018.1	1020.6	58.9	53.9	B	N
8/3/2016	17:00	F	9.7	ENE	1020	1015.7	54.9	49.9	O	R
8/4/2016	14:00	R	12.9	S	1012.3	1011.4	56.7	54.6	O	R
8/5/2016	17:00	H	38.6	ESE	1011.8	1005.7	57.9	55.1	O	RF
8/6/2016	14:00	R	20.9	ESE	1008.5	1002	57	53.5	O	R
8/7/2016	17:00	R	20.9	SSW	999.6	999.8	55.7	53.9	O	R
8/8/2016	9:00	H	9.7	SSW	1002.2	1008.9	55.7	52.6	O	R
8/9/2016	9:00	H	20.9	NE	1010.5	1010.8	54.5	53	O	N
8/10/2016	14:00	F	6.4	NE	1011.2	1011.2	57.9	53.8	F	N
8/11/2016	14:00	F	4.8	ENE	1010.7	1009.1	61.1	52.8	S	N
8/12/2016	9:00	R	19.3	ENE	1003.8	997.2	58.2	54.4	O	RF
8/13/2016	17:00	F	14.5	ENE	994.1	995.8	58.5	54.8	O	R
8/14/2016	9:00	R	14.5	ENE	998.2	998.8	64.5	56.3	S	N
8/15/2016	17:00	F	14.8	NE					O	N

[a] F = falling; H = high; L = low; R = rising.
[b] B = broken; C = clear; F = fog; O = overcast; S = scattered.
[c] F = fog; N = none; R = rain; S = snow.


ALASKA
DEPARTMENT OF FISH AND GAME