

# Walrus Islands State Game Sanctuary Annual Management Report 2015

Edward W. Weiss  
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**Cover Photo:** Andrew Olson working with HDOnTap adjusts Explore.org's camera above Observation Point; which provides an overview of Pacific walrus (*Odobenus rosmarus*) at Main Beach, Round Island, Walrus Island State Game Sanctuary, Alaska. Photo ©2015 ADF&G. Photo by Ryan P. Morrill.

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## Executive Summary

Established in 1960, the Walrus Islands State Game Sanctuary; a group of 7 islands (Round Island, Summit Island, Crooked Island, High Island, Black Rock, and The Twins) 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 from May through August to protect and monitor walruses, other terrestrial and marine wildlife, and to operate a visitor use program.

Walrus counts for the 2015 field season were conducted from 20 April through 14 August. The maximum count (eastside and westside beaches combined) was 1,607 on 26 May. The daily mean count from the eastside beaches was 427 walrus, lower than the 2006–2014 mean of 821. The daily mean count for all beaches combined was 464. The number of Pacific walrus hauling out at Round Island is down significantly over the last 2 years. Atypical haulout attendance was also observed during winter 2014–2015 in that walrus left Round Island early in 2014 and small groups were observed hauling out there again as early as late February 2015.

Steller sea lions were monitored at their Round Island haulout site at East Cape. Additional viewpoints were added to allow for accurate counts and for undertaking composition surveys. Sea lions were monitored in the field 20 April through 12 August. At traditional viewpoints, the maximum count of individuals was 571 on 9 May, and the minimum count of 36 individuals occurred on 16 July. The mean number of sea lions visible on Round Island from traditional viewpoints during the 2015 season was 166, below the 2008–2014 mean of 185. Four hundred and sixty-seven photo-confirmed sightings of 39 individuals originating from 4 natal rookeries were recorded during the 2015 field season.

Black-legged kittiwake (*Rissa tridactyla*) and common murre (*Uria aalge*) phenology and productivity were monitored from 24 May through 18 August. In 2015, common murre productivity was above average and black-legged kittiwake productivity was slightly below average compared to a 5-year mean. Pelagic cormorants (*Phalacrocorax pelagicus*) were not monitored due to budget constraints and lack of nesting at usual locations. A concise summary of phenology and productivity for 2010–2015 is provided.

Commercial transport from Togiak to Round Island was available throughout the summer, and visitation continued at low levels during the 2015 season. A total of 33 visitors to Round Island included visits by 11 persons involved in administrative duties. The 22 general public visitors were from 6 individual groups and were comprised of 14 overnight campers and 8 day visitors. Half of the visitors were Alaska residents the other half were nonresident visitors. There were 66 visitor use days and 290 staff use days for a total of 356 user days between 20 April and 14 August.

Live Internet cameras were set up at several Round Island haulout sites through an agreement with Explore.org (Explore Annenberg LLC). These cameras were connected with a GCI-installed satellite Internet and broadcasted via the website Explore.org. Walrus viewing

became interactive through assigned remote camera operators, daily technician interaction, weekly blog entries, as well as live chats throughout the season.

The Alaska SeaLife Center project monitoring disturbances at select walrus haulouts including Round Island concluded this year. Alaska SeaLife Center staff members were to analyze data and present results; however, at the time of writing the project data and results were unavailable and the future of the results uncertain.

There was 1 documented violation of the 3-mile restricted zone around the island (Alaska State Regulation – 5AAC 92.066). The incident involved a vessel passing through restricted waters at about 2 miles offshore. The vessel did not respond to hails. There was 1 infraction of flight advisories involving a small plane flying over Main Beach. A warning was issued to the owner of the plane.



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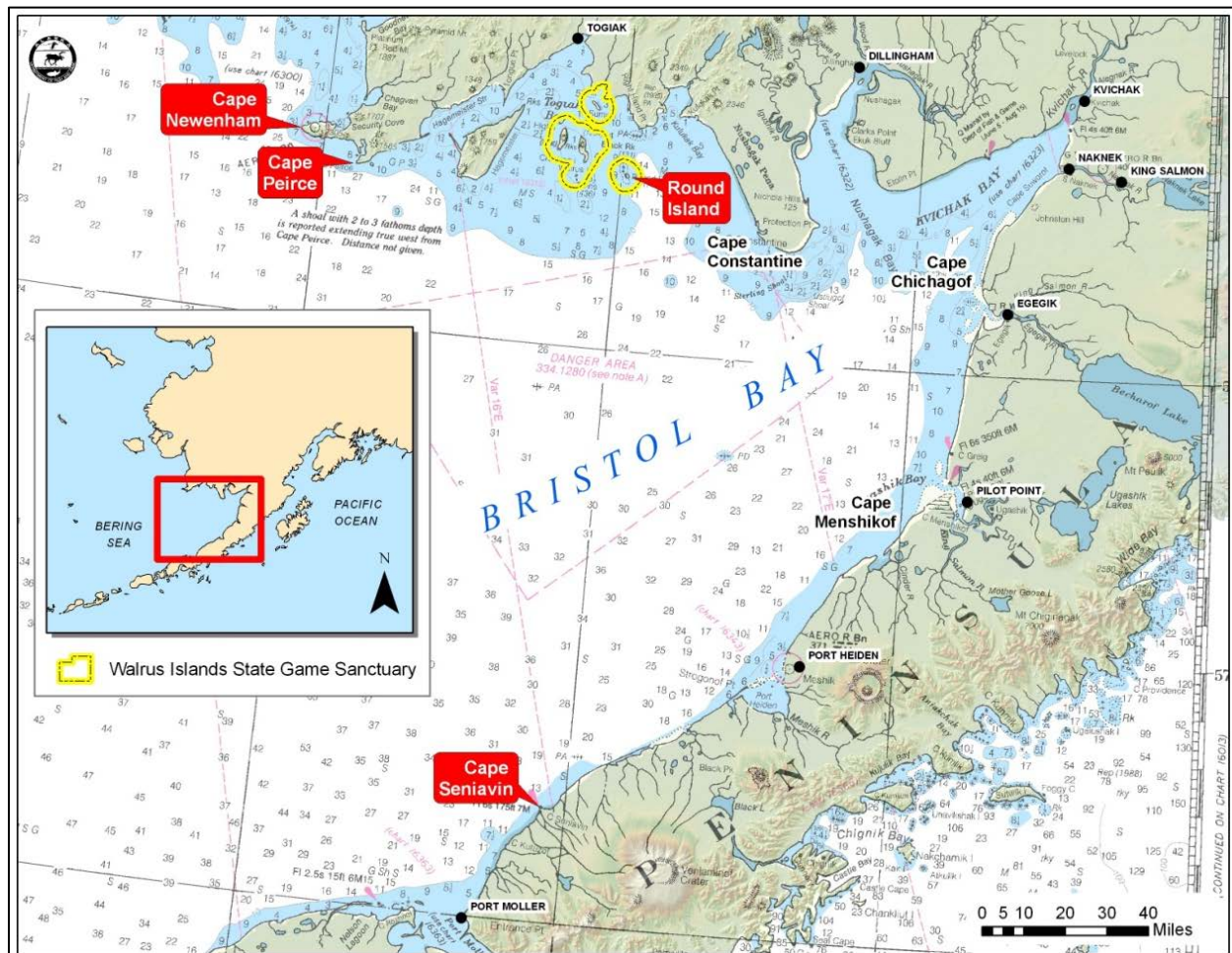
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# Introduction

The Walrus Islands State Game Sanctuary (WISGS or sanctuary) was created in 1960 by the Alaska State Legislature. The sanctuary protects a group of 7 craggy islands (Round Island, Summit Island, Crooked Island, High Island, Black Rock, and The Twins) and their adjacent waters in northern Bristol Bay, approximately 65 miles southwest of Dillingham, Alaska (Figure 1). The sanctuary was created to protect the last remaining terrestrial haulout for Pacific walrus (PAWA; *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 walrus; 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. Since 1989, 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 season. 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.

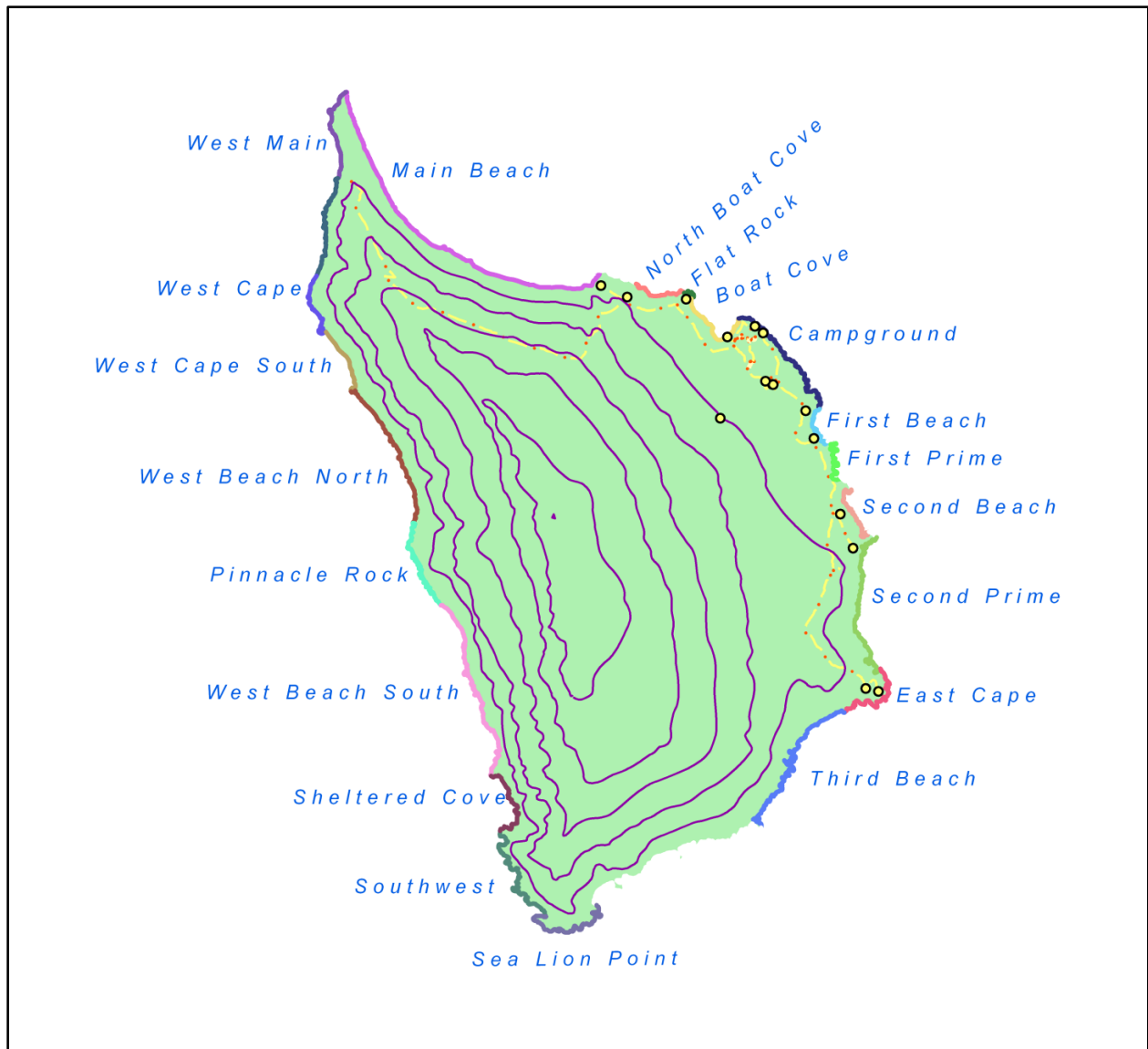
## **Wildlife Research and Monitoring**

### **WALRUS MONITORING SURVEYS**

Walrus monitoring protocols used in collecting daily PAWA observations on Round Island were established jointly by the U.S. Geological Survey-Biological Resources Division (USGS-BRD), the U.S. Fish and Wildlife Service (USFWS), and ADF&G staff in 1997 and refined in 2002. Nine haulout beaches (or uglit) are counted daily on the east side of the island: Boat Cove (BC), Campground (CG), First Beach (FB), First Prime (FP), Flat Rock (FR), Main Beach (MB), North Boat Cove (NBC), Second Beach (SB), and Second Prime (SP) (Figure 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 non-survey days from photos from Reconyx® (Holmen, Wisconsin) cameras. The remainder of the westside beaches, south of West Cape, are only observable by boat and done opportunistically as weather allows or via Reconyx 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) are collected at the time of all surveys using a Davis® (Davis Instruments, Hayward, California) weather station mounted on top of the cabin.

No boat counts of westside beaches were conducted in 2015. Daily WM counts were derived primarily from photo images, and periodic field surveys. Reconyx cameras also monitored West Cape South and West Beach North during 6 May 2014–4 May 2015. The West Cape South camera was destroyed by a rockfall over the winter and data after 31 July 2014 was lost.

As evidenced by the Reconyx cameras overlooking MB and WM, PAWA stopped hauling out at Round Island 7 September 2014 and began hauling out in significant numbers again at MB and WM on 27 March 2015. The cameras also showed PAWA sporadically hauling out at MB in small numbers ( $n = 1-15$ ) the last week of February, the first week of March 2015, and walrus arriving at WM on 26 March prior to hauling out on 27 March. While ADF&G does not have data for all years, the early departure with no use in September and October 2014, and the early arrival in March, seems atypical. Based on the data available, PAWA are usually present at the Round Island haulouts through the end of September and quite often through October – and typically arrive again in mid-April of each year.



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

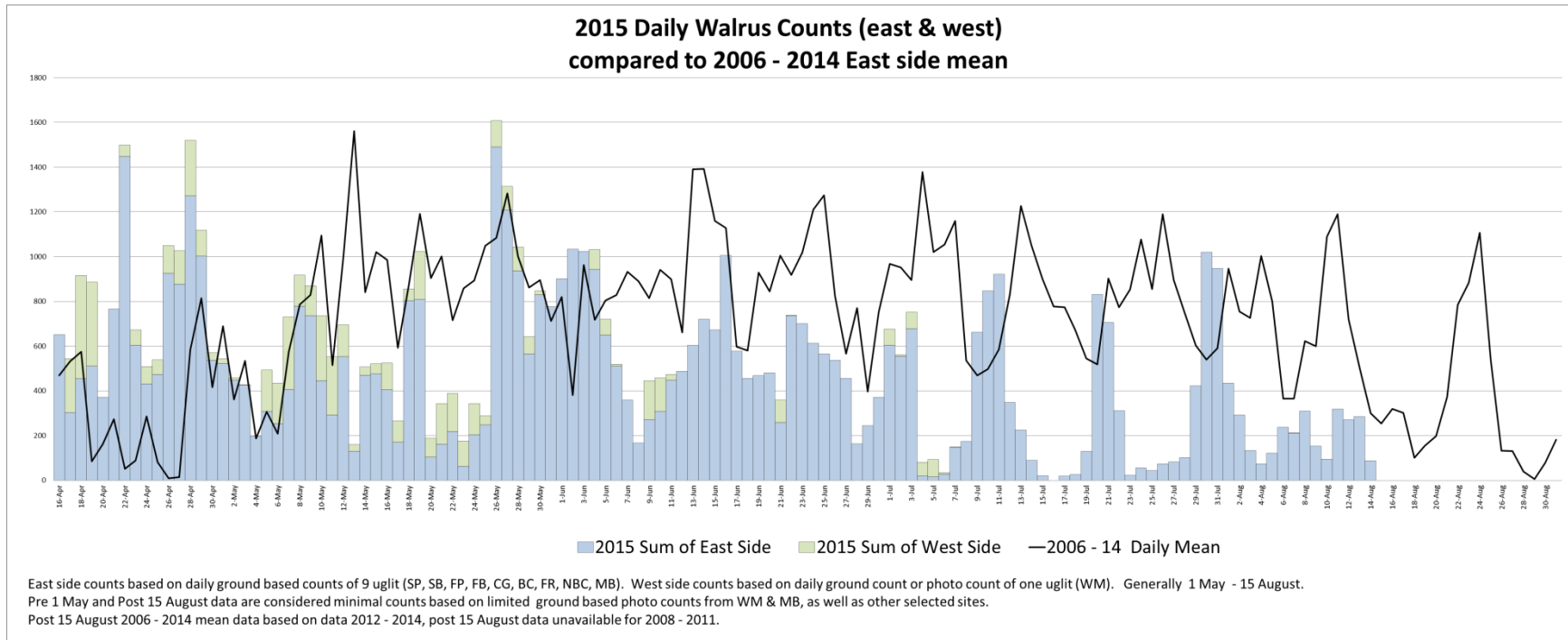
Regular walrus survey counts for the 2015 field season were conducted beginning when staff arrived on the island 20 April through 14 August. Eastside beaches were counted 116 out of the total 117 days that staff occupied the island. Daily counts are summarized in Figure 3 and Appendix A; and detailed in Appendix B. The first survey of WM beach was on 28 April during camera set up, arriving by boat on MB and climbing up to WM due to heavy snow on the trail. WM was physically surveyed on only 8 days, with in-season and post-season photo counts of the Alaska SeaLife Center camera data providing counts on 108 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 117 days staff were on the island. Additional WM counts after 13 August will be added after Alaska SeaLife Center cameras are downloaded in spring 2016.

The maximum walrus count of 1,607 occurred on 26 May 2015; from combined counts of east and westside beaches (Figure 3). This is a 30% decrease from the 2014 maximum count of 2,295 and a 54.6% decrease from the prior 10-year high count mean of 3,543. Walrus were present on the island for all but 1 day of the season, and absent from MB on only 4 days of the season. But PAWA numbers were lower than normal with a daily mean of 464 walrus on eastside and westside beaches through the period. A 22% reduction from last year's mean and a 49% decrease from the prior 9-year mean of 842. There were 17 of the 116 survey days with all island PAWA numbers below 100.

The maximum count on eastside beaches of 1,490 also occurred on 26 May. The mean count for eastside beaches was 427; a 25% decrease from the 2014 eastside mean of 570 and a 47% decrease from the prior 9-year mean of 808.

At WM beach the maximum count of 324 occurred on 7 May. PAWA use of WM dropped off considerably after 30 May. No PAWA used WM on 60 out of the total 116 survey days. Fifty-eight of these non-use days were after 30 May. The mean count for WM beach was 42 which is a 68% increase of the 2014 WM mean of 25. Four trips to the west side were made this season; and no walrus were observed on that side of Round Island, south of West Cape to Pinnacle Rock. Photo review of cameras set up at West Cape South and West Beach North from 4 May 2014 to 5 May 2015 determined that no walrus used these uglied during this timeframe.

The annual peak count of walrus at Round Island varies significantly between years (Figure 4) with the highest count estimate documented as 15,000 during a 1978 aerial survey. The lowest annual peak count was 1,746 in 1998 (Raymond and Stroka 1998). It is unknown how Round Island counts correlate to fluctuations in PAWA 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 walrus 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 WISGS (Round and Big Twin) (Frost et al. 1982). The southwestern shoreline of Hagemeister Island has also recently emerged as a significant walrus haulout in this region (MacDonald and Winfree 2008). Between feeding bouts, walrus 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 walrus 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.



**Figure 3. Pacific walrus hauled out daily in 2015 at Round Island, Alaska, compared to 2006–2014 mean.**

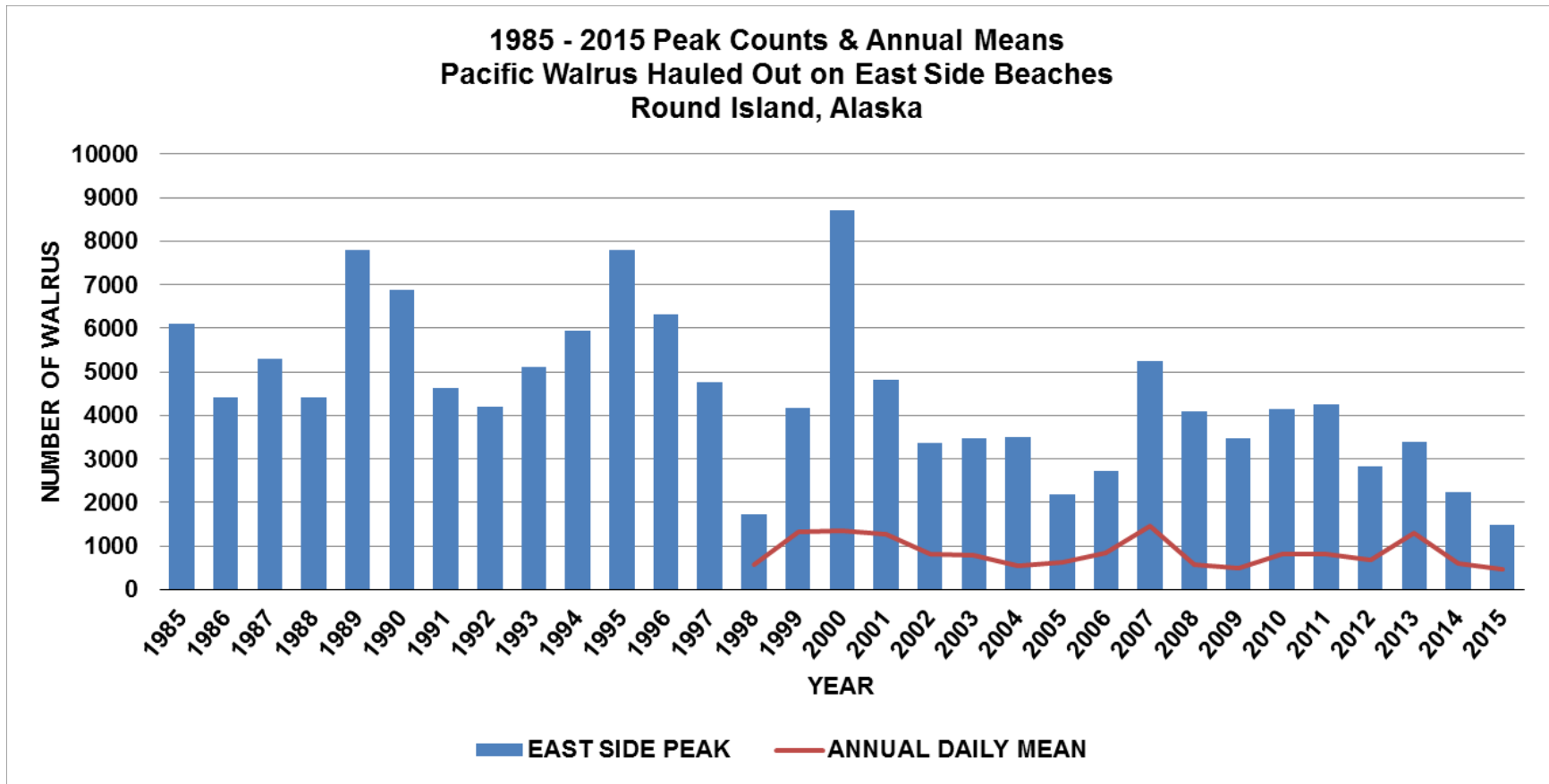


Figure 4. Peak and annual mean Pacific walrus counts, Round Island, Alaska, eastside beaches, 1985–2015.



## 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 ArcGIS software (esri, Redlands, California).

During 2015, Ryan P. Morrill (RPM) and Benjamin M. Histan (BMH) conducted variability counts throughout the season from 9 May through 11 August. The Bristol Bay Native Association intern assisted with 2 variability counts on 29 July and 31 July. These counts were made at MB and involved approximately 236 to 1,455 walrus. RPM and BMH continued conducting variability counts on a weekly basis throughout the summer. Ground photos were taken from the OP viewpoint and along the Traverse Trail looking down on MB. The photos from the Traverse Trail offered a better view of individual walrus and were used to check observer's walrus count estimates. Variability results are presented in Appendix C.

## **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.org 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 (nmi). 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. Anthropogenic events and walrus response records are included in Appendix D.

During the 2015 season, staff made an effort to record all anthropogenic events visually or audibly discernible at Round Island. Additional events were captured via Explore.org cameras and added to staff observed events. In total, 59 anthropogenic events were documented, 58 of these events occurred inside the 3 nmi restricted area. Dispersal type disturbances occurred during 26 of the 59 events; including all events with unknown sources.

Commercial access was available in 2015, and there was continued service of authorized vessel approaches to the island. Twenty-two of the anthropogenic events recorded involved authorized visitor transport boats or staff helicopters approaching or departing the island. These management and visitor operations caused dispersals on 4 occasions of 5 animals or less. Five walrus were dispersed from FR during 1 landing of a JetRanger III helicopter (Bell Helicopter, Mirabel, Quebec, Canada). And 1–2 walrus were dispersed during 3 arrivals of the commercial charter boat delivering campers.

During the set-up of Explore.org cameras on MB and WM, the Achilles inflatable (Marine Division of Achilles USA, Inc.) was used exclusively for transport from BC to MB due to inaccessibility to MB via the Traverse Trail. Thirteen boat trips were made from 24 April to 4 May, resulting in 3 separate disturbances of 20, 2, and 18 dispersals from MB. These 40 walrus dispersed from a total of 2,320 animals present on MB. Head-raises of 5 individuals occurred while operating a drill on MB.

On 27 April a Super Cub at medium altitudes flew over the island, and although no animals were disturbed, it was quite audible from land. Technicians were able to identify the plane's tail numbers and a warning letter was sent to the owner. On 3 May, a herring tender approaching the 3 nmi limit was successfully hailed over VHF, resulting in him re-routing around the sanctuary boundary. On 23 June a commercial gillnetter cruised offshore of Round Island at 2 nmi traveling northwest along the east side of the island. The vessel was caught on the radar and was unsuccessfully hailed on VHF. No disturbances were caused by this vessel. High altitude jets caused dispersal on 1 occasion. Dispersal from natural sources included red fox (*Vulpes vulpes*), common ravens (*Corvus corax*), and other walrus. Eleven dispersal events were from unknown sources involving an average of 52 animals ( $N = 12\text{--}119$ ). Ten of these unknown events were at FB with the remaining 1 at MB.

Only 1 event was recorded outside the 3 nmi, wherein a herring tender transited at or near the 3 nmi. No disturbances were observed.

## **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.org walrus cam viewing community. Injury observations are usually limited to injuries more substantial than the normal poke and jab associated sores. In 2015, 5 PAWA mortalities were reported. On 15 May, 1 PAWA was noted at SB. On 17 May 2 others were noted on MB. Another was found on MB on 7 July. And the fifth was noted 7 August at West Cape South.

A walrus with bleeding from the anal area was noted on 27 April 2015 at FR; the animal was resting and did not appear to be in distress. Another walrus spotted on 10 July appeared malnourished and had an injured and swollen penis.

## **STELLER SEA LION MONITORING**

Steller sea lions (STSL) 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

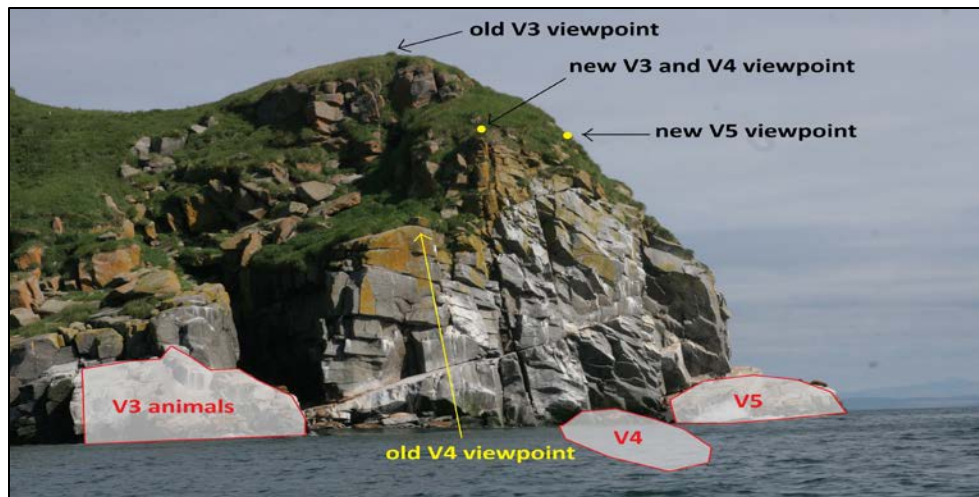
(TB; Figure 2) during winter and spring, when the EC rocks and ledges are iced up or Steller sea lions numbers are at their highest. STSL numbers are recorded, visible brands photographed, and injuries, entanglements, suckling behavior, and any unusual conditions are photographed and noted. Data are 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 STSL 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 STSL 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 STSL using ledges directly below the V3 viewpoint are visible from the traditional viewpoints.

Consequently, STSL 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 (Figure 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 = TB,
  - 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 STSL 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 STSL 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) more STSL 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.

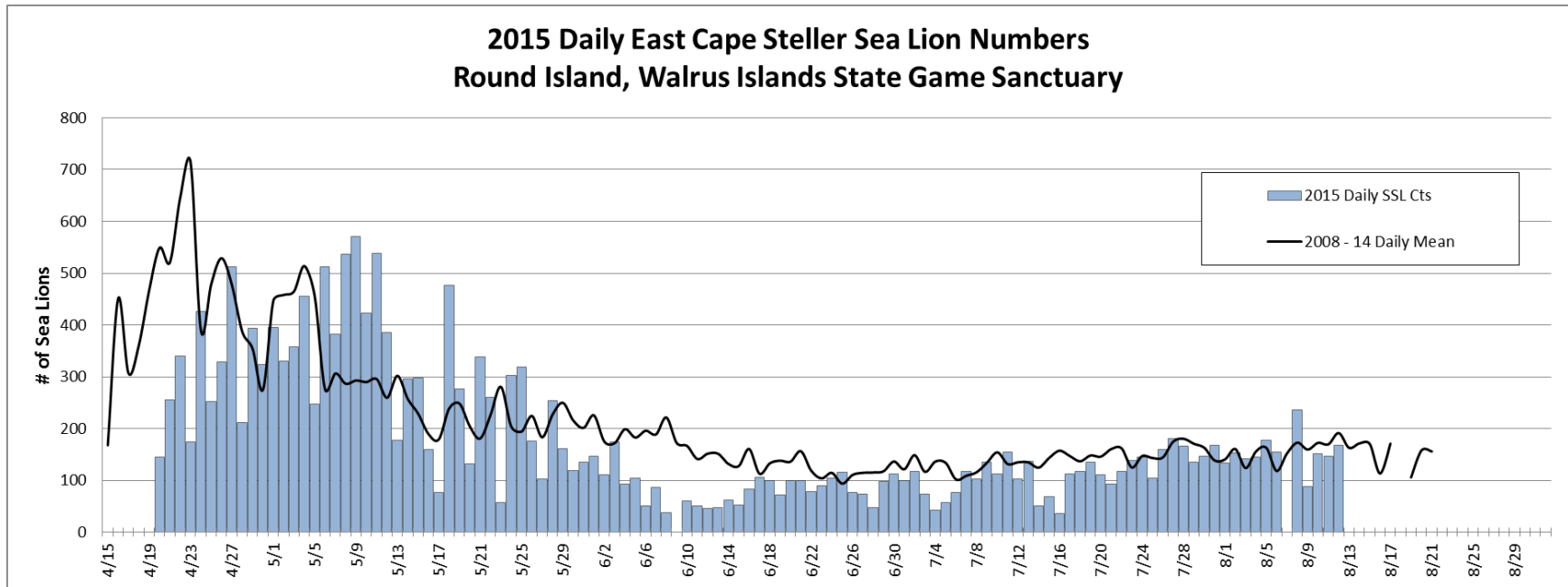


**Figure 5. East Cape Steller sea lion viewpoints (V3, V4, and V5), Round Island, Alaska.**

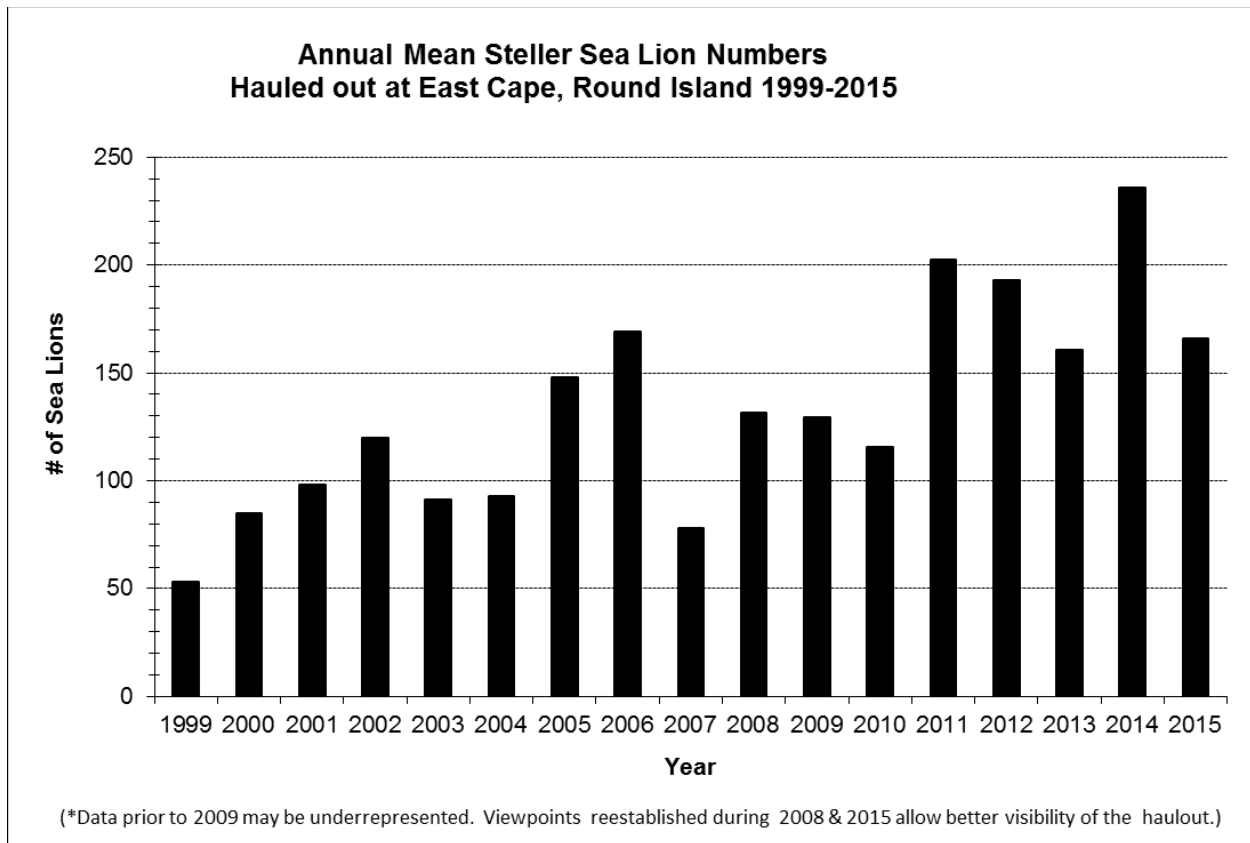
For the second year in a row, staff cooperating with ADF&G-DWC Marine Mammal Program, were sent out to the island in mid-April to take advantage of the higher numbers of STSL found at that time. In addition to counts and brand resight, composition counts were taken once a week to identify age and gender of the animals present on all haulouts. A total of 11 composition counts were taken throughout the summer, and 2 population counts were normally completed every day through 31 May.

During the 20 April through 12 August 2015 monitoring season, 140 land counts were conducted on 113 out of 115 days. Using the traditional viewpoints, the mean number of STSL present on Round Island was 166; the maximum count of 571 individuals was on 9 May and the minimum count of 36 individuals occurred on 16 July. Using the expanded viewpoints for early season observations increased the maximum to 643 on 8 May, and the mean to 208. This compares to the 2014 mean of 236 and the 2008–2014 mean of 167. Figure 6 shows the daily number of STSL present at the EC haulout during 2015 compared to the daily mean for the past 7 years, 2008–2014. Figure 7 shows the annual mean number of STSL present on Round Island between 1999 and 2015. Viewpoint changes implemented in 2008 and 2014–2015 has increased visibility of the whole haulout, however, inhibits the ability to make direct comparisons of historical means.

During 2015, 467 photo-confirmed sightings of brands were recorded at EC, representing 39 individuals. These brands originated from 4 natal rookeries where branding occurred, as compared to 3 branding locations during the 2014 season. The majority of branded Steller sea lions observed at Round Island originate from the Ugamak Island rookery. However, STSL branded at rookeries in Southeast and Southcentral Alaska, as well as Russia, are regularly observed. In 2015, 31 of the branded individuals originated from Ugamak Island in the eastern Aleutians (A brands); 4 from Sugarloaf Island in the Barren Islands near Kodiak, Alaska (X brand); 3 from Marmot Island near Kodiak, Alaska (T brand); and 1 from the Chiswell Islands near Seward (E brand). The majority of the branded animals (23) were juvenile to subadult males (2–8 years old). The remaining animals were adult males (7) and adult females (9).



**Figure 6. Steller sea lions hauled out at East Cape, Round Island, Alaska, 2015; daily numbers compared to 2008–2014 daily mean.**



**Figure 7. Mean number of Steller sea lions hauled out at East Cape, Round Island, Alaska, 1999–2015.**

Count data compared to historic means are presented in Figure 6. Count and brand resight details with comparison to counts at expanded viewpoints are contained in Appendix E.

One female STSL was seen throughout the season with a severely injured left hind flipper. She was observed on multiple occasions from May through August, at times nursing a pup. Another STSL was observed on 19 July with the scarring around the neck, possible remnants of a broken entanglement.

In cooperation with the ADF&G-DWC Marine Mammal Program, a new camera set-up was deployed 5 August 2015 to capture high resolution images of STSL 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 (Pelican Products Inc., Torrance, California) along with a 12V battery connected to a solar panel. The camera is wired into a light sensor and timer, and set to take photographs every 5 minutes during daylight hours.

## SEABIRD MONITORING

Three species of colonial nesting seabirds are normally monitored at 5 historical plots on Round Island. Nesting chronology and nest productivity data are normally collected for black-legged kittiwakes (*Rissa tridactyla*; BLKI) on plots 2 and 3 at OP; and common murre (*Uria aalge*;

COMU) on plots 1, 2, and 4 at OP; and pelagic cormorants (*Phalacrocorax pelagicus*; PECO) at several locations. 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 Drago 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 13 April 2016.

Overall, BLKI productivity on the Round Island plots during 2015 was slightly lower than the 5-year productivity mean, while COMU productivity was higher than the 5-year productivity mean. Details on productivity, phenology, and population counts for each species are provided below. Phenology and productivity data for all 3 species for years 2011–2015 are summarized in Table 1.

### Pelagic Cormorant Productivity Monitoring

PECO productivity monitoring was not conducted this year due to budget constraints, although nesting sites were opportunistically monitored in late April. PECO were present on Round Island when staff members arrived on 20 April 2015, and adults had begun establishing nest sites. Of the 4 locations historically monitored (First Prime North, First Prime South, First Beach North, Cabin, and First Beach South), PECO nesting was observed only at First Beach North and Cabin sites.

### Black-legged Kittiwake Productivity Monitoring

While a few BLKI were at Round Island as early as 15 April, they showed up in dramatic numbers on 20 April 2015 as evidenced by the remote cameras overlooking MB and WM. BLKI productivity monitoring was conducted from 30 May through 13 August 2015 on Plots 2 and 3 at OP. The first day that eggs were observed was 30 May and 31 May at OP3 and OP2, respectively. Nests were continually added to the plots as eggs were laid, resulting in 50 nests monitored; 25 on OP2 and 25 on OP3. The first chicks were observed at OP2 on 21 June and at OP3 on 23 June, for an average first chick date of 22 June. The maximum chick count was 44 on 29 June with 8 chicks surviving to fledge from both plots. Productivity for BLKIs in 2015 was 0.16 chicks/nest (Table 1) compared to 0.34 chicks/nest in 2014 and a previous 5-year average of 0.26 chicks/nest. Complete productivity observations for BLKI plot(s) are presented in Table 1 and Appendix F.

**Table 1. Seabird phenology and productivity summary, Round Island, Alaska, 2011–2015.**

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

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

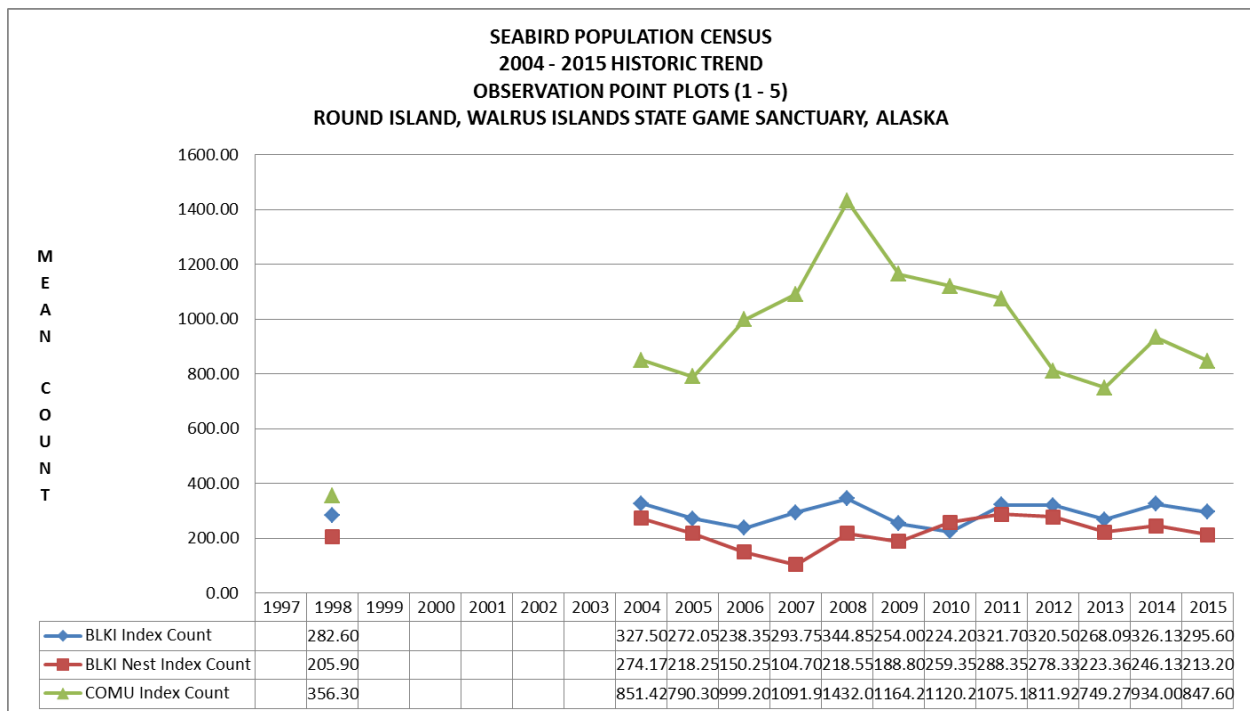


## Common Murre Productivity Monitoring

COMU productivity monitoring was conducted from 19 June through 12 August 2015 on Plots 1, 2, and 4 at OP. A total of 57 nest sites were monitored at OP1 ( $n = 10$ ), OP2 ( $n = 22$ ), and OP4 ( $n = 25$ ). The date of first egg sightings was 19 June at OP2 and 21 June at OP1 and OP4. The first COMU chick was observed on 12 July at OP4, on 13 July at OP3, and on 31 July at OP1. The maximum number of chicks that were observed was 8 on 25 July at OP2, 6 on 20 July at OP4, and 3 on 12 August on OP1. Of the 21 chicks that hatched, 9 survived to fledge (chicks older than 15 days were assumed to have fledged). Productivity rates were 0.16 chicks/nest, which was above last year's nesting failures and above the 5-year average productivity of 0.10. Phenology and productivity data are summarized in Table 1. Complete productivity observations for COMU plot(s) are presented in Appendix G.

## Population Counts

Ten population index counts of the 5 OP plots were conducted for BLKI, COMU, and PECO between 24 May and 6 August as weather permitted. On average there were 296 BLKI, 214 BLKI nests, 848 COMU, 41 PECO, and 25 PECO nests across all plots (Figure 8) (standard deviation; 101, 66, 95, 7 and 8 respectively). Complete population counts for BLKI, BLKI nests, and COMU plot(s) are presented in Appendix H.



**Figure 8. 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, 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 2015 season, along with observations from off-season game camera data are summarized in Appendix I. Some of the more noteworthy observations are detailed below.

### Marine Mammals

Gray whales (*Eschrichtius robustus*) were observed passing the island on their migration north 21 April through 2 June. Gray whales are typically observed along the eastern shores of Round Island from mid-April through late May or mid-June, depending on the year. For a few days, gray whales fed quite close to shore in front of the cabin and MB. Humpback whales (*Megaptera novaeangliae*) were observed close to the island on 2 July.

A decomposing harbor seal (*Phoca largha*) carcass with evidence of head wound was found on 2 August. Photos were taken but no samples were taken.

### Terrestrial Mammals

Conservative estimates of 8–10 different red fox were identified along the trail system and on MB during 2015. The den at the staff cabin appeared to be abandoned, and no fox kits were observed throughout the island. Fox were viewed preying on birds heavily on MB, with up to 5 individuals present on MB at one time.

In collaboration with ADF&G-DWC's Threatened, Endangered, and Diversity Program, Round Island staff set up and monitored a Wildlife Acoustic, Songmeter Zero-crossing bat detector during the 2015 season. The recorder records ultrasound frequencies to detect bat presence. The detector was mounted on the southwest wall of the tool shed facing the meadow behind the cabin site. The recorder ran from 2 June through 22 June and then stopped, likely when the batteries died. The recorder was operational again from 8 July through 13 August, when camp shut down. No bat calls were detected. Additional monitoring may be conducted in the future in order to sample different locations and confirm results.

### SMALL MAMMAL TRAPPING EFFORTS

This year, as in the past it was common to observe voles and shrews scurrying through the grass or lying dead on trails at various times throughout the season. Based on prior identifications these are likely tundra voles (*Microtus oeconomus*) and montane “dusky” shrews (*Sorex*

*monticolus*). Unidentified lemmings have also been noted in the past; however, these have not been positively identified and may just be large tundra voles.

Staff ran a series of small mammal traps at various locations on the east side of the island in an attempt to confirm species presence at Round Island. A series of 6 live capture can traps were set at numerous locations over the period 3 June–12 July 2015. Traps were variously baited with a variety of items including peanut butter and oats, cheese, apples, walnuts, and turkey. While small mammal sign is plentiful on Round Island, and specimens are often observed live and dead along the trails, the approximately 4,728 trap hours expended resulted in no small mammal captures. One fledgling songbird was captured and released.

These results are consistent with prior efforts conducted in 1958 (1,152 hr), 1972 (1,380 hr), 1990 (1,500 hr), and 1992 (428.5 hr); wherein few to no specimens were actually caught in traps. Sinnott (Hessing and Sheffield 1990:8) reported catching 3 tundra vole and 2 Siberian lemmings in the 1990 effort. Specimens found on trails or from these efforts have often been forwarded to the University of Alaska Museum of the North in Fairbanks for cataloging. However, specimens on file at the museum only confirm tundra voles and montane “dusky” shrews.

## Birds

First observance or notable daily observations of bird species are summarized in Appendix I. A list of less common birds observed on Round Island during the 2015 season include a king eider (*Somateria spectabilis*) on 13 May; horned grebe (*Podiceps auritus*) on 15 May; pine grosbeak (*Pinicola enucleator*) on 29 June; white-winged crossbill (*Loxia leucoptera*) on 7 July; white-fronted goose (*Anser albifrons*) on 6 August; and northern fulmar (*Fulmarus glacialis*) on 7 August. A belted kingfisher (*Megaceryle alcyon*) was also observed perched on the boat cable in BC on 14 August.

## Invertebrates

Ticks were observed on dead voles again this year. Staff were only able to collect photographic evidence which was not sufficient to identify the ticks to species. ADF&G veterinary staff tentatively identified them as a type of Ixodid tick as they were found on voles. It may be *Ixodes angustus* which typically infests mice and voles as hosts. *Ixodes uriae* have been previously noted at Round Island, however, this species typically infests seabirds.

## Remote Camera Observations

Reconyx game cameras are used at select sites across Round Island, both in season and during winters. Review of photos from these cameras provides data or information that supplements 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 the normally occupied beaches 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 usage.

Cameras were stationed overlooking TB, EC V1, CAMP, MB, and WM from 1 August 2014 through staff arrival in 2015. And overlooking EC, FB, and WM from 1 May 2015 through 14 August 2015 when staff left the island. The TB camera fell over during a storm 31 October 2015; having only a view of the sky; only cloud cover data were available after that. The CAMP and EC cameras batteries died mid-winter losing data after 1 February and 23 March respectively.

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 2 September 2014 in association with a storm system. The rest appear to have been gone by 16 September. A few seabirds began returning about 10 April 2015; followed by BLKI showing up en masse 20 April. Puffins first arrived around the beginning of May with a tufted puffin being seen at MB on 2 May, and puffins being evident on the EC cameras on 5 May.
- PAWA use at Round Island largely ended by 7 September for the 2014 season. Remarkably, a few individuals ( $n = 1-15$ ) were observed via camera in November, December, January, February, and early March. By 27 March PAWA were using WM again for the season. This use continued through staff arrival 20 April with an average of 373 PAWA (range 0–916) present at camera monitored beaches (MB, WM, FB) during this 27 March–20 April period.
- Temperatures appeared warmer than normal as judged from the camera data. Cameras on the south and east beaches are periodically exposed to direct sunlight and register warmer than actual temperatures. Even so, just looking at data from MB, CAMP, and WM temperatures were often above freezing and snow and ice conditions indicated warm temperatures and thawing. Maximum, minimum, and average temperatures for these camera sites are presented below.

Period	Temperatures		
	Maximum	Minimum	Average
2014			
Sep	77	36	51
Oct	56	15	33
Nov	47	18	34
Dec	43	10	30
2015			
Jan	40	-2	23
Feb	48	-3	26
Mar	55	-3	27
Apr	61	15	33

- Sea ice was not very prevalent around the island during winter 2014–2015; only encroaching on the island during 31 January–16 February and 8–16 March. Shorefast ice areas did not form very often and they cleared within a few days of forming; so haulout areas were not precluded by ice very often.
- Snow was fairly frequent from late October through mid-April; however, it almost always melted off within a couple days of falling, at the lower elevations.
- Common ravens, bald eagles, and red fox are year-round residents.
- STSL were present at EC throughout winter 2014–2015. STSL use waned a bit in the fall, with steady use through the winter and then increased the second week of April 2015. Primary use seemed to be at the V1 ledges with increasing use at TB with icing of the V1 rocks and ledges and as numbers increased in spring 2015.

Prior to staff leaving 14 August, cameras were stationed at MB, WM, FB, and EC for the 2015–2016 winter monitoring.

### Other Portions of Walrus Islands State Game Sanctuary

No staff visits were made to the other islands within the sanctuary this season and 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 PAWA and STSL 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 during 3 August 2014–21 March 2015. Daily minimum and maximum temperatures, precipitation, winds, barometer and cloud cover recorded manually in conjunction with PAWA and STSL surveys, as well as surviving electronic data from the Davis weather station, are archived into the WISGS database. Additional temperature data from Reconyx field cameras placed at various locations around the island are also archived in Reconyx image data within the WISGS database.

A summary of temperatures, wind speeds, days with precipitation and cloud cover for the period 2008–2015 is provided in Table 2. Daily weather data as recorded during monitoring surveys for 2015 are presented in Appendix J.

**Table 2. Weather summary, Round Island, Alaska, 2008–2015.**

Month	Temperatures °F		Wind speed (km/h)		Days with precipitation	Days <25% overcast	Days >50% overcast
	Average high	Range	Average	Range			
May	50	23–77	19.5	0–66	19%	30%	55%
Jun	55	30–84	19.5	0–79	18.5%	31%	55%
Jul	56	37–76	19.5	0–103	30%	23%	66%
Aug	59	42–75	20.7	0–81	27.5%	23%	68%

## Public Use and Land Management

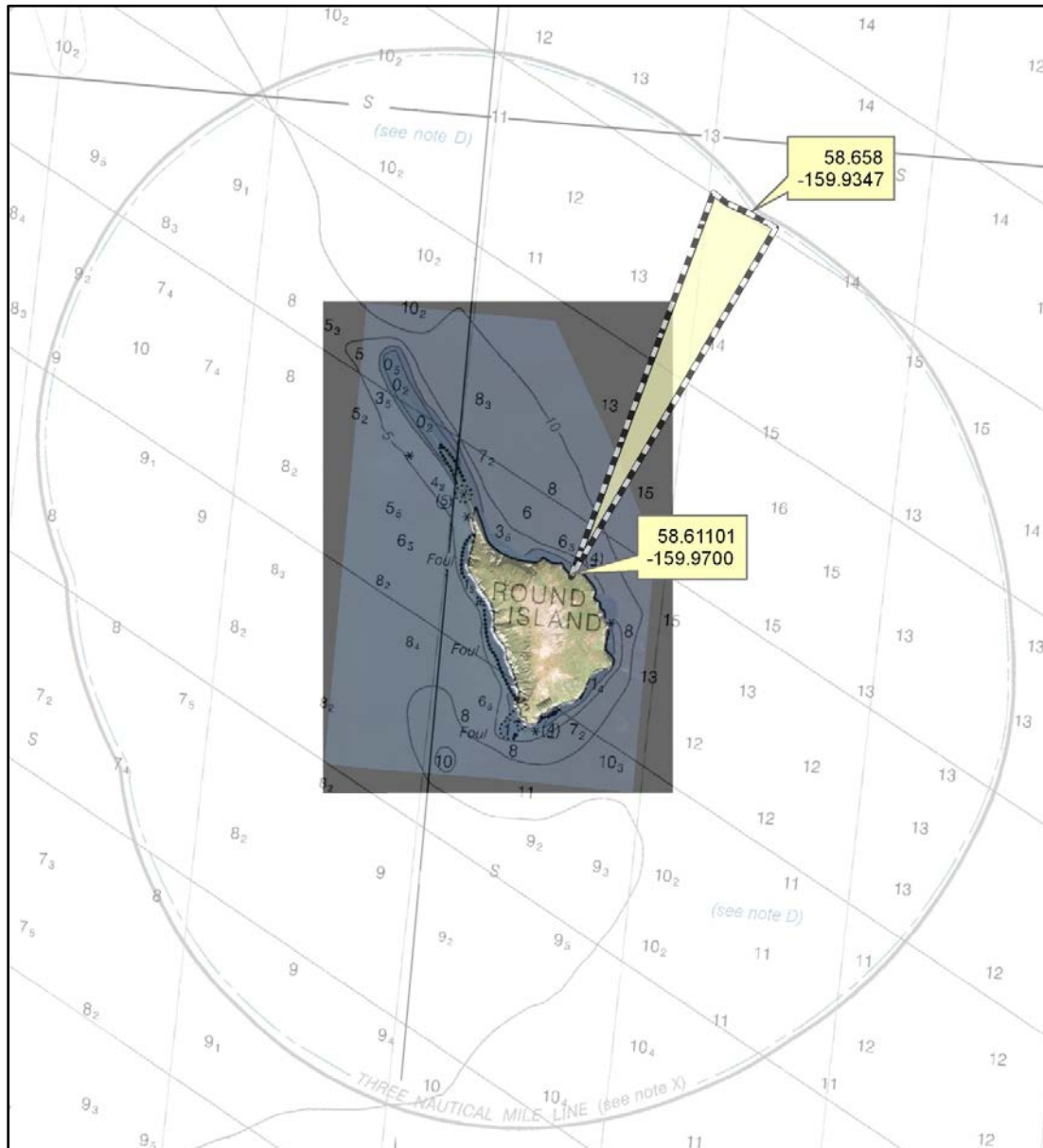
To protect sanctuary wildlife and other resources, access to Round Island and the waters within 3 geographical miles of the island are restricted. The 3-mile restriction has been in place since 1989, varying only slightly in the use of nautical versus geographical miles. Three geographical miles is about 10 meters more than 3 nmi. 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 (Figure 9). 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, and 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 9. Round Island, Walrus Islands State Game Sanctuary, Alaska, showing 3 nautical miles restricted waters and access corridor.**

Visitor use data for the 2015 season are summarized in Table 3. The availability of commercial transport provided by Togiak Outfitters throughout the summer allowed for opportunity of campers and guided day visitation during the 2015 season. Visitation interest was high late last winter; however, delays in funding the program led to a number of cancellations. Consequently there were a total of 22 public visitors to the island this season, 14 overnight campers, and 8 day visitors. There were visits by an additional 11 persons involved in administrative duties (staff, maintenance, management, or training). Public visitors represented 6 individual groups with a mean group size of 4.2 (range: 2–6). Eleven visitors were Alaska residents, the remainder hailed from California, Georgia, Florida, Washington, and Washington D.C.

**Table 3. Visitor use summary, Walrus Islands State Game Sanctuary, Round Island, Alaska, 2015.**

State	Visitor numbers				User days			
	Admin	Campers	Day use	Total	Admin	Campers	Day use	Total
Alaska	6	2	19	27	232	14	19	265
California			1	1			1	1
Canada			1	1			1	1
Germany			2	2			2	2
Oregon			1	1			1	1
Switzerland			5	5			5	5
Utah		3		3		9		9
Vermont			1	1			1	1
Washington			7	7			7	7
Grand Total	6	5	37	48	232	23	37	292

There were 66 visitor use days and 290 staff use days for a total of 356 user days between 20 April and 14 August. Public visitor use days were split between 59 camper user days and 7 day use days. The average length of stay for the campers was 4.1 days.

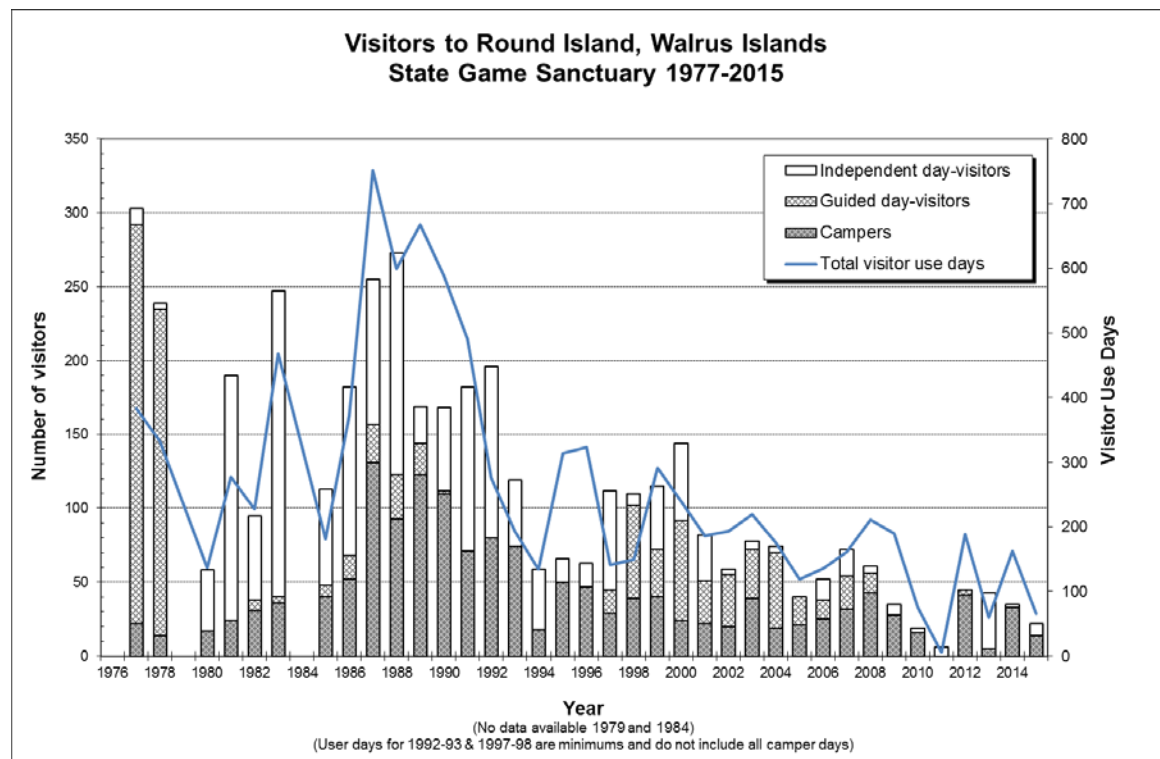
One of the visiting groups included Jeff Corwin and staff from the Georgia Aquarium and the Alaska SeaLife Center. They were on the island for 2 days filming for an episode of Ocean Mysteries which aired in November 2015.

Historically, visitation to Round Island has been variable (Figure 10). 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.



**Figure 10. Visitor use at Round Island, Alaska, 1977–2015.**

### WALRUS INTERNET CAM

In January 2015, ADF&G began discussions with the Annenberg Foundation and Explore.org 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 PAWA 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.

## 2015 Summary

After planning in January through March, on the ground work at Round Island began 20–25 March 2015. During this phase of the project ADF&G staff worked with Explore contractors, GCI and HDOnTap, at Round Island to complete initial installation and setup of cameras, powerstands, and satellite uplink infrastructure. HDOnTap staff had been working in Dillingham on construction of camera powerstands and electronics. All helicopter staff movements and equipment delivery and placement was handled by Sam Egli of Egli Air Haul, King Salmon, Alaska. The Egli JetRanger helicopter returned to Dillingham each evening.

On 20 March 2015, ADF&G Lands and Refuge Manager, Ed Weiss, flew to Round Island accompanied by GCI staff, Scot Standard and Alex Bautista. Over the next day and a half camp was opened, several loads of project equipment and supplies were delivered via sling loads and the GCI satellite dish and Internet router installation was completed. GCI staff departed Round Island late on 21 March. Equipment slinging continued on 22 March and HDOnTap staff, Timothy Sears, Andrew Olson, and Tom Leigh arrived that afternoon. Over the next 2 days camera powerstands, solar components, and electronics were assembled and then placed by helicopter at FB, WM overlook, and the NBC repeater site. The cabin powerstand was also assembled and readied for placement. Installation of camera mounts at FB and MB, as well as, testing of electronics and the GCI Internet connection also occurred. This initial work was completed by late evening on 24 March and the HDOnTap crew departed Round Island that evening. ADF&G staff secured camp the morning of 25 March and departed about noon that day. No PAWA were present at Round Island during this phase of the project.

The next phase of the project began after ADF&G staff arrived at Round Island for the normal season opening on 16 April 2015. Additional equipment and supplies were flown in by Egli Air Haul on 20 April and the HDOnTap crew arrived on 21 April. HDOnTap staff during this second phase was Tim Sears, Andrew Olson, and Andrew Marvil. From 21 April to 5 May, ADF&G sanctuary staff worked alongside the HDOnTap staff completing the installation and training on maintenance and operation of the system. Tasks completed during this period included placement of the cabin power stand, final installation and hookup of all 4 solar/Efoyl methanol fuel cell power stations, 5 Internet web cameras, power and data cables, hard drive storage, final hookup and testing of satellite Internet, and computer systems. Five Internet web cameras, 3 PTZ (point, tilt, zoom) and 2 fixed, were installed overlooking FB, MB, and WM beach.

The installations at MB and WM necessitated the installation of a number of fixed safety lines to allow safe installation of equipment and movement of staff between the power station at the WM overlook, the WM PTZ camera, and the MB camera (Figures 11–13). Power and data lines were sheathed in aluminum conduit, anchored along the hillside and connected to the cameras.

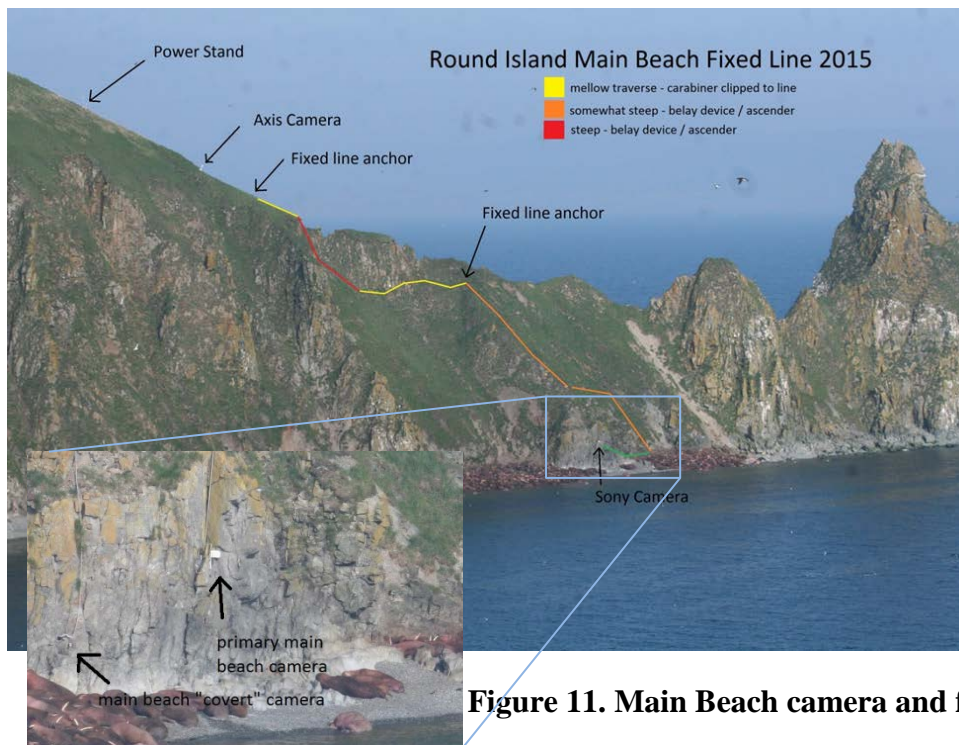
The walrus cameras were launched on 20 May 2015 via the Explore.org website. Staff members were able to talk live from Round Island with Charles Annenberg Weingarten over the Internet

to announce the project to the public. Round Island staff monitored and participated in web community postings daily. Staff also contributed to online daily Q&A discussion boards, weekly blogs, and live video chat sessions. In addition to the tremendous HD views of walrus streaming live from Round Island; the Explore.org walrus cam site generated a tremendous online dialog of over 13,500 comments providing a wealth of information to viewers regarding Round Island, PAWA, and WISGS.

ADF&G staff completed all in-season maintenance of Round Island based components of the walrus cam system. Specific maintenance issues that came up included a POV camera problem, TBox IP remote problems, fly dung on lens covers obscuring view at MB camera, performance inconsistencies with the ISP/satellite connection, and satellite bandwidth undersized for full utilization. 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 from 21 May through camp closure on 14 August.

Cameras went offline and were taken down on 13 August. During the live operating season the Round Island walrus cam drew over 1.8 million views and generated over 13,500 comments on the Explore community chat board. Additional, viewing and participation continued into the winter, recalling the 2015 season and anticipating 2016 operations. It is intended to have the online cameras in operation again in 2016, beginning in late March. Staff presence on the island will begin in mid-April.

Under the grant, ADF&G Round Island staff spent over 640 hours participating in the walrus cam project, 23 April–30 August 2016. Additionally, more than 300 hours were spent by other ADF&G staff participating in initial planning, Round Island installations, and the walrus cam online community.



**Figure 11. Main Beach camera and fixed lines.**



**Figure 12. Typical power stand.**



**Figure 13. West Main PTZ camera.**

## **ACCESS VIOLATIONS**

Staff documented 2 access infractions during the 2015 season. A violation of access restrictions (5 AAC 92.066) and a violation of ADF&G aircraft access policy and Federal Aviation Administration flight advisories. On 23 June a commercial gillnetter cruised along the east side of Round Island at about 2 miles distance at around 10 knots heading northwest towards Togiak. The vessel did not respond when hailed by staff on marine VHF. Investigation and identification of responsible parties through vessel identification numbers was unsuccessful. On 27 April 2015 a low flying plane was seen cruising over the island coming from the north and then banking a turn towards Togiak. Several attempts to raise the aircraft by radio were unsuccessful. Photographic documentation showed the airplanes tail numbers and a follow-up investigation led to informational warning being issued to the registered owner. No walrus were known to be disturbed during these incursions.

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, PAWA have thrived in the Bering and Chukchi seas (Fay 1982). In the 17<sup>th</sup> century there was an increased demand for walrus ivory, oil, and hides, which corresponded to the arrival

of the Europeans. Walrus were hunted extensively until the end of the 19<sup>th</sup> 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 2015 Qayassiq subsistence hunt at the 4 September prehunt meeting in Dillingham, Alaska. Manokotak and Togiak reported attempting to hunt at Round Island this year. However, no walrus were present at Round Island when they arrived on 7 October. Manokotak's crew returned home, while Togiak's crew hunted at Hagemeister Island where they struck 3; harvesting 1 and losing 2. Twin Hills crew of 5 also hunted at Hagemeister Island on 23 October, finding and harvesting a single walrus. The remaining communities did not hunt at Round Island or harvest any walrus.

## **Sanctuary Administration and Management**

### **STAFFING**

ADF&G staff were present on Round Island from 20 April through 14 August 2015. Camp supplies were transported from Seward, Alaska to Round Island via the F/V Barwell, owned and operated by Scott Tressler. Gear and supplies were loaded at the Seward dock on 15 April 2015 and delivered to the island 27 April. Sanctuary manager Ryan P. Morrill (RPM) and field technician Benjamin M. Hinstead (BMH) arrived in Dillingham on 17 April. Weather delays kept RPM and BMH from flying out to Round Island until 20 April via Egli Air JetRanger III helicopter. Pilot Sam Egli returned to Dillingham and flew out a sling load of camera gear on the evening of 20 April. The HDOnTap crew of Tim Sears, Andrew Olson, and Andrew Marvil arrived on the island on 21 April via Egli Air. On 7 May the Barwell anchored in front of the cabin and coordinated with the Pollux helicopter pilot, Sean Charlton, to sling load 3 brailer bags of supplies (1,800 lb total) from the boat deck to shore in 35 minutes.

HDOnTap personnel flew off of Round Island on 5 May with Egli Air, who also sling loaded a large wooden container off of the island. Former sanctuary manager, Diane Okonek, was present 29 May–16 June for RPM who was on staff break; and volunteer Diana Johnson was present 16 June–14 July. Staff transports on these dates were by Paul Markoff of Togiak Outfitters Inc. BMH took his break and left the island 14 July–23 July. During that period, former sanctuary

manager, Stephanie Sell and intern Kelsey Loper staffed the sanctuary. Due to unavailability of commercial vessel transport, a crew swap on 23 July was done by Pollux Aviation who transported BMH and Diana Johnson to Round Island and returned Stephanie Sell and Kelsey Loper to Dillingham. This swap out was further simplified by low walrus numbers that day. On 29 July, RPM returned to the island with BBNA intern Jas Upton via Togiak Outfitters Inc. Diana Johnson travelled back to Togiak via Togiak Outfitters on that day. Unfortunately, the intern was sent off the island due to disciplinary actions on 4 August, returning to Togiak via Togiak Outfitters Inc. Demobilization of camp and transport of staff off the island occurred on 14 August and was also done by Togiak Outfitters.

## **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.

This year staff continued making improvements to problem areas on the Round Island trail system. GeoBlock® repairs were added to bad spots along the trail system in the FB, and BC to FR areas. Rock steps at BC along the campground trail were repaired or replaced. The foot bridge at FB was also replaced. Weed whacking along trails is an ongoing endeavor to improve visibility and footing.

Staff made a number of minor repairs to camp infrastructure including gutter repairs on the cabin, repairs and replacements to the water line, repairs to a leaky fuel oil line and filter, and repairs to leaks in Achilles raft. Maintenance or maintenance repairs were done on the composting outhouse, weed whacker, doors, and water system.

## **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; National Fish & Wildlife Foundation; and a Coastal Impact Assistance Program grant from National Marine Fisheries Service through the ADF&G-DWC Marine Mammal Program allowed ADF&G to continue its presence on the island and responsibilities with walrus, seabird, and sea lion monitoring; webcam support; visitor services; enforcement; and facilities maintenance.

Staff at the Alaska SeaLife Center worked with staff from an international group of zoos and aquaria with walrus interest known as the Walrus Conservation Consortium to secure additional grant funding to support Round Island operations.

In addition to the Explore.org funding agreement noted above, ADF&G entered into a cooperative agreement in September 2015 with the National Park Service under the National Natural Landmark (NNL) program for funding to assist with ADF&G's mission at Round Island. The agreement, providing up to a total of \$52,000 assistance, will be utilized starting with the

2016 season and go through September 2020. Designated as a NNL in 1968, the NNL designation recognizes the national importance of WISGS's natural history and resources, and has provided funding, technical advice, and assistance to ADF&G for department operations on Round Island.

## IVORY COLLECTION

Nine complete tusks and 8 pieces of broken ivory were recovered during the 2015 season. These pieces were collected from 3 mortalities and beach cast ivory found along West Cape South, MB, and SB. 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, 2015.**

Date	Location <sup>a</sup>	Mortalities observed	No. of tusks ivory present	Beach cast ivory	Amount collected	Comments
5/8	MB	1	2	0	0	Boat not in water, carcass not with group, located half way down beach, too high chance of disturbance not retrieved.
5/13	MB	1	2	0	0	Same mort as 5/8; observed 2 tusks intact.
6/1	FB	1	2	0	0	No action, too high a chance of disturbance, around 100 walrus on beach.
6/2	FB	0	2	0	2	No disturbance to 5 walrus on FB, body wedged face down in rocks, cut off head.
6/18	MB	1	unk	0	0	Apparent mortality; not moving, face down shallow water, surrounded by bloody water.
6/18	MB	0	0	3	3	Walked along beach at low tide, no walrus present, also found oosik.
6/27	WM	2	4	0	0	Two morts on WM; 1 extremely decomposed, 1 normally bloated.
7/20	WM	1	2	1	1	Took boat to WM, mortality too close to cliffs with nesting murres and kittiwakes.
7/28	MB	0	0	1	1	Walked along beach at low tide, walrus positioned near point.
7/29	NBC	1	2	0	2	Beached mort, highly decomposed.
7/30	FR	0	0	1	1	Broken piece in crack, no walrus present.
8/2	SB	0	0	2	2	Small broken pieces, no walrus present.
8/7	MB	1	2	0	0	New mort on MB with 1 full tusk, 1 broken nub.
8/8	FB	0	0	3	3	Three small pieces of beach cast ivory on FB no walrus present.

<sup>a</sup> FB = First Beach; FR = Flat Rock; MB = Main Beach; NBC= North Boat Cove; SB = Second Beach; WM = West Main.

## 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 early deployment and STSL efforts at Round Island. Thanks to HDOnTap staff Tim Sears, Andrew Marvil, and Andrew Olson for webcam set-up and 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, 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 Pollux Aviation, Egli Air Haul, and Togiak Outfitters for their continued transport support. Thanks to Warner Leu 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.**

Date	Eastside total	Westside total	Total no. walrus
4/16/2015	652	0	652
4/17/2015	302	241	543
4/18/2015	453	463	916
4/19/2015	510	376	886
4/20/2015	371	0	371
4/21/2015	765	0	765
4/22/2015	1,447	52	1,499
4/23/2015	603	69	672
4/24/2015	431	77	508
4/25/2015	474	65	539
4/26/2015	924	125	1,049
4/27/2015	876	151	1,027
4/28/2015	1,272	247	1,519
4/29/2015	1,001	117	1,118
4/30/2015	536	35	571
5/1/2015	522	22	544
5/2/2015	447	10	457
5/3/2015	425	2	427
5/4/2015	197	0	197
5/5/2015	307	185	492
5/6/2015	253	181	434
5/7/2015	406	324	730
5/8/2015	778	139	917
5/9/2015	735	134	869
5/10/2015	445	290	735
5/11/2015	291	262	553
5/12/2015	552	144	696
5/13/2015	130	30	160
5/14/2015	470	37	507
5/15/2015	475	45	520
5/16/2015	404	120	524
5/17/2015	170	95	265
5/18/2015	802	54	856
5/19/2015	808	215	1,023
5/20/2015	104	84	188
5/21/2015	162	181	343
5/22/2015	218	171	389
5/23/2015	63	113	176
5/24/2015	203	139	342
5/25/2015	247	42	289
5/26/2015	1,490	117	1,607
5/27/2015	1,208	105	1,313
5/28/2015	937	106	1,043
5/29/2015	564	79	643
5/30/2015	829	17	846
5/31/2015	777	0	777
6/1/2015	902	0	902
6/2/2015	1,034	0	1,034
6/3/2015	1,023	0	1,023
6/4/2015	942	90	1,032
6/5/2015	649	71	720
6/6/2015	510	9	519
6/7/2015	358	0	358
6/8/2015	166	0	166

Date	Eastside total	Westside total	Total no. walrus
6/9/2015	271	174	445
6/10/2015	308	150	458
6/11/2015	446	28	474
6/12/2015	488	0	488
6/13/2015	604	0	604
6/14/2015	719	0	719
6/15/2015	672	0	672
6/16/2015	1,006	0	1,006
6/17/2015	578	0	578
6/18/2015	456	0	456
6/19/2015	468	0	468
6/20/2015	481	0	481
6/21/2015	258	100	358
6/22/2015	735	1	736
6/23/2015	701	0	701
6/24/2015	612	0	612
6/25/2015	565	0	565
6/26/2015	536	0	536
6/27/2015	456	0	456
6/28/2015	163	0	163
6/29/2015	245	0	245
6/30/2015	371	0	371
7/1/2015	603	72	675
7/2/2015	554	8	562
7/3/2015	678	73	751
7/4/2015	19	61	80
7/5/2015	16	77	93
7/6/2015	27	8	35
7/7/2015	148	1	149
7/8/2015	174	0	174
7/9/2015	661	0	661
7/10/2015	847	0	847
7/11/2015	920	0	920
7/12/2015	349	0	349
7/13/2015	224	0	224
7/14/2015	89	0	89
7/15/2015	20	0	20
7/16/2015	0	0	0
7/17/2015	19	0	19
7/18/2015	26	0	26
7/19/2015	129	0	129
7/20/2015	830	0	830
7/21/2015	705	0	705
7/22/2015	312	0	312
7/23/2015	22	0	22
7/24/2015	55	0	55
7/25/2015	44	0	44
7/26/2015	74	0	74
7/27/2015	82	0	82
7/28/2015	102	0	102
7/29/2015	422	0	422
7/30/2015	1,019	0	1,019
7/31/2015	947	0	947
8/1/2015	434	0	434
8/2/2015	292	0	292

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Date	Eastside total	Westside total	Total no. walrus
8/3/2015	134	0	134
8/4/2015	73	0	73
8/5/2015	120	0	120
8/6/2015	238	0	238
8/7/2015	210	1	211
8/8/2015	309	0	309
8/9/2015	153	0	153
8/10/2015	95	0	95
8/11/2015	318	0	318
8/12/2015	271	0	271
8/13/2015	284	0	284
8/14/2015	88	0	88

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**Appendix B. Pacific walrus detailed count data, Round Island, Alaska, 2014–2015.**

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
10/11/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_0038.JPG, 10/11/14 @1400. Calm, fog early, snow flurries late in day.
10/11/2014	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_0038.JPG, 10/11/14 @1400. Camera obscured all day.
10/11/2014	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_0039.JPG, 10/11/14 @1400.
10/12/2014	14:00	EWW	MB	GP	14:00	3	1	C	0	0	G	ADF&G MB photo IMG_0071.JPG, 10/12/14 @1400. Ptly cloudy, calm. Snow flurries night prior. Wind late in day.
10/12/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1240.JPG, 10/12/14 @1400.
10/12/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_0072.JPG, 10/12/14 @1400.
10/13/2014	14:00	EWW	MB	GP	14:00	5	3	C	0	0	G	ADF&G MB photo IMG_0104.JPG, 10/13/14 @1400. Mostly sunny, windy throughout day.
10/13/2014	14:00	EWW	WBN	GP	14:00	4	3	C	0	0	G	ADF&G WBN photo IMG_1259.JPG, 10/13/14 @1600. Camera obscured at survey time, clears at 1500–1700, no walrus present.
10/13/2014	14:00	EWW	WM	GP	14:00	5	2	C	0	0	E	ADF&G WM photo IMG_0105.JPG, 10/13/14 @1400.
10/14/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_0137.JPG, 10/14/14 @1400.
10/14/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1274.JPG, 10/14/14 @1400.
10/14/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_0138.JPG, 10/14/14 @1400.
10/15/2014	14:00	EWW	MB	GP	14:00	1	1	C	0	0	G	ADF&G MB photo IMG_0170.JPG, 10/15/14 @1400. CALM.
10/15/2014	14:00	EWW	WBN	GP	14:00	1	0	P	0	0	G	ADF&G WBN photo IMG_1292.JPG, 10/15/14 @1500. Camera partially obscured at count time, clears at 1500. No PAWA.
10/15/2014	14:00	EWW	WM	GP	14:00	1	1	C	0	0	E	ADF&G WM photo IMG_0171.JPG, 10/15/14 @1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
10/16/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_0203.JPG, 10/16/14 @ 1400.
10/16/2014	14:00	EWW	WBN	GP	14:00	1	1	P	0	0	G	ADF&G WBN photo IMG_1308.JPG, 10/16/14 @ 1400.
10/16/2014	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_0204.JPG, 10/16/14 @ 1400.
10/17/2014	14:00	EWW	MB	GP	14:00		2	C	0	0	G	ADF&G MB photo IMG_0236.JPG, 10/17/14 @ 1400. Foggy at sea no BSS.
10/17/2014	14:00	EWW	WBN	GP	14:00	1	2	C	0	0	G	ADF&G WBN photo IMG_1325.JPG, 10/17/14 @ 1400.
10/17/2014	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_0237.JPG, 10/17/14 @ 1400.
10/18/2014	9:00	EWW	MB	GP	9:00	3	2	C	0	0	G	ADF&G MB photo IMG_0259.JPG, 10/18/14 @ 0900. CORA AT 1300.
10/18/2014	9:00	EWW	WBN	GP	9:00	2	2	C	0	0	G	ADF&G WBN photo IMG_1338.JPG, 10/18/14 @ 1000. Photo at count time too dark, clear view at 1000 no PAWA.
10/18/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_0270.JPG, 10/18/14 @ 1400.
10/19/2014	9:00	EWW	MB	GP	9:00	4	2	C	0	0	G	ADF&G MB photo IMG_0292.JPG, 10/19/14 @ 0900. Clear, wind throughout day.
10/19/2014	9:00	EWW	WBN	GP	9:00	2	2	P	0	0	G	ADF&G WBN photo IMG_1359.JPG, 10/19/14 @ 1400. Photo at count time too dark, partially obscured, clears by 1400, no PAWA.
10/19/2014	14:00	EWW	WM	GP	14:00	4	3	C	0	0	E	ADF&G WM photo IMG_0303.JPG, 10/19/14 @ 1400.
10/20/2014	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_0335.JPG, 10/20/14 @ 1500. Calm.
10/20/2014	14:00	EWW	WBN	GP	14:00	1	1	P	0	0	G	ADF&G WBN photo IMG_1376.JPG, 10/20/14 @ 1500. Photo partially blurred, but clears at 1500, no PAWA.
10/20/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_0336.JPG, 10/20/14 @ 1400.
10/21/2014	9:00	EWW	MB	GP	9:00	3	3	C	0	0	G	ADF&G MB photo IMG_0358.JPG, 10/21/14 @ 0900. Snow overnight, seas rougher throughout day.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
10/21/2014	9:00	EWW	WBN	GP	9:00	1	1	C	0	0	G	ADF&G WBN photo IMG_1393.JPG, 10/21/14 @ 1400. 0900 photo dark and obscured by snow until noon. Snow last night and this a.m.
10/21/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_0369.JPG, 10/21/14 @ 1400.
10/22/2014	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	ADF&G WM photo IMG_0402.JPG, 10/22/14 @ 1400.
10/22/2014	14:00	EWW	MB	GP	14:00	4	2	C	0	0	G	ADF&G MB photo IMG_0401.JPG, 10/22/14 @ 1400. Clear, wind throughout day.
10/22/2014	14:00	EWW	WBN	GP	14:00	4	2	C	0	0	G	ADF&G WBN photo IMG_1410.JPG, 10/22/14 @ 1400.
10/23/2014	9:00	EWW	MB	GP	9:00	1	1	C	0	0	G	ADF&G MB photo IMG_0424.JPG, 10/23/14 @ 0900. Calm, fog periodically through day.
10/23/2014	9:00	EWW	WBN	GP	9:00			O			N	ADF&G WBN photo IMG_0424.JPG, 10/23/14 @ 0900. Obscured by moisture all day.
10/23/2014	14:00	EWW	WM	GP	14:00	1	2	C	0	0	E	ADF&G WM photo IMG_0435.JPG, 10/23/14 @ 1400.
10/24/2014	17:00	EWW	MB	GP	17:00	3	2	C	0	0	G	ADF&G MB photo IMG_0473.JPG, 10/24/14 @ 1700. Clear throughout day.
10/24/2014	17:00	EWW	WBN	GP	17:00	2	2	C	0	0	G	ADF&G WBN photo IMG_1447.JPG, 10/24/14 @ 1700.
10/24/2014	17:00	EWW	WM	GP	17:00	3	2	C	0	0	E	ADF&G WM photo IMG_0474.JPG, 10/24/14 @ 1700.
10/25/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_0500.JPG, 10/25/14 @ 1400.
10/25/2014	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_1461.JPG, 10/25/14 @ 1400.
10/25/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_0501.JPG, 10/25/14 @ 1400.
10/26/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_0533.JPG, 10/26/14 @ 1400.
10/26/2014	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_1478.JPG, 10/26/14 @ 1400.
10/26/2014	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_0534.JPG, 10/26/14 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
10/27/2014	9:00	EWW	MB	GP	9:00	2	2	C	0	0	G	ADF&G MB photo IMG_0556.JPG, 10/27/14 @ 0900.
10/27/2014	9:00	EWW	WBN	GP	9:00	3	2	C	0	0	G	ADF&G WBN photo IMG_1495.JPG, 10/27/14 @ 1400.
10/27/2014	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	ADF&G WM photo IMG_0557.JPG, 10/27/14 @ 1400.
10/28/2014	17:00	EWW	MB	GP	17:00	3	3	C	0	0	G	ADF&G MB photo IMG_0605.JPG, 10/28/14 @ 1700.
10/28/2014	17:00	EWW	WBN	GP	17:00	3	2	C	0	0	G	ADF&G WBN photo IMG_1516.JPG, 10/28/14 @ 1700.
10/28/2014	17:00	EWW	WM	GP	17:00	3	3	C	0	0	E	ADF&G WM photo IMG_0606.JPG, 10/28/14 @ 1700.
10/29/2014	9:00	EWW	MB	GP	9:00	4	2	C	0	0	G	ADF&G MB photo IMG_0622.JPG, 10/29/14 @ 0900. Windy throughout day.
10/29/2014	9:00	EWW	WBN	GP	9:00	2	2	C	0	0	G	ADF&G WBN photo IMG_1529.JPG, 10/29/14 @ 1400.
10/29/2014	9:00	EWW	WM	GP	9:00	4	3	C	0	0	E	ADF&G WM photo IMG_0633.JPG, 10/29/14 @ 1400.
10/30/2014	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_0665.JPG, 10/30/14 @ 1400.
10/30/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1547.JPG, 10/30/14 @ 1400.
10/30/2014	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_0666.JPG, 10/30/14 @ 1400.
10/31/2014	17:00	EWW	MB	GP	17:00	5	3	C	0	0	G	ADF&G MB photo IMG_0704.JPG, 10/31/14 @ 1700. Windy, rough seas throughout day. Some light snow.
10/31/2014	17:00	EWW	WBN	GP	17:00	1	0	P	0	0	G	ADF&G WBN photo IMG_1566.JPG, 10/31/14 @ 1700. Snow throughout day.
10/31/2014	17:00	EWW	WM	GP	17:00	5	1	C	0	0	E	ADF&G WM photo IMG_0705.JPG, 10/31/14 @ 1700. Snowstorm.
11/1/2014	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_0731.JPG, 11/01/14 @ 1400. Rough seas throughout day.
11/1/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_1580.JPG, 11/01/14 @ 1400.



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
11/1/2014	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	ADF&G WM photo IMG_0732.JPG, 11/01/14 @ 1400.
11/2/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_0764.JPG, 11/02/14 @ 1400.
11/2/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_1597.JPG, 11/02/14 @ 1400.
11/2/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_0767.JPG, 11/02/14 @ 1400.
11/3/2014	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_0797.JPG, 11/03/14 @ 1400. Snow overnight.
11/3/2014	14:00	EWW	WBN	GP	14:00	2	1	P	0	0	G	ADF&G WBN photo IMG_1614.JPG, 11/03/14 @ 1400.
11/3/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_0800.JPG, 11/03/14 @ 1400.
11/4/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_0830.JPG, 11/04/14 @ 1400.
11/4/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1631.JPG, 11/04/14 @ 1400.
11/4/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_0833.JPG, 11/04/14 @ 1400.
11/5/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_0863.JPG, 11/05/14 @ 1600.
11/5/2014	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_1648.JPG, 11/05/14 @ 1400.
11/5/2014	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_0866.JPG, 11/05/14 @ 1400.
11/6/2014	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_0896.JPG, 11/06/14 @ 1400.
11/6/2014	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_1665.JPG, 11/06/14 @ 1400.
11/6/2014	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_0899.JPG, 11/06/14 @ 1400.
11/7/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_0929.JPG, 11/07/14 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
11/7/2014	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_1682.JPG, 11/07/14 @ 1400.
11/7/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_0932.JPG, 11/07/14 @ 1400.
11/8/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_0962.JPG, 11/08/14 @ 1400.
11/8/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_1699.JPG, 11/08/14 @ 1400.
11/8/2014	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_0965.JPG, 11/08/14 @ 1400.
11/9/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_0995.JPG, 11/09/14 @ 1400.
11/9/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_1716.JPG, 11/09/14 @ 1400.
11/9/2014	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	ADF&G WM photo IMG_0998.JPG, 11/09/14 @ 1400.
11/10/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_1028.JPG, 11/10/14 @ 1400.
11/10/2014	14:00	EWW	WBN	GP	14:00	3	3	C	0	0	G	ADF&G WBN photo IMG_1733.JPG, 11/10/14 @ 1400.
11/10/2014	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_1031.JPG, 11/10/14 @ 1400.
11/11/2014	14:00	EWW	MB	GP	14:00		2	P	0	0	F	ADF&G MB photo IMG_1061.JPG, 11/11/14 @ 1400. Mostly obscured by fog and moisture most of day, no BSS.
11/11/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_1750.JPG, 11/11/14 @ 1400.
11/11/2014	14:00	EWW	WM	GP	14:00		3	C	0	0	E	ADF&G WM photo IMG_1064.JPG, 11/11/14 @ 1400. Fog, no BSS. Fog.
11/12/2014	14:00	EWW	MB	GP	14:00			O			N	ADF&G MB photo IMG_1094.JPG, 11/12/14 @ 1400. Obscured by fog all day, no BSS.
11/12/2014	14:00	EWW	WBN	GP	14:00		2	P	0	0	G	ADF&G WBN photo IMG_1767.JPG, 11/12/14 @ 1400. Fog throughout day, no BSS. Fog throughout day.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
11/12/2014	14:00	EWW	WM	GP	14:00		2	C	0	0	E	ADF&G WM photo IMG_1097.JPG, 11/12/14 @ 1400. Fog, no BSS. Fog
11/13/2014	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_1127.JPG, 11/13/14 @ 1400.
11/13/2014	14:00	EWW	WBN	GP	14:00	3	1	C	0	0	G	ADF&G WBN photo IMG_1784.JPG, 11/13/14 @ 1400.
11/13/2014	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	ADF&G WM photo IMG_1130.JPG, 11/13/14 @ 1400.
11/14/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_1160.JPG, 11/14/14 @ 1400.
11/14/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1801.JPG, 11/14/14 @ 1400.
11/14/2014	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_1163.JPG, 11/14/14 @ 1400.
11/15/2014	14:00	EWW	MB	GP	14:00	4	2	C	0	0	G	ADF&G MB photo IMG_1193.JPG, 11/15/14 @ 1800.
11/15/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1818.JPG, 11/15/14 @ 1400.
11/15/2014	14:00	EWW	WM	GP	14:00	4	1	C	0	0	E	ADF&G WM photo IMG_1196.JPG, 11/15/14 @ 1400.
11/16/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_1226.JPG, 11/16/14 @ 1400.
11/16/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1836.JPG, 11/16/14 @ 1500. 1400 partially obscured by raindrops.
11/16/2014	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_1229.JPG, 11/16/14 @ 1400.
11/17/2014	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_1259.JPG, 11/17/14 @ 1400.
11/17/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1852.JPG, 11/17/14 @ 1400.
11/17/2014	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_1262.JPG, 11/17/14 @ 1400.
11/18/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_1292.JPG, 11/18/14 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
11/18/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1869.JPG, 11/18/14 @ 1400.
11/18/2014	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_1295.JPG, 11/18/14 @ 1400.
11/19/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_1325.JPG, 11/19/14 @ 1400.
11/19/2014	14:00	EWW	WBN	GP	14:00	2	3	C	0	0	G	ADF&G WBN photo IMG_1886.JPG, 11/19/14 @ 1400.
11/19/2014	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_1328.JPG, 11/19/14 @ 1400.
11/20/2014	14:00	EWW	MB	GP	14:00	5	3	C	0	0	G	ADF&G MB photo IMG_1358.JPG, 11/20/14 @ 1400.
11/20/2014	14:00	EWW	WBN	GP	14:00	4	2	C	0	0	G	ADF&G WBN photo IMG_1903.JPG, 11/20/14 @ 1400.
11/20/2014	14:00	EWW	WM	GP	14:00	5	2	C	0	0	E	ADF&G WM photo IMG_1361.JPG, 11/20/14 @ 1400.
11/21/2014	14:00	EWW	MB	GP	14:00	5	3	C	0	0	G	ADF&G MB photo IMG_1391.JPG, 11/21/14 @ 1400.
11/21/2014	14:00	EWW	WBN	GP	14:00	4	1	C	0	0	G	ADF&G WBN photo IMG_1920.JPG, 11/21/14 @ 1400.
11/21/2014	14:00	EWW	WM	GP	14:00	5	2	C	0	0	E	ADF&G WM photo IMG_1394.JPG, 11/21/14 @ 1400.
11/22/2014	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_1424.JPG, 11/22/14 @ 1400.
11/22/2014	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_1937.JPG, 11/22/14 @ 1400.
11/22/2014	14:00	EWW	WM	GP	14:00	4	1	C	0	0	E	ADF&G WM photo IMG_1427.JPG, 11/22/14 @ 1400.
11/23/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_1457.JPG, 11/23/14 @ 1400.
11/23/2014	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_1954.JPG, 11/23/14 @ 1400.
11/23/2014	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_1460.JPG, 11/23/14 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
11/24/2014	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_1490.JPG, 11/24/14 @ 1430.
11/24/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1971.JPG, 11/24/14 @ 1430.
11/24/2014	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_1493.JPG, 11/24/14 @ 1400.
11/25/2014	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_1523.JPG, 11/25/14 @ 1400.
11/25/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_1988.JPG, 11/25/14 @ 1400.
11/25/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_1526.JPG, 11/25/14 @ 1400.
11/26/2014	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_1556.JPG, 11/26/14 @ 1400.
11/26/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2005.JPG, 11/26/14 @ 1400.
11/26/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_1559.JPG, 11/26/14 @ 1400.
11/27/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_1589.JPG, 11/27/14 @ 1400.
11/27/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2022.JPG, 11/27/14 @ 1400.
11/27/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_1592.JPG, 11/27/14 @ 1400.
11/28/2014	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_1622.JPG, 11/28/14 @ 1400.
11/28/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2039.JPG, 11/28/14 @ 1400.
11/28/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_1625.JPG, 11/28/14 @ 1400.
11/29/2014	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_1655.JPG, 11/29/14 @ 1400.
11/29/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2056.JPG, 11/29/14 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
11/29/2014	14:00	EWW	WM	GP	14:00	1	2	C	0	0	E	ADF&G WM photo IMG_1658.JPG, 11/29/14 @ 1400.
11/30/2014	14:00	EWW	MB	GP	14:00		2	C	0	0	G	ADF&G MB photo IMG_1688.JPG, 11/30/14 @ 1400. Snowing, BSS not visible. Snow throughout day.
11/30/2014	14:00	EWW	WBN	GP	14:00		2	C	0	0	G	ADF&G WBN photo IMG_2073.JPG, 11/30/14 @ 1400. Fog at sea, no BSS.
11/30/2014	14:00	EWW	WM	GP	14:00		2	P	0	0	E	ADF&G WM photo IMG_1691.JPG, 11/30/14 @ 1400. Snow and fog, no BSS. Snow and fog.
12/1/2014	14:00	EWW	MB	GP	14:00		2	C	0	0	G	ADF&G MB photo IMG_1721.JPG, 12/1/14 @ 1230. Fog, BSS not visible.
12/1/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2090.JPG, 12/1/14 @ 1230.
12/1/2014	14:00	EWW	WM	GP	14:00		3	C	0	0	E	ADF&G WM photo IMG_1724.JPG, 12/1/14 @ 1400. Fog, no BSS. Fog.
12/2/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_1754.JPG, 12/2/14 @ 1400.
12/2/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2107.JPG, 12/2/14 @ 1400. Snowing at 1300
12/2/2014	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_1757.JPG, 12/2/14 @ 1400.
12/3/2014	14:00	EWW	MB	GP	14:00	3	3	O			N	ADF&G MB photo IMG_1787.JPG, 12/3/14 @ 1400. Obscured by fog after 1230 no survey.
12/3/2014	14:00	EWW	WBN	GP	14:00		2	P	0	0	G	ADF&G WBN photo IMG_2124.JPG, 12/3/14 @ 1400. Fog throughout afternoon, no BSS. Fog throughout afternoon.
12/3/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_1790.JPG, 12/3/14 @ 1400.
12/4/2014	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_1820.JPG, 12/4/14 @ 1400.
12/4/2014	14:00	EWW	WBN	GP	14:00	3	1	C	0	0	G	ADF&G WBN photo IMG_2141.JPG, 12/4/14 @ 1400.
12/4/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_1823.JPG, 12/4/14 @ 1400.
12/5/2014	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_1853.JPG, 12/5/14 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
12/5/2014	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_2158.JPG, 12/5/14 @ 1400.
12/5/2014	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	ADF&G WM photo IMG_1856.JPG, 12/5/14 @ 1400.
12/6/2014	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_1886.JPG, 12/6/14 @ 1400.
12/6/2014	14:00	EWW	WBN	GP	14:00	2	1	P	0	0	G	ADF&G WBN photo IMG_2175.JPG, 12/6/14 @ 1400.
12/6/2014	14:00	EWW	WM	GP	14:00	4	1	C	0	0	E	ADF&G WM photo IMG_1889.JPG, 12/6/14 @ 1400.
12/7/2014	14:00	EWW	MB	GP	14:00	6	3	C	0	0	G	ADF&G MB photo IMG_1919.JPG, 12/7/14 @ 1400.
12/7/2014	14:00	EWW	WBN	GP	14:00	4	1	C	0	0	G	ADF&G WBN photo IMG_2192.JPG, 12/7/14 @ 1400.
12/7/2014	14:00	EWW	WM	GP	14:00	6	2	C	0	0	E	ADF&G WM photo IMG_1922.JPG, 12/7/14 @ 1400.
12/8/2014	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_1952.JPG, 12/8/14 @ 1400.
12/8/2014	14:00	EWW	WBN	GP	14:00	3	1	C	0	0	G	ADF&G WBN photo IMG_2209.JPG, 12/8/14 @ 1400.
12/8/2014	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	ADF&G WM photo IMG_1955.JPG, 12/8/14 @ 1400.
12/9/2014	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_1985.JPG, 12/9/14 @ 1630.
12/9/2014	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_2226.JPG, 12/9/14 @ 1630.
12/9/2014	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_1988.JPG, 12/9/14 @ 1400.
12/10/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_2018.JPG, 12/10/14 @ 1400.
12/10/2014	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_2243.JPG, 12/10/14 @ 1400.
12/10/2014	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_2021.JPG, 12/10/14 @ 1400.
12/11/2014	14:00	EWW	MB	GP	14:00	4	2	C	0	0	G	ADF&G MB photo IMG_2051.JPG, 12/11/14 @ 1400. Light snow overnight.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
12/11/2014	14:00	EWV	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2260.JPG, 12/11/14 @ 1400.
12/11/2014	14:00	EWV	WM	GP	14:00	4	3	C	0	0	E	ADF&G WM photo IMG_2054.JPG, 12/11/14 @ 1400.
12/12/2014	14:00	EWV	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_2084.JPG, 12/12/14 @ 1400.
12/12/2014	14:00	EWV	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2277.JPG, 12/12/14 @ 1400. Camera obscured by moisture all day.
12/12/2014	14:00	EWV	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_2087.JPG, 12/12/14 @ 1400.
12/13/2014	14:00	EWV	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_2117.JPG, 12/13/14 @ 1400.
12/13/2014	14:00	EWV	WBN	GP	14:00	1	1	C	0	0	G	ADF&G WBN photo IMG_2294.JPG, 12/13/14 @ 1400.
12/13/2014	14:00	EWV	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_2120.JPG, 12/13/14 @ 1400.
12/14/2014	14:00	EWV	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_2150.JPG, 12/14/14 @ 1400.
12/14/2014	14:00	EWV	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2311.JPG, 12/14/14 @ 1400.
12/14/2014	14:00	EWV	WM	GP	14:00	4	1	C	0	0	E	ADF&G WM photo IMG_2153.JPG, 12/14/14 @ 1400.
12/15/2014	14:00	EWV	MB	GP	14:00		2	P	0	0	G	ADF&G MB photo IMG_2183.JPG, 12/15/14 @ 1400. Partially obscured, BSS unknown. Snow overnight.
12/15/2014	14:00	EWV	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_2328.JPG, 12/15/14 @ 1400.
12/15/2014	14:00	EWV	WM	GP	14:00	2	3	C	0	0	E	ADF&G WM photo IMG_2186.JPG, 12/15/14 @ 1400. Fog
12/16/2014	14:00	EWV	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_2216.JPG, 12/16/14 @ 1400. Snow overnight.
12/16/2014	14:00	EWV	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2345.JPG, 12/16/14 @ 1400.
12/16/2014	14:00	EWV	WM	GP	14:00	2	3	C	0	0	E	ADF&G WM photo IMG_2219.JPG, 12/16/14 @ 1400.



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
12/17/2014	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_2249.JPG, 12/17/14 @ 1400.
12/17/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2362.JPG, 12/17/14 @ 1400.
12/17/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_2252.JPG, 12/17/14 @ 1400.
12/18/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_2282.JPG, 12/18/14 @ 1400.
12/18/2014	14:00	EWW	WBN	GP	14:00	3	1	C	0	0	G	ADF&G WBN photo IMG_2379.JPG, 12/18/14 @ 1400.
12/18/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_2285.JPG, 12/18/14 @ 1400.
12/19/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_2315.JPG, 12/19/14 @ 1400.
12/19/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2396.JPG, 12/19/14 @ 1400.
12/19/2014	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_2318.JPG, 12/19/14 @ 1400.
12/20/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_2348.JPG, 12/20/14 @ 1400.
12/20/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2413.JPG, 12/20/14 @ 1400.
12/20/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_2351.JPG, 12/20/14 @ 1400.
12/21/2014	14:00	EWW	MB	GP	14:00	1	2	C	0	0	G	ADF&G MB photo IMG_2381.JPG, 12/21/14 @ 1800.
12/21/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2430.JPG, 12/21/14 @ 1800. Snow late in day.
12/21/2014	14:00	EWW	WM	GP	14:00	1	2	C	0	0	E	ADF&G WM photo IMG_2384.JPG, 12/21/14 @ 1400.
12/22/2014	14:00	EWW	MB	GP	14:00		2	P	0	0	P	ADF&G MB photo IMG_2414.JPG, 12/22/14 @ 1400. Camera mostly obscured throughout day. No BSS. Snow overnight.
12/22/2014	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2447.JPG, 12/22/14 @ 1400. Camera obscured by snow all day. Snow.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
12/22/2014	14:00	EWW	WM	GP	14:00			O			N	ADF&G WM photo IMG_2417.JPG, 12/22/14 @ 1400. Snowstorm. Camera obscured.
12/23/2014	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_2447.JPG, 12/23/14 @ 1400. One PAWA visible leaving beach at 1200. Snow overnight.
12/23/2014	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2464.JPG, 12/23/14 @ 1400. Camera obscured by snow all day. Snow.
12/23/2014	14:00	EWW	WM	GP	14:00			O			N	ADF&G WM photo IMG_2450.JPG, 12/23/14 @ 1400. Snowstorm. Camera obscured.
12/24/2014	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_2480.JPG, 12/24/14 @ 1400.
12/24/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2481.JPG, 12/24/14 @ 1400.
12/24/2014	14:00	EWW	WM	GP	14:00	2	3	C	0	0	E	ADF&G WM photo IMG_2483.JPG, 12/24/14 @ 1400. Snow on ground from night prior.
12/25/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_2513.JPG, 12/25/14 @ 1400.
12/25/2014	14:00	EWW	WBN	GP	14:00	4	3	C	0	0	G	ADF&G WBN photo IMG_2498.JPG, 12/25/14 @ 1400.
12/25/2014	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_2516.JPG, 12/25/14 @ 1400. Snow melted.
12/26/2014	14:00	EWW	MB	GP	14:00	3	1	C	0	0	G	ADF&G MB photo IMG_2546.JPG, 12/26/14 @ 1400.
12/26/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2515.JPG, 12/26/14 @ 1400.
12/26/2014	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_2549.JPG, 12/26/14 @ 1400.
12/27/2014	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_2579.JPG, 12/27/14 @ 1400. Snow overnight.
12/27/2014	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_2532.JPG, 12/27/14 @ 1400.
12/27/2014	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_2582.JPG, 12/27/14 @ 1400.
12/28/2014	14:00	EWW	MB	GP	14:00	4	3	P	0	0	F	ADF&G MB photo IMG_2612.JPG, 12/28/14 @ 1400. Partially obscured by fog thru day.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
12/28/2014	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2549.JPG, 12/28/14 @ 1400. Camera obscured by snow all day.
12/28/2014	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	ADF&G WM photo IMG_2615.JPG, 12/28/14 @ 1400. Snow.
12/29/2014	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_2645.JPG, 12/29/14 @ 1400.
12/29/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2566.JPG, 12/29/14 @ 1400.
12/29/2014	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_2648.JPG, 12/29/14 @ 1400.
12/30/2014	14:00	EWW	MB	GP	14:00	2	1	P	0	0	G	ADF&G MB photo IMG_2678.JPG, 12/30/14 @ 1400. Partially obscured by fog thru day.
12/30/2014	14:00	EWW	WBN	GP	14:00	3	1	P	0	0	F	ADF&G WBN photo IMG_2583.JPG, 12/30/14 @ 1400.
12/30/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_2681.JPG, 12/30/14 @ 1400.
12/31/2014	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_2711.JPG, 12/31/14 @ 1400.
12/31/2014	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2600.JPG, 12/31/14 @ 1400.
12/31/2014	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_2714.JPG, 12/31/14 @ 1400.
1/1/2015	14:00	EWW	MB	GP	14:00			O	0	0	N	ADF&G MB photo IMG_2744.JPG, 1/1/15 @ 1400. Obscured by fog/moisture throughout day, no BSS.
1/1/2015	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2617.JPG, 1/1/15 @ 1400. Camera obscured by moisture all day.
1/1/2015	14:00	EWW	WM	GP	14:00		2	C	0	0	E	ADF&G WM photo IMG_2747.JPG, 1/1/15 @ 1400. Cameras obscured no BSS.
1/2/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_2777.JPG, 1/2/15 @ 1400.
1/2/2015	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_2634.JPG, 1/2/15 @ 1400.
1/2/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_2780.JPG, 1/2/15 @ 1400. Ice forming along shoreline.
1/3/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_2810.JPG, 1/3/15 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
1/3/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2651.JPG, 1/3/15 @ 1400.
1/3/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_2813.JPG, 1/3/15 @ 1400.
1/4/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_2843.JPG, 1/4/15 @ 1400.
1/4/2015	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_2668.JPG, 1/4/15 @ 1400.
1/4/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_2846.JPG, 1/4/15 @ 1400.
1/5/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_2876.JPG, 1/5/15 @ 1400.
1/5/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2685.JPG, 1/5/15 @ 1400.
1/5/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_2879.JPG, 1/5/15 @ 1400.
1/6/2015	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_2909.JPG, 1/6/15 @ 1400. Snowed overnight. Seas roughening late in day to BSS = 4.
1/6/2015	14:00	EWW	WBN	GP	14:00	1	0	P	0	0	G	ADF&G WBN photo IMG_2702.JPG, 1/6/15 @ 1400. Partially obscured by fog but clearly no PAWA. Snow overnight and in a.m.
1/6/2015	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_2912.JPG, 1/6/15 @ 1400. Snowstorm.
1/7/2015	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_2942.JPG, 1/7/15 @ 1400. Snowed overnight.
1/7/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_2719.JPG, 1/7/15 @ 1400. Snow overnight and in a.m.
1/7/2015	14:00	EWW	WM	GP	14:00	4	1	C	0	0	E	ADF&G WM photo IMG_2945.JPG, 1/7/15 @ 1400.
1/8/2015	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_2975.JPG, 1/8/15 @ 1400.
1/8/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_2736.JPG, 1/8/15 @ 1400.
1/8/2015	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_2978.JPG, 1/8/15 @ 1400.
1/9/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_3008.JPG, 1/9/15 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
1/9/2015	14:00	EWW	WBN	GP	14:00	2	1	P	0	0	G	ADF&G WBN photo IMG_2753.JPG, 1/9/15 @ 1400. Partially obscured by moisture.
1/9/2015	14:00	EWW	WM	GP	14:00	1	2	C	0	0	E	ADF&G WM photo IMG_3011.JPG, 1/9/15 @ 1400.
1/10/2015	14:00	EWW	MB	GP	14:00			O			N	ADF&G MB photo IMG_3041.JPG, 1/10/15 @ 1400. Camera Obscured by fog, no count.
1/10/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2770.JPG, 1/10/15 @ 1400.
1/10/2015	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_3044.JPG, 1/10/15 @ 1400.
1/11/2015	14:00	EWW	MB	GP	14:00	2	3	C	0	0	G	ADF&G MB photo IMG_3074.JPG, 1/11/15 @ 1200.
1/11/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_2787.JPG, 1/11/15 @ 1200.
1/11/2015	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_3077.JPG, 1/11/15 @ 1400.
1/12/2015	14:00	EWW	MB	GP	14:00	5	3	C	0	0	G	ADF&G MB photo IMG_3107.JPG, 1/12/15 @ 1400.
1/12/2015	14:00	EWW	WBN	GP	14:00	4	1	C	0	0	G	ADF&G WBN photo IMG_2804.JPG, 1/12/15 @ 1400.
1/12/2015	14:00	EWW	WM	GP	14:00	5	2	C	0	0	E	ADF&G WM photo IMG_3110.JPG, 1/12/15 @ 1400.
1/13/2015	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_3140.JPG, 1/13/15 @ 1400.
1/13/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2821.JPG, 1/13/15 @ 1400.
1/13/2015	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_3143.JPG, 1/13/15 @ 1400.
1/14/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_3173.JPG, 1/14/15 @ 1400.
1/14/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_2838.JPG, 1/14/15 @ 1400.
1/14/2015	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_3176.JPG, 1/14/15 @ 1400.
1/15/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_3206.JPG, 1/15/15 @ 1400.
1/15/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_2855.JPG, 1/15/15 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
1/15/2015	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_3209.JPG, 1/15/15 @ 1400.
1/16/2015	14:00	EWW	MB	GP	14:00	2	1	P	0	0	G	ADF&G MB photo IMG_3239.JPG, 1/16/15 @ 1400. Camera partially obscured by moisture.
1/16/2015	14:00	EWW	WBN	GP	14:00	1	1	C	0	0	G	ADF&G WBN photo IMG_2872.JPG, 1/16/15 @ 1400.
1/16/2015	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_3242.JPG, 1/16/15 @ 1400.
1/17/2015	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_3272.JPG, 1/17/15 @ 1400.
1/17/2015	14:00	EWW	WBN	GP	14:00	3	3	C	0	0	G	ADF&G WBN photo IMG_2889.JPG, 1/17/15 @ 1400.
1/17/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_3275.JPG, 1/17/15 @ 1400.
1/18/2015	14:00	EWW	MB	GP	14:00			O			N	ADF&G MB photo IMG_3305.JPG, 1/18/15 @ 1400. Camera obscured by moisture or frost all day, no count.
1/18/2015	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2907.JPG, 1/18/15 @ 1400. Camera obscured by moisture/ice.
1/18/2015	14:00	EWW	WM	GP	14:00			O			N	ADF&G WM photo IMG_3308.JPG, 1/18/15 @ 1400. Camera obscured by moisture.
1/19/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_3338.JPG, 1/19/15 @ 1400.
1/19/2015	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2924.JPG, 1/19/15 @ 1400. Camera obscured by moisture / ice.
1/19/2015	14:00	EWW	WM	GP	17:30	2	1	O	0	0	F	ADF&G WM photo IMG_3341.JPG, 1/19/15 @ 1400 & IMG_3346.JPG, 1/21/15 @ 1400. Camera obscured by moisture until 1700 but none there after that.
1/20/2015	14:00	EWW	MB	GP	14:00			O			N	ADF&G MB photo IMG_3371.JPG, 1/20/15 @ 1400. Camera obscured by moisture or frost all day, no count.
1/20/2015	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2940.JPG, 1/20/15 @ 1400. Camera obscured by moisture/ice.
1/20/2015	14:00	EWW	WM	GP	14:00			O			N	ADF&G WM photo IMG_3374.JPG, 1/20/15 @ 1400. Camera obscured by moisture/frost all day.
1/21/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_3404.JPG, 1/21/15 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
1/21/2015	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2957.JPG, 1/21/15 @ 1400. Camera obscured by moisture/ice.
1/21/2015	14:00	EWW	WM	GP	17:30	2	1	O	0	0	F	ADF&G WM photo IMG_3407.JPG, 1/21/15 @ 1400 & IMG_3412.JPG, 1/21/15 @ 1400. Camera obscured by moisture until 1700 but none there after that.
1/22/2015	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_3437.JPG, 1/22/15 @ 1400.
1/22/2015	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_2975.JPG, 1/22/15 @ 1400. Camera obscured by moisture/ice.
1/22/2015	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_3440.JPG, 1/22/15 @ 1400.
1/23/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_3470.JPG, 1/23/15 @ 1400.
1/23/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_2991.JPG, 1/23/15 @ 1400.
1/23/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_3473.JPG, 1/23/15 @ 1400.
1/24/2015	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_3503.JPG, 1/24/15 @ 1400. Snowed overnight and throughout day.
1/24/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3008.JPG, 1/24/15 @ 1400. Snow in afternoon.
1/24/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_3506.JPG, 1/24/15 @ 1400. Snow night prior.
1/25/2015	14:00	EWW	MB	GP	14:00		2	P	0	0	F	ADF&G MB photo IMG_3536.JPG, 1/25/15 @ 1400. Camera partially obscured by snow, moisture; no BSS. Snowed overnight.
1/25/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3027.JPG, 1/25/15 @ 1600. Camera obscured by snow until 1600. Snow last night.
1/25/2015	14:00	EWW	WM	GP	14:00		0	C	0	0	E	ADF&G WM photo IMG_3539.JPG, 1/25/15 @ 1400. Snow and fog, no BSS.
1/26/2015	14:00	EWW	MB	GP	14:00	5	3	P	0	0	F	ADF&G MB photo IMG_3569.JPG, 1/26/15 @ 1400. Camera partially obscured by snow, fog, moisture. Snowed overnight.
1/26/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3042.JPG, 1/26/15 @ 1400. Snow and fog most of day.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
1/26/2015	14:00	EWW	WM	GP	14:00			O			N	ADF&G WM photo IMG_3572.JPG, 1/26/15 @ 1400. Camera obscured by moisture all day.
1/27/2015	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_3602.JPG, 1/27/15 @ 1400.
1/27/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3059.JPG, 1/27/15 @ 1400.
1/27/2015	14:00	EWW	WM	GP	14:00	4	0	C	0	0	E	ADF&G WM photo IMG_3605.JPG, 1/27/15 @ 1400.
1/28/2015	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_3635.JPG, 1/28/15 @ 1400.
1/28/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3076.JPG, 1/28/15 @ 1400.
1/28/2015	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_3638.JPG, 1/28/15 @ 1400.
1/29/2015	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_3668.JPG, 1/29/15 @ 1400.
1/29/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3093.JPG, 1/29/15 @ 1400.
1/29/2015	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_3671.JPG, 1/29/15 @ 1400.
1/30/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_3701.JPG, 1/30/15 @ 1400. Shore ice forming with receding tide.
1/30/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3110.JPG, 1/30/15 @ 1400.
1/30/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_3704.JPG, 1/30/15 @ 1400.
1/31/2015	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_3734.JPG, 1/31/15 @ 1400. Shore ice forming, light pack ice along MB and in area.
1/31/2015	14:00	EWW	WBN	GP	14:00	1	1	C	0	0	G	ADF&G WBN photo IMG_3127.JPG, 1/31/15 @ 1400. Light pack ice present in afternoon.
1/31/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_3737.JPG, 1/31/15 @ 1400. Small amount pack ice along shore.
2/1/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_3767.JPG, 2/1/15 @ 1400.
2/1/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3144.JPG, 2/1/15 @ 1400.



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
2/1/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_3770.JPG, 2/1/15 @ 1400. Small amount pack ice along shore.
2/2/2015	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_3800.JPG, 2/2/15 @ 1400. North winds, seas roughening throughout day to BSS = 4.
2/2/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3161.JPG, 2/2/15 @ 1400.
2/2/2015	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_3803.JPG, 2/2/15 @ 1400.
2/3/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_3833.JPG, 2/3/15 @ 1400. Light pack ice along east side of island. Shore ice forming on MB.
2/3/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3178.JPG, 2/3/15 @ 1400. Light pack ice offshore
2/3/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_3836.JPG, 2/3/15 @ 1400. Shore and anchor ice forming along shore.
2/4/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_3866.JPG, 2/4/15 @ 1400. Shorefast ice all along MB, light pack ice around north end of island.
2/4/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3195.JPG, 2/4/15 @ 1400. Pack ice along shore in early afternoon.
2/4/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_3869.JPG, 2/4/15 @ 1400. Shore and anchor ice forming along shore.
2/5/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_3899.JPG, 2/5/15 @ 1400. Shorefast ice all along MB, light pack ice around north end of island.
2/5/2015	14:00	EWW	WBN	GP	14:00	0	0	C	0	0	G	ADF&G WBN photo IMG_3212.JPG, 2/5/15 @ 1400. Shoreline icing and pack ice present all day.
2/5/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_3902.JPG, 2/5/15 @ 1400. Thin pack ice along shore
2/6/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_3932.JPG, 2/6/15 @ 1400. Shorefast ice all along MB, light pack ice around north end of island.
2/6/2015	14:00	EWW	WBN	GP	14:00	0	0	C	0	0	G	ADF&G WBN photo IMG_3229.JPG, 2/6/15 @ 1400. Shoreline icing and pack ice present all day.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
2/6/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_3935.JPG, 2/6/15 @ 1400. Thin pack ice along shore.
2/7/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_3965.JPG, 2/7/15 @ 1400. Heavier shorefast ice along MB, and heavier pack ice around north end of island.
2/7/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3246.JPG, 2/7/15 @ 1400. Shoreline icing and offshore pack ice present all day.
2/7/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_3968.JPG, 2/7/15 @ 1400. Pack ice along shore.
2/8/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_3998.JPG, 2/8/15 @ 1400. Heavier shorefast ice along MB, and heavier pack ice around north end of island.
2/8/2015	14:00	EWW	WBN	GP	14:00	0	0	C	0	0	G	ADF&G WBN photo IMG_3263.JPG, 2/8/15 @ 1400. Shoreline icing and pack ice present all day.
2/8/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_4001.JPG, 2/8/15 @ 1400. Pack ice along shore.
2/9/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_4031.JPG, 2/9/15 @ 1400. Heavier shorefast ice along MB, and heavier pack ice around north end of island.
2/9/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3280.JPG, 2/9/15 @ 1400. Shoreline icing and pack ice present all day.
2/9/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_4034.JPG, 2/9/15 @ 1400. Pack ice along shore.
2/10/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_4064.JPG, 2/10/15 @ 1400. Heavier shorefast ice along MB, and heavier pack ice around north end of island.
2/10/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3297.JPG, 2/10/15 @ 1400. Shoreline icing and pack ice present most of day.
2/10/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_4067.JPG, 2/10/15 @ 1400. Pack ice along shore.
2/11/2015	14:00	EWW	MB	GP	14:00	3	3	P	0	0	F	ADF&G MB photo IMG_4097.JPG, 2/11/15 @ 1400. Camera partially obscured by snow and storm. Snow and storm overnight and throughout day.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
2/11/2015	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_3314.JPG, 2/11/15 @ 1400. Camera obscured by snow through 1900. Snow last night and this a.m.
2/11/2015	14:00	EWW	WM	GP	14:00	3	0	C	0	0	N	ADF&G WM photo IMG_4100.JPG, 2/11/15 @ 1400. Camera obscured. Snowing. Look at other photos.
2/12/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_4130.JPG, 2/12/15 @ 1400. Most of shore ice and pack ice cleared out by storm; shorefast ice remains in alcoves along MB.
2/12/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3331.JPG, 2/12/15 @ 1400.
2/12/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_4133.JPG, 2/12/15 @ 1400.
2/13/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_4163.JPG, 2/13/15 @ 1400.
2/13/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3348.JPG, 2/13/15 @ 1400.
2/13/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_4166.JPG, 2/13/15 @ 1400.
2/14/2015	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_4196.JPG, 2/14/15 @ 1400.
2/14/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3365.JPG, 2/14/15 @ 1400.
2/14/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_4199.JPG, 2/14/15 @ 1400.
2/15/2015	14:00	EWW	MB	GP	14:00	2	1	P	0	0	G	ADF&G MB photo IMG_4229.JPG, 2/15/15 @ 1430. Snowed overnight and throughout morning, pack ice moves in from east; shorefast ice forming along MB.
2/15/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3382.JPG, 2/15/15 @ 1400. Snow last night, thin pan ice moves in in late afternoon.
2/15/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_4232.JPG, 2/15/15 @ 1400. Pack ice along shore
2/16/2015	14:00	EWW	MB	GP	14:00	4	3	C	0	0	G	ADF&G MB photo IMG_4262.JPG, 2/16/15 @ 1400. Storm clears MB of shorefast ice and pack ice. Snow throughout afternoon.
2/16/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3399.JPG, 2/16/15 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
2/16/2015	14:00	EWW	WM	GP	14:00	4	0	C	0	0	E	ADF&G WM photo IMG_4265.JPG, 2/16/15 @ 1400.
2/17/2015	14:00	EWW	MB	GP	14:00	4	2	C	0	0	G	ADF&G MB photo IMG_4295.JPG, 2/17/15 @ 1400.
2/17/2015	14:00	EWW	WBN	GP	14:00	4	3	C	0	0	G	ADF&G WBN photo IMG_3416.JPG, 2/17/15 @ 1400.
2/17/2015	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	ADF&G WM photo IMG_4298.JPG, 2/17/15 @ 1400.
2/18/2015	14:00	EWW	MB	GP	14:00	2	1	C	0	0	G	ADF&G MB photo IMG_4328.JPG, 2/18/15 @ 1400.
2/18/2015	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_3433.JPG, 2/18/15 @ 1400.
2/18/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_4331.JPG, 2/18/15 @ 1400.
2/19/2015	14:00	EWW	MB	GP	14:00	4	3	P	0	0	G	ADF&G MB photo IMG_4361.JPG, 2/19/15 @ 1400. Camera partially obscured by snow storm in afternoon. Snowing throughout afternoon. Light pack ice moves in from east late in day.
2/19/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3448.JPG, 2/19/15 @ 1200. Camera obscured by snow 1400–1700, but no PAWA prior to or after. Snow 1300– .
2/19/2015	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	ADF&G WM photo IMG_4364.JPG, 2/19/15 @ 1400. Snow.
2/20/2015	14:00	EWW	MB	GP	14:00	4	2	C	0	0	G	ADF&G MB photo IMG_4394.JPG, 2/20/15 @ 1400. Light pack ice stacked against east side early in day moving in and out after noon with tides and winds.
2/20/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3467.JPG, 2/20/15 @ 1400. Little ice moves in late in day.
2/20/2015	14:00	EWW	WM	GP	14:00	4	1	C	0	0	E	ADF&G WM photo IMG_4397.JPG, 2/20/15 @ 1400.
2/21/2015	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_4427.JPG, 2/21/15 @ 1400. MB mostly cleared of ice; some remains in alcoves.
2/21/2015	14:00	EWW	WBN	GP	14:00	3	0	C	0	0	G	ADF&G WBN photo IMG_3484.JPG, 2/21/15 @ 1400. Shoreline iced.
2/21/2015	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_4430.JPG, 2/21/15 @ 1400. Pack ice chunks along shore.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
2/22/2015	14:00	EWW	MB	GP	14:00	3	1	C	0	0	G	ADF&G MB photo IMG_4460.JPG, 2/22/15 @ 1400.
2/22/2015	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_3501.JPG, 2/22/15 @ 1400.
2/22/2015	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_4463.JPG, 2/22/15 @ 1400.
2/23/2015	14:00	EWW	MB	GP	14:00	2	1	C	10	0	G	ADF&G MB photo IMG_4493.JPG, 2/23/15 @ 1400. Small group of PAWA on mid MB throughout day. Snowed overnight.
2/23/2015	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_3520.JPG, 2/23/15 @ 1600. Camera obscured by snow until 1600. Snow in morning.
2/23/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_4496.JPG, 2/23/15 @ 1400.
2/24/2015	14:00	EWW	MB	GP	14:00	2	1	C	9	0	G	ADF&G MB photo IMG_4526.JPG, 2/24/15 @ 1400. Small group of PAWA on mid MB throughout day.
2/24/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_3535.JPG, 2/24/15 @ 1400.
2/24/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_4529.JPG, 2/24/15 @ 1400.
2/25/2015	14:00	EWW	MB	GP	14:00	2	1	C	5	0	G	ADF&G MB photo IMG_4559.JPG, 2/25/15 @ 1400. Small group of PAWA on mid MB leaves throughout afternoon, only 2 remain at end of day.
2/25/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_3552.JPG, 2/25/15 @ 1400.
2/25/2015	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_4562.JPG, 2/25/15 @ 1400.
2/26/2015	14:00	EWW	MB	GP	14:00	1	1	C	0	0	G	ADF&G MB photo IMG_4592.JPG, 2/26/15 @ 1400.
2/26/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_3569.JPG, 2/26/15 @ 1400.
2/26/2015	14:00	EWW	WM	GP	14:00	1	2	C	0	0	E	ADF&G WM photo IMG_4595.JPG, 2/26/15 @ 1400.
2/27/2015	14:00	EWW	MB	GP	14:00		2	C	1	0	G	ADF&G MB photo IMG_4625.JPG, 2/27/15 @ 1400. Camera obscured by fog 1030–1330; fog at sea no BSS. One PAWA at lower MB 1330–2000.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
2/27/2015	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_3586.JPG, 2/27/15 @ 1400.
2/27/2015	14:00	EWW	WM	GP	14:00	2	2	C	0	0	E	ADF&G WM photo IMG_4628.JPG, 2/27/15 @ 1400.
2/28/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	4	F	ADF&G MB photo IMG_4658.JPG, 2/28/15 @ 1300. Camera obscured by fog 1330–1500. One PAWA at water's edge mid MB, another at water's edge lower MB, and likely a couple in water just offshore lower MB (IMG_4656.JPG).
2/28/2015	14:00	EWW	WBN	GP	14:00	1	1	C	0	0	G	ADF&G WBN photo IMG_3602.JPG, 2/28/15 @ 1300.
2/28/2015	14:00	EWW	WM	GP	14:00	1	1	C	0	0	N	ADF&G WM photo IMG_4661.JPG, 2/28/15 @ 1400. Obscured by fog.
3/1/2015	14:00	EWW	MB	GP	14:00	3	3	C	1	0	G	ADF&G MB photo IMG_4693.JPG, 3/1/15 @ 1400. One PAWA on mid MB at 1330 and 1400 (IMG_4690 and 4691.JPG).
3/1/2015	14:00	EWW	WBN	GP	14:00	3	1	C	0	0	G	ADF&G WBN photo IMG_3620.JPG, 3/1/15 @ 1400.
3/1/2015	14:00	EWW	WM	GP	14:00	3	1	C	0	0	E	ADF&G WM photo IMG_4694.JPG, 3/1/15 @ 1400.
3/2/2015	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_4724.JPG, 3/2/15 @ 1400.
3/2/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_3637.JPG, 3/2/15 @ 1400.
3/2/2015	14:00	EWW	WM	GP	14:00	3	2	C	0	0	E	ADF&G WM photo IMG_4727.JPG, 3/2/15 @ 1400.
3/3/2015	14:00	EWW	MB	GP	12:00		1	C	0	0	G	ADF&G MB photo IMG_4753.JPG, 3/3/15 @ 1200. Camera obscured by fog and snow after 1300. No BSS. Snow late in day and overnight.
3/3/2015	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_3652.JPG, 3/3/15 @ 1200. Snow starts late afternoon.
3/3/2015	14:00	EWW	WM	GP	14:00		2	C	0	0	E	ADF&G WM photo IMG_4760.JPG, 3/3/15 @ 1400. Snow and fog, no BSS.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
3/4/2015	14:00	EWW	MB	GP	14:00	2	1	C	4	0	F	ADF&G MB photo IMG_4790.JPG, 3/4/15 @ 1400. Count is estimate based on size of herd and visible animals in photos. Distance and resolution not good enough for accurate count. Camera obscured by snow and fog prior to 1300. Sm. Group of PAWA on mid MB through day.
3/4/2015	14:00	EWW	WBN	GP	14:00			O			N	Camera obscured by snow all day. Snow.
3/4/2015	14:00	EWW	WM	GP	14:00			O			N	ADF&G WM photo IMG_4793.JPG, 3/4/15 @ 1400. Obscured by snow or moisture.
3/5/2015	14:00	EWW	MB	GP	14:00	2	1	C	15	1	F	ADF&G MB photo IMG_4823.JPG, 3/5/15 @ 1400. Count is estimate based on size of herd and visible animals in photos. Distance and resolution not good enough for accurate count. Sm. Group of PAWA on mid MB builds through day. Snowed overnight.
3/5/2015	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_3692.JPG, 3/5/15 @ 1800. Camera obscured by snow and moisture until 1800.
3/5/2015	14:00	EWW	WM	GP	14:00			O			N	ADF&G WM photo IMG_4826.JPG, 3/5/15 @ 1400. Obscured by snow or moisture.
3/6/2015	14:00	EWW	MB	GP	14:00	2	2	C	16	0	F	ADF&G MB photo IMG_4856.JPG, 3/6/15 @ 1400. Count is estimate based on size of herd and visible animals in photos. Distance and resolution not good enough for accurate count. Partially obscured by snow and fog throughout day. Slightly larger Group of PAWA on MB early day. CORA at 1200. Snow after noon. PAWA herd decreases in size.
3/6/2015	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_3702.JPG, 3/6/15 @ 1100. Camera mostly obscured by snow at 1400. Snow.
3/6/2015	14:00	EWW	WM	GP	14:00			O			N	ADF&G WM photo IMG_4859.JPG, 3/6/15 @ 1400. Obscured by snow or moisture.
3/7/2015	14:00	EWW	MB	GP	14:00	3	2	P	6	0	F	ADF&G MB photo IMG_4889.JPG, 3/7/15 @ 1400. Count is estimate based on size of herd and visible animals in photos. Distance and resolution not good enough for accurate count. About a half dozen visible moving around through day in same spot.
3/7/2015	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_3722.JPG, 3/7/15 @ 1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
3/7/2015	14:00	EWW	WM	GP	14:00	4	3	C	0	0	E	ADF&G WM photo IMG_4892.JPG, 3/7/15 @ 1400.
3/8/2015	14:00	EWW	MB	GP	14:00	4	2	C	0	0	G	ADF&G MB photo IMG_4922.JPG, 3/8/15 @ 1400. One PAWA visible at water's edge at 1230.
3/8/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_3739.JPG, 3/8/15 @ 1400.
3/8/2015	14:00	EWW	WM	GP	14:00	4	3	C	0	0	E	ADF&G WM photo IMG_4923.JPG, 3/8/15 @ 1400.
3/9/2015	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_4955.JPG, 3/9/15 @ 1400.
3/9/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_3756.JPG, 3/9/15 @ 1400. Ice buildup on shore.
3/9/2015	14:00	EWW	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_4956.JPG, 3/9/15 @ 1400.
3/10/2015	14:00	EWW	MB	GP	14:00	0	0	C	0	0	G	ADF&G MB photo IMG_4988.JPG, 3/10/15 @ 1400. Shorefast ice forming on receding tide, light pack ice north and east of island.
3/10/2015	14:00	EWW	WBN	GP	14:00	1	0	P	0	0	G	ADF&G WBN photo IMG_3773.JPG, 3/10/15 @ 1400. Ice buildup on shore.
3/10/2015	14:00	EWW	WM	GP	14:00	0	0	C	0	0	E	ADF&G WM photo IMG_4989.JPG, 3/10/15 @ 1400. Ice forming along shoreline.
3/11/2015	14:00	EWW	MB	GP	14:00	0	0	C	0	0	G	ADF&G MB photo IMG_5021.JPG, 3/11/15 @ 1400. Shorefast ice along MB, thin ice north and east of island.
3/11/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3790.JPG, 3/11/15 @ 1400. Ice buildup on shore.
3/11/2015	14:00	EWW	WM	GP	14:00	0	0	C	0	0	E	ADF&G WM photo IMG_5022.JPG, 3/11/15 @ 1400. Ice forming along shoreline.
3/12/2015	14:00	EWW	MB	GP	14:00	4	2	C	0	0	G	ADF&G MB photo IMG_5054.JPG, 3/12/15 @ 1400.
3/12/2015	14:00	EWW	WBN	GP	14:00	3	0	C	0	0	G	ADF&G WBN photo IMG_3807.JPG, 3/12/15 @ 1400. Ice buildup on shore.
3/12/2015	14:00	EWW	WM	GP	14:00	4	2	C	0	0	E	ADF&G WM photo IMG_5055.JPG, 3/12/15 @ 1400. Ice forming along shoreline.
3/13/2015	14:00	EWW	MB	GP	14:00	2	0	C	0	0	G	ADF&G MB photo IMG_5087.JPG, 3/13/15 @ 1400. Ice forming north and east and along MB.



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
3/13/2015	14:00	EWW	WBN	GP	14:00	0	0	C	0	0	G	ADF&G WBN photo IMG_3824.JPG, 3/13/15 @ 1400. Ice buildup on shore, thin pack ice pushed up against island, pack ice in background north of island.
3/13/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_5088.JPG, 3/13/15 @ 1400. Ice forming along shoreline.
3/14/2015	14:00	EWW	MB	GP	14:00	2	0	C	0	0	G	ADF&G MB photo IMG_5120.JPG, 3/14/15 @ 1400. Pack ice packed along east side and north of island.
3/14/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3841.JPG, 3/14/15 @ 1400. Ice buildup on shore, thin pack ice pushed up against island.
3/14/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_5121.JPG, 3/14/15 @ 1400. Ice forming along shoreline. Pack ice along shore.
3/15/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_5153.JPG, 3/15/15 @ 1400. Pack ice packed along east side and north of island.
3/15/2015	14:00	EWW	WBN	GP	14:00	0	0	C	0	0	G	ADF&G WBN photo IMG_3858.JPG, 3/15/15 @ 1400. Ice buildup on shore, pack ice pushed up against island, pack ice in background north of island.
3/15/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_5154.JPG, 3/15/15 @ 1400. Shorefast ice.
3/16/2015	14:00	EWW	MB	GP	14:00	2	0	C	0	0	G	ADF&G MB photo IMG_5186.JPG, 3/16/15 @ 1400. Ice thinning and mostly moves out by end of day. Shorefast ice still along MB.
3/16/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3875.JPG, 3/16/15 @ 1400. Shorefast ice buildup mostly gone but builds with lowering tide. Little pack ice.
3/16/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_5187.JPG, 3/16/15 @ 1400. Shorefast ice.
3/17/2015	14:00	EWW	MB	GP	14:00	1	2	C	0	0	G	ADF&G MB photo IMG_5219.JPG, 3/17/15 @ 1400. Shorefast ice mostly clears from MB.
3/17/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3892.JPG, 3/17/15 @ 1400.
3/17/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_5220.JPG, 3/17/15 @ 1400. Shorefast ice.
3/18/2015	14:00	EWW	MB	GP	14:00	3	3	C	0	0	G	ADF&G MB photo IMG_5252.JPG, 3/18/15 @ 1400. Shorefast ice almost entirely clear from MB by end of day.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
3/18/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3909.JPG, 3/18/15 @ 1400.
3/18/2015	14:00	EWW	WM	GP	14:00	3	0	C	0	0	E	ADF&G WM photo IMG_5253.JPG, 3/18/15 @ 1400. Shorefast ice.
3/19/2015	14:00	EWW	MB	GP	14:00	1	0	C	0	0	G	ADF&G MB photo IMG_5285.JPG, 3/19/15 @ 1400. Snowed at higher elevations overnight.
3/19/2015	14:00	EWW	WBN	GP	14:00	1	0	C	0	0	G	ADF&G WBN photo IMG_3926.JPG, 3/19/15 @ 1400.
3/19/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_5286.JPG, 3/19/15 @ 1400.
3/20/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_5318.JPG, 3/20/15 @ 1400.
3/20/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3943.JPG, 3/20/15 @ 1400.
3/20/2015	14:00	EWW	WM	GP	14:00	2	1	C	0	0	E	ADF&G WM photo IMG_5319.JPG, 3/20/15 @ 1400.
3/21/2015	14:00	EWW	MB	GP	14:00	1	1	C	0	0	G	ADF&G MB photo IMG_5351.JPG, 3/21/15 @ 1400.
3/21/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3960.JPG, 3/21/15 @ 1400.
3/21/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_5352.JPG, 3/21/15 @ 1400.
3/22/2015	14:00	EWW	MB	GP	14:00	1	1	C	0	0	G	ADF&G MB photo IMG_5384.JPG, 3/22/15 @ 1400.
3/22/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3977.JPG, 3/22/15 @ 1400.
3/22/2015	14:00	EWW	WM	GP	14:00	1	0	C	0	0	E	ADF&G WM photo IMG_5385.JPG, 3/22/15 @ 1400.
3/23/2015	14:00	EWW	MB	GP	14:00	2	2	C	0	0	G	ADF&G MB photo IMG_5417.JPG, 3/23/15 @ 1400.
3/23/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_3994.JPG, 3/23/15 @ 1400.
3/23/2015	14:00	EWW	WM	GP	14:00	2	0	C	0	0	E	ADF&G WM photo IMG_5418.JPG, 3/23/15 @ 1400. HDOnTap staff and helo on lower MB 1100–1200.
3/24/2015	14:00	EWW	MB	GP	14:00	3	2	C	0	0	G	ADF&G MB photo IMG_5450.JPG, 3/24/15 @ 1400. HDOnTap staff and helo on lower MB 1500–1730.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
3/24/2015	14:00	EWW	WBN	GP	14:00	2	0	C	0	0	G	ADF&G WBN photo IMG_4011.JPG, 3/24/15 @ 1400.
3/24/2015	14:00	EWW	WM	GP	14:00	3	0	C	0	0	E	ADF&G WM photo IMG_0022.JPG, 3/24/15 @ 1400.
3/25/2015	9:00	RPM	MB	GP	9:00	4	3	C	0	0	E	ADF&G MB photo IMG_5473, 3/25/2015 @0900. Estimate from group size.
3/25/2015	9:00	EWW	WBN	GP	9:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4023.JPG, 3/25/2015 @0900.
3/25/2015	9:00	RPM	WM	GP	9:00	3	2	C	0	0	E	ADF&G WM photo IMG_0046, 3/25/2015@0900
3/26/2015	9:00	RPM	MB	GP	9:00	2	2	C	0	1	E	ADF&G MB photo IMG_5506, 3/26/2015 @0900. Estimate from group size.
3/26/2015	9:00	EWW	WBN	GP	9:00	2	0	C	0	0	G	ADF&G WBN photo IMG_4040.JPG, 3/26/2015 @0900.
3/26/2015	9:00	RPM	WM	GP	9:00	2	1	C	0	0	E	ADF&G WM photo IMG_0080, 3/26/2015@0900
3/27/2015	14:00	RPM	MB	GP	14:00	2	2	C	0	0	E	ADF&G MB photo IMG_5549, 3/27/2015 @1400. Estimate from group size.
3/27/2015	14:00	EWW	WBN	GP	14:00	3	1	C	0	0	G	ADF&G WBN photo IMG_4062.JPG, 3/27/2015 @1400.
3/27/2015	14:00	RPM	WM	GP	14:00	2	1	C	42	6	E	ADF&G WM photo IMG_0124, 3/27/2015@1400
3/28/2015	14:00	RPM	MB	GP	14:00	4	3	C	0	0	E	ADF&G MB photo IMG_5582, 3/28/2015 @1400. Estimate from group size.
3/28/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4079.JPG, 3/28/2015 @1400.
3/28/2015	14:00	RPM	WM	GP	14:00	3	1	C	91	8	G	ADF&G WM photo IMG_0158, 3/28/2015@1400.
3/29/2015	14:00	RPM	MB	GP	14:00	1	0	C	450	5	F	ADF&G MB photo IMG_5615, 3/29/2015 @1400. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
3/29/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4096.JPG, 3/29/2015 @1400.
3/29/2015	14:00	RPM	WM	GP	14:00	1	1	C	170	8	G	ADF&G WM photo IMG_0192, 3/29/2015@1400.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
3/30/2015	17:00	RPM	MB	GP	17:00	2	0	C	400	2	F	ADF&G MB photo IMG_5654, 3/30/2015 @1700. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
3/30/2015	17:00	EWW	WBN	GP	17:00	2	2	C	0	0	G	ADF&G WBN photo IMG_4116.JPG, 3/30/2015 @1700.
3/30/2015	17:00	RPM	WM	GP	17:00	3	3	C	138	0	G	ADF&G WM photo IMG_0232, 3/30/2015@1700.
3/31/2015	14:00	RPM	MB	GP	14:00	1	0	C	120	7	F	ADF&G MB photo IMG_5681, 3/31/2015 @1400. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
3/31/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4130.JPG, 3/31/2015 @1400.
3/31/2015	14:00	RPM	WM	GP	14:00	2	2	C	37	1	E	ADF&G WM photo IMG_0260, 3/31/2015@1400.
4/1/2015	17:00	RPM	MB	GP	17:00	1	1	C	550	3	F	ADF&G MB photo IMG_5720, 4/01/2015 @1700. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/1/2015	17:00	EWW	WBN	GP	17:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4150.JPG, 4/01/2015 @1700.
4/1/2015	17:00	RPM	WM	GP	17:00	2	2	C	30	0	E	ADF&G WM photo IMG_0300, 4/01/2015@1700.
4/2/2015	17:00	RPM	MB	GP	17:00	4	2	C	75	1	F	ADF&G MB photo IMG_5753, 4/02/2015 @1700. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/2/2015	17:00	EWW	WBN	GP	17:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4167.JPG, 4/02/2015 @1700.
4/2/2015	17:00	RPM	WM	GP	17:00	4	3	C	0	0	E	ADF&G WM photo IMG_0334, 4/02/2015@1700.
4/3/2015	17:00	RPM	MB	GP	17:00	1	0	C	225	1	F	ADF&G MB photo IMG_5786, 4/03/2015 @1700. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/3/2015	17:00	EWW	WBN	GP	17:00	1	0	C	0	0	G	ADF&G WBN photo IMG_4184.JPG, 4/03/2015 @1700.
4/3/2015	17:00	RPM	WM	GP	17:00	1	0	C	4	0	E	ADF&G WM photo IMG_0368, 4/03/2015@1700.
4/4/2015	14:00	RPM	MB	GP	14:00	2	0	C	225	0	F	ADF&G MB photo IMG_5813, 4/04/2015 @1400. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/4/2015	14:00	EWW	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4198.JPG, 4/04/2015 @1400. Snow last night.
4/4/2015	14:00	RPM	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_0396, 4/04/2015@1400 Snowed overnight.
4/5/2015	9:00	RPM	MB	GP	9:00	2	1	C	250	0	F	ADF&G MB photo IMG_5836, 4/05/2015 @0900. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/5/2015	9:00	EWW	WBN	GP	9:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4210.JPG, 4/05/2015 @0900.
4/5/2015	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	ADF&G WM photo IMG_0420, 4/05/2015@0900.
4/6/2015	17:00	RPM	MB	GP	17:00	3	1	C	250	0	F	ADF&G MB photo IMG_5885, 4/06/2015 @1700. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/6/2015	17:00	EWW	WBN	GP	17:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4235.JPG, 4/06/2015 @1700. Snow in morning.
4/6/2015	17:00	RPM	WM	GP	17:00	4	3	C	0	0	E	ADF&G WM photo IMG_0470, 4/06/2015@1700.
4/7/2015	17:00	RPM	MB	GP	17:00	2	1	C	60	3	F	ADF&G MB photo IMG_5918, 4/07/2015 @1700. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/7/2015	17:00	EWW	WBN	GP	17:00	3	3	C	0	0	G	ADF&G WBN photo IMG_4252.JPG, 4/07/2015 @1700.
4/7/2015	17:00	RPM	WM	GP	17:00	2	3	C	0	0	E	ADF&G WM photo IMG_0504, 4/07/2015@1700. Snow flurries early, significant snow in afternoon.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/8/2015	17:00	RPM	MB	GP	17:00	3	2	C	120	0	F	ADF&G MB photo IMG_5955, 4/08/2015 @1700. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/8/2015	17:00	EWW	WBN	GP	17:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4271.JPG, 4/08/2015 @1900. Camera obscured by snow; used 1900. Snow in afternoon.
4/8/2015	17:00	RPM	WM	GP	17:00	2	1	C	0	0	E	ADF&G WM photo IMG_0538, 4/08/2015@1700.
4/9/2015	9:00	RPM	MB	GP	9:00	1	0	C	250	2	F	ADF&G MB photo IMG_5968, 4/09/2015 @0900. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/9/2015	9:00	EWW	WBN	GP	9:00	4	3	C	0	0	G	ADF&G WBN photo IMG_4278.JPG, 4/09/2015 @0900. Tide high beach awash.
4/9/2015	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	ADF&G WM photo IMG_0556, 4/09/2015@0900.
4/10/2015	14:00	RPM	MB	GP	14:00	4	3	O			N	ADF&G MB photo IMG_6011, 4/10/2015 @1400 – Foggy all day.
4/10/2015	14:00	EWW	WBN	GP	14:00			O			N	ADF&G WBN photo IMG_4300.JPG, 4/10/2015 @1400. Camera obscured by snow and moisture all day.
4/10/2015	14:00	RPM	WM	GP	14:00	5	3	C	0	0	E	ADF&G WM photo IMG_0600, 4/10/2015@1400.
4/11/2015	14:00	RPM	MB	GP	14:00	2	2	C	20	5	F	ADF&G MB photo IMG_6044, 4/11/2015 @1400. Estimate from group size. - counting IMG_6040,6041,6042,6043.
4/11/2015	14:00	EWW	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_4320.JPG, 4/11/2015 @1700. Camera obscured by snow and moisture at count time, used 1700.
4/11/2015	14:00	RPM	WM	GP	14:00	3	3	C	0	0	E	ADF&G WM photo IMG_0634, 4/11/2015@1400.
4/12/2015	17:00	RPM	MB	GP	17:00	2	0	C	400	7	F	ADF&G MB photo IMG_6083, 4/12/2015 @1700. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/12/2015	17:00	EWW	WBN	GP	17:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4337.JPG, 4/12/2015 @1700.
4/12/2015	17:00	RPM	WM	GP	17:00	2	2	C	0	0	E	ADF&G WM photo IMG_0674, 4/12/2015@1700.
4/13/2015	14:00	RPM	MB	GP	14:00	1	0	C	450	3	F	ADF&G MB photo IMG_6110, 4/13/2015 @1400. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/13/2015	14:00	EWW	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4351.JPG, 4/13/2015 @1400.
4/13/2015	14:00	RPM	WM	GP	14:00	1	1	C	0	1	E	ADF&G WM photo IMG_0702, 4/13/2015@1400.
4/14/2015	9:00	RPM	MB	GP	9:00	4	3	C	700	0	F	ADF&G MB photo IMG_6133, 4/14/2015 @0900. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/14/2015	9:00	EWW	WBN	GP	9:00	2	0	C	0	0	G	ADF&G WBN photo IMG_4368.JPG, 4/14/2015 @1400. Camera obscured with moisture 0900, used 1400.
4/14/2015	9:00	RPM	WM	GP	9:00	3	1	C	2	0	E	ADF&G WM photo IMG_0726, 4/14/2015@0900. Small herd builds to about 40 by 20:00.
4/15/2015	9:00	RPM	MB	GP	9:00	3	2	C	800	6	F	ADF&G MB photo IMG_6166, 4/15/2015 @0900. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/15/2015	9:00	EWW	WBN	GP	9:00	4	2	C	0	0	G	ADF&G WBN photo IMG_4388.JPG, 4/15/2015 @1700. Camera obscured with moisture most of day, used 1700. PECO visible 1900 this day.
4/15/2015	9:00	RPM	WM	GP	9:00	3	3	C	25	0	E	ADF&G WM photo IMG_0726, 4/15/2015@0900.
4/16/2015	9:00	RPM	MB	GP	9:00	3	2	C	650	2	F	ADF&G MB photo IMG_6199, 4/16/2015 @0900 - COMPARED TO IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/16/2015	9:00	EWW	WBN	GP	9:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4397.JPG, 4/16/2015 @0900.
4/16/2015	9:00	RPM	WM	GP	9:00	4	3	C	0	0	E	ADF&G WM photo IMG_0794, 4/16/2015@0900.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/17/2015	14:00	RPM	MB	GP	14:00	4	3	C	300	2	F	ADF&G MB photo IMG_6242, 4/17/2015 @1400. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/17/2015	14:00	EWV	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4419.JPG, 4/17/2015 @1400.
4/17/2015	14:00	RPM	WM	GP	14:00	2	1	C	222	19	G	ADF&G WM photo IMG_0838, 4/17/2015@1400.
4/18/2015	17:00	RPM	MB	GP	17:00	2	2	C	450	3	F	ADF&G MB photo IMG_6281, 4/18/2015 @1700. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/18/2015	17:00	EWV	WBN	GP	17:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4439.JPG, 4/18/2015 @1700.
4/18/2015	17:00	RPM	WM	GP	17:00	2	1	C	453	10	G	ADF&G WM photo IMG_0878, 4/18/2015@1700 – Large number cut offscreen.
4/19/2015	9:00	RPM	MB	GP	9:00	2	1	C	500	10	F	ADF&G MB photo IMG_6298, 4/19/2015 @0900. Estimate from group size. – compared to IMG_6357,6498,6572 (4/20/15@2200, 4/25/15@1000, 4/27/15@1400).
4/19/2015	9:00	EWV	WBN	GP	9:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4448.JPG, 4/19/2015 @0900. BLKI return in great numbers from first pic 0700 on. Storm in late afternoon.
4/19/2015	9:00	RPM	WM	GP	9:00	2	2	C	367	9	G	ADF&G WM photo IMG_0896, 4/19/2015@0900 – Large number cut offscreen.
4/20/2015	14:00	BMH	BC	O	21:13	3	1	C	0	0	E	
4/20/2015	14:00	BMH	CG	O	21:10	3	2	C	0	0	E	
4/20/2015	14:00	RPM	FB	O	19:38	4	3	C	0	0	E	
4/20/2015	14:00	RPM	FP	O	19:45	4	3	C	0	0	E	
4/20/2015	14:00	BMH	FR	O	21:21	3	1	C	0	0	E	
4/20/2015	14:00	BMH	MB	O	21:30	3	1	C	360	11	G	



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/20/2015	14:00	BMH	NBC	O	21:24	3	1	C	0	0	E	
4/20/2015	14:00	RPM	SB	O	19:48	4	3	C	0	0	E	
4/20/2015	14:00	RPM	SP	O	19:57	4	3	C	0	0	E	
4/20/2015	14:00	EWW	WBN	GP	14:00	4	3	C	0	0	G	ADF&G WBN photo IMG_4470.JPG, 4/20/2015 @1400. Snowstorm in morning. BLKI in great numbers. Rafts of COMU? show up offshore.
4/20/2015	14:00	RPM	WM	GP	14:00	3	3	C	0	0	E	Snowed overnight.
4/21/2015	9:00	RPM	BC	S	9:47	2	1	C	0	0	E	
4/21/2015	9:00	RPM	CG	S	9:43	2	1	C	0	0	E	
4/21/2015	9:00	BMH	FB	S	9:46	2	2	C	1	0	E	
4/21/2015	9:00	BMH	FP	S	10:00	2	2	C	0	0	E	
4/21/2015	9:00	RPM	FR	S	9:52	2	1	C	2	1	E	
4/21/2015	9:00	RPM	MB	S	10:07	2	1	C	727	34	G	
4/21/2015	9:00	RPM	NBC	S	10:03	2	1	C	0	0	E	
4/21/2015	9:00	BMH	SB	S	10:02	2	2	C	0	0	E	
4/21/2015	9:00	BMH	SP	S	10:09	2	2	C	0	0	E	
4/21/2015	9:00	EWW	WBN	GP	9:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4482.JPG, 4/21/2015 @0900. Snow and fog in morning. BLKI in great numbers. Rafts of COMU? show up offshore.
4/21/2015	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	
4/22/2015	14:00	BMH	BC	S	15:10	1	0	C	5	2	E	
4/22/2015	14:00	BMH	CG	S	15:17	1	0	C	1	1	E	
4/22/2015	14:00	RPM	FB	S	14:28	1	0	C	27	1	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/22/2015	14:00	RPM	FP	S	14:25	1	0	C	0	2	E	
4/22/2015	14:00	BMH	FR	S	15:08	1	0	C	7	3	E	
4/22/2015	14:00	BMH	MB	GP		1	0	C	1,343	44	E	
4/22/2015	14:00	BMH	NBC	S	15:04	1	0	C	0	3	E	
4/22/2015	14:00	RPM	SB	S	14:20	1	0	C	7	0	E	
4/22/2015	14:00	RPM	SP	S	14:08	1	0	C	0	1	E	
4/22/2015	14:00	EWV	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4504.JPG, 4/22/2015 @1400.
4/22/2015	14:00	RPM	WM	GP	14:00	2	2	C	52	0	E	
4/23/2015	9:00	RPM	BC	S	9:24	4	1	C	3	1	E	
4/23/2015	9:00	RPM	CG	S	9:19	4	3	C	0	0	E	
4/23/2015	9:00	BMH	FB	S	9:13	4	3	C	0	1	E	
4/23/2015	9:00	BMH	FP	S	9:18	4	3	C	0	0	E	
4/23/2015	9:00	RPM	FR	S	9:32	4	2	C	0	4	E	
4/23/2015	9:00	RPM	MB	S	9:43	4	1	C	540	52	G	
4/23/2015	9:00	RPM	NBC	S	9:40	4	1	C	1	1	E	
4/23/2015	9:00	BMH	SB	S	9:20	4	3	C	0	0	E	
4/23/2015	9:00	BMH	SP	S	9:25	4	3	C	0	0	E	
4/23/2015	9:00	EWV	WBN	GP	9:00	3	3	C	0	0	G	ADF&G WBN photo IMG_4516.JPG, 4/23/2015 @0900. Rafts of COMU offshore.
4/23/2015	9:00	RPM	WM	GP	9:00	4	3	C	69	0	E	
4/24/2015	14:00	BMH	BC	S	14:33	3	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/24/2015	14:00	BMH	CG	S	14:30	3	2	C	0	0	E	
4/24/2015	14:00	RPM	FB	S	14:17	3	1	C	0	0	E	
4/24/2015	14:00	RPM	FP	S	14:25	3	1	C	0	0	E	
4/24/2015	14:00	BMH	FR	S	14:39	3	1	C	0	0	E	
4/24/2015	14:00	BMH	MB	S	14:47	2	1	C	410	20	G	
4/24/2015	14:00	BMH	NBC	S	14:43	3	1	C	0	0	E	
4/24/2015	14:00	RPM	SB	S	14:28	3	2	C	0	0	E	
4/24/2015	14:00	RPM	SP	S	14:34	3	2	C	0	1	E	
4/24/2015	14:00	EWV	WBN	GP	14:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4538.JPG, 4/24/2015 @1400. Rafts of COMU offshore.
4/24/2015	14:00	RPM	WM	GP	14:00	2	1	C	76	1	E	
4/25/2015	9:00	RPM	BC	S	9:27	3	2	C	0	1	E	
4/25/2015	9:00	RPM	CG	S	9:15	3	2	C	0	6	E	
4/25/2015	9:00	BMH	FB	S	9:21	3	3	C	0	0	E	
4/25/2015	9:00	BMH	FP	S	9:38	3	3	C	0	0	E	
4/25/2015	9:00	RPM	FR	S	9:35	3	2	C	0	1	E	
4/25/2015	9:00	RPM	MB	S	9:45	3	2	C	444	21	G	
4/25/2015	9:00	RPM	NBC	S	9:43	3	1	C	0	1	E	
4/25/2015	9:00	BMH	SB	S	9:40	3	2	C	0	0	E	
4/25/2015	9:00	BMH	SP	S	9:45	3	3	C	0	0	E	
4/25/2015	9:00	EWV	WBN	GP	9:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4550.JPG, 4/25/2015 @0900. Numerous BLKI, COMU, PECO present.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/25/2015	9:00	RPM	WM	GP	9:00	3	3	C	64	1	E	
4/26/2015	17:00	RPM	BC	O	12:42	3	2	C	0	0	G	
4/26/2015	17:00	RPM	CG	O	12:38	3	2	C	0	0	G	
4/26/2015	17:00	BMH	FB	O	11:35	3	2	C	0	1	E	
4/26/2015	17:00	BMH	FP	O	11:31	3	2	C	0	1	E	
4/26/2015	17:00	RPM	FR	O	12:48	3	2	C	0	0	G	
4/26/2015	17:00	RPM	MB	O	13:02	3	2	C	900	20	F	
4/26/2015	17:00	RPM	NBC	O	12:54	3	2	C	0	0	G	
4/26/2015	17:00	BMH	SB	O	11:25	3	2	C	0	2	E	
4/26/2015	17:00	BMH	SP	O	11:22	3	2	C	0	0	E	
4/26/2015	17:00	EWV	WBN	GP	17:00	3	2	C	0	0	G	ADF&G WBN photo IMG_4575.JPG, 4/26/2015 @1700. Numerous BLKI, COMU, PECO present.
4/26/2015	17:00	RPM	WM	GP	17:00	3	2	C	125	0	E	
4/27/2015	14:00	BMH	BC	S	14:31	0	0	C	0	2	E	
4/27/2015	14:00	BMH	CG	S	14:28	0	0	C	0	0	E	
4/27/2015	14:00	RPM	FB	S	13:10	1	0	C	1	1	E	
4/27/2015	14:00	RPM	FP	S	13:07	1	0	C	0	0	E	
4/27/2015	14:00	BMH	FR	S	14:37	0	0	C	6	1	E	
4/27/2015	14:00	BMH	MB	GP	14:58	0	0	C	795	68	E	
4/27/2015	14:00	BMH	NBC	S	14:43	0	0	C	0	0	E	
4/27/2015	14:00	RPM	SB	S	12:59	1	0	C	0	1	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/27/2015	14:00	RPM	SP	S	12:55	1	0	C	0	1	E	
4/27/2015	14:00	EWV	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4589.JPG, 4/27/2015 @1400. Numerous BLKI, COMU, PECO present.
4/27/2015	14:00	RPM	WM	GP	14:00	1	1	C	140	11	E	
4/28/2015	9:00	RPM	BC	S	9:18	1	0	P	0	1	E	
4/28/2015	9:00	RPM	CG	S	9:14	1	0	P	0	2	E	
4/28/2015	9:00	BMH	FB	S	9:18	0	0	P	2	1	E	
4/28/2015	9:00	BMH	FP	S	9:23	0	0	P	0	0	E	
4/28/2015	9:00	RPM	FR	S	9:25	1	0	P	5	1	E	
4/28/2015	9:00	RPM	MB	O	21:20	1	0	C	1,200	60	F	
4/28/2015	9:00	RPM	NBC	S	9:32	1	0	O	0	0	P	Too much fog in a.m.
4/28/2015	9:00	BMH	SB	S	9:26	0	0	P	0	0	E	
4/28/2015	9:00	BMH	SP	S	9:30	0	0	P	0	0	E	
4/28/2015	9:00	EWV	WBN	GP	9:00	2	2	C	0	0	G	ADF&G WBN photo IMG_4607.JPG, 4/28/2015 @1500. Camera obscured by fog until 1500 use 1500. Numerous BLKI, COMU, PECO present.
4/28/2015	9:00	RPM	WM	O	22:20	1	1	C	242	5	E	
4/29/2015	14:00	RPM	BC	S	14:43	2	0	C	2	1	E	
4/29/2015	14:00	RPM	CG	S	14:40	2	1	C	0	3	E	
4/29/2015	14:00	RPM	FB	S	14:14	2	1	C	3	1	E	
4/29/2015	14:00	RPM	FP	S	14:19	2	1	C	0	0	E	
4/29/2015	14:00	RPM	FR	S	14:48	2	0	C	10	1	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
4/29/2015	14:00	RPM	MB	S	14:55	2	0	C	923	56	G	
4/29/2015	14:00	RPM	NBC	S	14:53	2	0	C	0	0	E	
4/29/2015	14:00	RPM	SB	S	14:22	2	1	C	0	1	E	
4/29/2015	14:00	RPM	SP	S	11:51	2	1	C	0	0	E	
4/29/2015	14:00	EWV	WBN	GP	14:00	2	1	C	0	0	G	ADF&G WBN photo IMG_4623.JPG, 4/29/2015 @1400. Numerous BLKI, COMU, PECO present.
4/29/2015	14:00	RPM	WM	GP	14:00	2	1	C	114	3	E	
4/30/2015	17:00	BMH	BC	S	17:21	4	1	C	0	0	E	
4/30/2015	17:00	BMH	CG	S	17:17	4	1	C	0	0	E	
4/30/2015	17:00	RPM	FB	S	17:15	4	0	C	0	0	E	
4/30/2015	17:00	RPM	FP	S	17:22	4	0	C	0	0	E	
4/30/2015	17:00	BMH	FR	S	17:33	4	1	C	0	1	E	
4/30/2015	17:00	BMH	MB	S	17:39	3	1	P	525	10	F	
4/30/2015	17:00	BMH	NBC	S	17:36	3	1	C	0	0	E	
4/30/2015	17:00	RPM	SB	S	17:24	4	0	C	0	0	E	
4/30/2015	17:00	RPM	SP	S	17:30	4	0	C	0	0	E	
4/30/2015	17:00	EWV	WBN	GP	17:00	2	2	P	0	0	G	ADF&G WBN photo IMG_4643.JPG, 4/30/2015 @1700. Camera obscured by fog most of day. Numerous BLKI, COMU, PECO present.
4/30/2015	17:00	RPM	WM	GP	17:30	3	3	C	35	0	E	
5/1/2015	14:00	BMH	BC	S	14:42	1	0	C	0	0	E	
5/1/2015	14:00	BMH	CG	S	14:39	1	0	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/1/2015	14:00	BMH	FB	S	14:29	2	1	C	0	0	E	
5/1/2015	14:00	BMH	FP	S	14:26	2	0	C	0	0	E	
5/1/2015	14:00	BMH	FR	S	15:06	1	0	C	0	0	E	
5/1/2015	14:00	BMH	MB	S	15:23	1	0	C	475	43	G	
5/1/2015	14:00	BMH	NBC	S	15:19	1	0	C	0	3	E	
5/1/2015	14:00	BMH	SB	S	14:22	2	1	C	0	1	E	
5/1/2015	14:00	BMH	SP	S	14:19	2	1	C	0	0	E	
5/1/2015	14:00	EWV	WBN	GP	14:00	2	2	C	0	0	G	ADF&G WBN photo IMG_4657.JPG, 5/1/2015 @1400. Numerous BLKI, COMU, PECO present.
5/1/2015	14:00	RPM	WM	GP	14:00	2	2	C	22	0	E	
5/2/2015	17:00	BMH	BC	S	18:54	0	0	C	0	0	E	
5/2/2015	17:00	BMH	CG	S	19:03	1	0	C	0	1	E	
5/2/2015	17:00	BMH	FB	S	19:09	1	0	C	0	0	E	
5/2/2015	17:00	BMH	FP	S	19:15	1	0	C	0	0	E	
5/2/2015	17:00	BMH	FR	S	18:52	0	0	C	0	0	E	
5/2/2015	17:00	BMH	MB	S	18:36	0	0	C	420	19	G	
5/2/2015	17:00	BMH	NBC	S	18:48	0	0	C	0	4	E	
5/2/2015	17:00	BMH	SB	S	19:17	1	0	C	0	0	E	
5/2/2015	17:00	BMH	SP	S	19:21	1	0	C	0	3	E	
5/2/2015	17:00	EWV	WBN	GP	17:00	1	1	C	0	0	G	ADF&G WBN photo IMG_4677.JPG, 5/2/2015 @1700. Numerous BLKI, COMU, PECO present.
5/2/2015	17:00	BMH	WM	S	16:20	0	1	C	10	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/3/2015	14:00	BMH	BC	S	15:02	1	0	C	0	1	E	
5/3/2015	14:00	BMH	CG	S	14:58	1	0	C	0	0	E	
5/3/2015	14:00	BMH	FB	S	14:11	1	0	C	0	1	E	
5/3/2015	14:00	BMH	FP	S	14:07	1	0	C	0	0	E	
5/3/2015	14:00	BMH	FR	S	15:09	1	0	C	0	0	E	
5/3/2015	14:00	BMH	MB	S	15:18	1	0	C	400	21	G	
5/3/2015	14:00	BMH	NBC	S	15:14	1	0	C	0	0	E	
5/3/2015	14:00	BMH	SB	S	14:03	1	0	C	0	1	E	
5/3/2015	14:00	BMH	SP	S	14:01	1	0	C	0	1	E	
5/3/2015	14:00	EWV	WBN	GP	14:00	1	1	C	0	0	G	ADF&G WBN photo IMG_4686.JPG, 5/3/2015 @1400. Numerous BLKI, COMU, PECO present.
5/3/2015	14:00	RPM	WM	GP	14:00	1	2	C	2	0	E	
5/4/2015	9:00	BMH	BC	S	9:20	4	3	C	0	4	E	
5/4/2015	9:00	BMH	CG	S	9:17	4	3	C	0	0	E	
5/4/2015	9:00	RPM	FB	S	9:33	4	3	C	0	0	E	
5/4/2015	9:00	RPM	FP	S	9:25	4	3	C	0	0	E	
5/4/2015	9:00	BMH	FR	S	9:25	4	3	C	0	0	E	
5/4/2015	9:00	BMH	MB	S	9:36	4	3	C	190	2	G	
5/4/2015	9:00	BMH	NBC	S	9:31	4	3	C	0	0	E	
5/4/2015	9:00	RPM	SB	S	9:23	4	3	C	0	0	E	
5/4/2015	9:00	RPM	SP	S	9:18	4	3	C	0	1	E	



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/4/2015	9:00	EWV	WBN	GP	9:00	1	0	C	0	0	G	ADF&G WBN photo IMG_4708.JPG, 5/4/2015 @0900. Numerous BLKI, COMU, PECO present.
5/4/2015	9:00	RPM	WM	GP	9:00	1	0	C	0	0	E	
5/5/2015	17:00	RPM	BC	S	18:57	3	1	C	0	0	E	
5/5/2015	17:00	RPM	CG	S	18:52	3	3	C	0	0	E	
5/5/2015	17:00	BMH	FB	S	19:03	3	2	C	0	0	E	
5/5/2015	17:00	BMH	FP	S	19:09	3	2	C	0	0	E	
5/5/2015	17:00	RPM	FR	S	19:04	3	1	C	0	0	E	
5/5/2015	17:00	RPM	MB	S	19:15	3	1	C	300	7	G	
5/5/2015	17:00	RPM	NBC	S	19:11	3	1	C	0	0	E	
5/5/2015	17:00	BMH	SB	S	19:11	3	2	C	0	0	E	
5/5/2015	17:00	BMH	SP	S	19:16	3	2	C	0	0	E	
5/5/2015	17:00	RPM	WM	GP	17:00	1	1	C	181	4	E	
5/6/2015	9:00	BMH	BC	S	9:39	3	2	C	0	0	E	
5/6/2015	9:00	BMH	CG	S	9:35	3	2	C	0	1	E	
5/6/2015	9:00	RPM	FB	S	9:45	3	1	C	0	0	E	
5/6/2015	9:00	RPM	FP	S	9:38	3	1	C	0	0	E	
5/6/2015	9:00	BMH	FR	S	9:47	3	2	C	0	0	E	
5/6/2015	9:00	BMH	MB	S	9:54	3	2	C	245	7	G	
5/6/2015	9:00	BMH	NBC	S	9:51	3	2	C	0	0	E	
5/6/2015	9:00	RPM	SB	S	9:36	3	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/6/2015	9:00	RPM	SP	S	9:28	3	2	C	0	0	E	
5/6/2015	9:00	RPM	WM	GP	9:00	1	1	C	156	25	E	
5/7/2015	14:00	BMH	BC	S	14:27	1	0	C	0	1	E	
5/7/2015	14:00	BMH	CG	S	14:22	1	1	C	0	0	E	
5/7/2015	14:00	RPM	FB	S	14:10	1	1	C	0	2	E	
5/7/2015	14:00	RPM	FP	S	14:17	1	1	C	0	0	E	
5/7/2015	14:00	BMH	FR	S	14:34	1	0	C	0	0	E	
5/7/2015	14:00	BMH	MB	S	14:45	1	0	C	370	31	G	
5/7/2015	14:00	BMH	NBC	S	14:39	1	0	C	0	0	E	
5/7/2015	14:00	RPM	SB	S	14:19	1	1	C	1	1	E	
5/7/2015	14:00	RPM	SP	S	14:27	1	1	C	0	0	E	
5/7/2015	14:00	RPM	WM	GP	14:00	1	1	C	311	13	E	
5/8/2015	9:00	RPM	BC	S	9:21	2	0	C	0	0	E	
5/8/2015	9:00	RPM	CG	S	9:16	2	0	C	0	2	E	
5/8/2015	9:00	BMH	FB	S	9:19	2	0	C	2	19	E	
5/8/2015	9:00	BMH	FP	S	9:27	2	0	C	0	0	E	
5/8/2015	9:00	RPM	FR	S	9:28	2	1	C	3	8	E	
5/8/2015	9:00	RPM	MB	S	9:37	2	0	C	642	97	G	
5/8/2015	9:00	RPM	NBC	S	9:35	2	1	C	0	2	E	
5/8/2015	9:00	BMH	SB	S	9:29	2	0	C	0	3	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/8/2015	9:00	BMH	SP	S	9:33	2	0	C	0	0	E	
5/8/2015	9:00	RPM	WM	GP	9:00	2	3	C	136	3	E	
5/9/2015	14:00	BMH	BC	S	14:50	0	0	C	0	0	E	
5/9/2015	14:00	BMH	CG	S	14:38	0	0	C	0	0	E	
5/9/2015	14:00	BMH	FB	S	14:26	0	0	C	1	3	E	
5/9/2015	14:00	BMH	FP	S	14:23	0	0	C	0	0	E	
5/9/2015	14:00	BMH	FR	S	15:00	0	0	C	3	0	E	
5/9/2015	14:00	BMH	MB	S		0	0	C	680	48	G	
5/9/2015	14:00	BMH	NBC	S	15:04	0	0	C	0	0	E	
5/9/2015	14:00	BMH	SB	S	14:19	0	0	C	0	0	E	
5/9/2015	14:00	BMH	SP	S	14:16	0	0	C	0	0	E	
5/9/2015	14:00	RPM	WM	GP	14:00	1	1	C	131	3	E	
5/10/2015	14:00	RPM	BC	S	14:17	5	3	C	0	0	E	
5/10/2015	14:00	RPM	CG	S	14:14	5	3	C	0	0	E	
5/10/2015	14:00	BMH	FB	S	14:07	5	3	C	0	0	E	
5/10/2015	14:00	BMH	FP	S	14:04	5	3	C	0	0	E	
5/10/2015	14:00	RPM	FR	S	14:20	5	3	C	0	1	E	
5/10/2015	14:00	RPM	MB	S	14:28	5	3	C	415	29	G	
5/10/2015	14:00	RPM	NBC	S	14:26	5	3	C	0	0	E	
5/10/2015	14:00	BMH	SB	S	14:00	5	3	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/10/2015	14:00	BMH	SP	S	13:58	5	3	C	0	0	E	
5/10/2015	14:00	RPM	WM	GP	14:00	2	1	C	261	29	E	
5/11/2015	14:00	BMH	BC	S	14:25	2	1	C	1	0	E	
5/11/2015	14:00	BMH	CG	S	14:20	2	1	C	0	1	E	
5/11/2015	14:00	RPM	FB	S	14:09	2	1	C	0	1	E	
5/11/2015	14:00	RPM	FP	S	14:17	2	1	C	0	0	E	
5/11/2015	14:00	BMH	FR	S	14:34	2	1	C	1	0	E	
5/11/2015	14:00	BMH	MB	S	14:42	2	1	C	270	17	G	
5/11/2015	14:00	BMH	NBC	S	14:38	2	1	C	0	0	E	
5/11/2015	14:00	RPM	SB	S	14:19	2	1	C	0	0	E	
5/11/2015	14:00	RPM	SP	S	14:26	2	1	C	0	0	E	
5/11/2015	14:00	RPM	WM	GP	14:00	1	0	C	248	14	E	
5/12/2015	14:00	RPM	BC	S	14:09	2	0	C	0	0	E	
5/12/2015	14:00	RPM	CG	S	14:06	2	1	C	0	1	E	
5/12/2015	14:00	BMH	FB	S	14:14	3	1	C	0	0	E	
5/12/2015	14:00	BMH	FP	S	14:19	3	1	C	0	0	E	
5/12/2015	14:00	RPM	FR	S	14:15	2	0	C	1	0	E	
5/12/2015	14:00	RPM	MB	S	14:24	2	0	C	517	30	G	
5/12/2015	14:00	RPM	NBC	S	14:21	2	0	C	0	0	E	
5/12/2015	14:00	BMH	SB	S	14:21	3	1	C	3	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/12/2015	14:00	BMH	SP	S	14:25	3	1	C	0	0	E	
5/12/2015	14:00	RPM	WM	GP	14:00	2	2	C	138	6	E	
5/13/2015	14:00	BMH	BC	S	14:23	4	3	C	0	0	E	
5/13/2015	14:00	BMH	CG	S	14:15	4	3	C	0	0	E	
5/13/2015	14:00	RPM	FB	S	14:11	3	3	C	0	0	E	
5/13/2015	14:00	RPM	FP	S	14:16	3	3	C	0	0	E	
5/13/2015	14:00	BMH	FR	S	14:36	3	2	C	0	0	E	
5/13/2015	14:00	BMH	MB	S	14:44	3	2	C	120	9	G	
5/13/2015	14:00	BMH	NBC	S	14:41	3	2	C	0	0	E	
5/13/2015	14:00	RPM	SB	S	14:18	3	3	C	1	0	E	
5/13/2015	14:00	RPM	SP	S	14:25	3	3	C	0	0	E	
5/13/2015	14:00	RPM	WM	GP	14:00	2	2	C	30	0	E	
5/14/2015	14:00	RPM	BC	S	14:22	2	1	C	0	0	E	
5/14/2015	14:00	RPM	CG	S	14:17	2	1	C	0	0	E	
5/14/2015	14:00	BMH	FB	S	14:17	3	2	C	0	0	E	
5/14/2015	14:00	BMH	FP	S	14:24	3	2	C	0	0	E	
5/14/2015	14:00	RPM	FR	S	14:28	2	1	C	0	0	E	
5/14/2015	14:00	RPM	MB	S	14:36	2	1	C	440	29	G	
5/14/2015	14:00	RPM	NBC	S	14:34	2	1	C	0	1	E	
5/14/2015	14:00	BMH	SB	S	14:26	3	2	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/14/2015	14:00	BMH	SP	S	14:34	3	2	C	0	0	E	
5/14/2015	14:00	RPM	WM	GP	14:00	2	2	C	36	1	E	
5/15/2015	9:00	BMH	BC	S	9:29	4	3	C	0	0	E	
5/15/2015	9:00	BMH	CG	S	9:25	4	3	C	0	0	E	
5/15/2015	9:00	RPM	FB	S	9:13	3	3	C	0	0	E	
5/15/2015	9:00	RPM	FP	S	9:20	3	3	C	0	0	E	
5/15/2015	9:00	BMH	FR	S	9:36	4	3	C	0	5	E	
5/15/2015	9:00	BMH	MB	S	9:43	4	3	C	457	10	G	
5/15/2015	9:00	BMH	NBC	S	9:40	4	3	C	0	0	E	
5/15/2015	9:00	RPM	SB	S	9:23	3	3	C	0	3	E	
5/15/2015	9:00	RPM	SP	S	9:31	3	3	C	0	0	E	
5/15/2015	9:00	RPM	WM	GP	9:00	3	2	C	45	0	E	
5/16/2015	14:00	RPM	BC	S	14:29	6	3	C	0	1	E	
5/16/2015	14:00	RPM	CG	S	14:25	6	3	C	0	1	E	
5/16/2015	14:00	BMH	FB	S	14:11	6	3	C	0	1	E	
5/16/2015	14:00	BMH	FP	S	14:09	6	3	C	0	0	E	
5/16/2015	14:00	RPM	FR	S	14:34	6	3	C	0	1	E	
5/16/2015	14:00	RPM	MB	S	14:42	6	3	C	389	7	G	
5/16/2015	14:00	RPM	NBC	S	14:40	6	3	C	0	3	E	
5/16/2015	14:00	BMH	SB	S	14:03	6	3	C	0	1	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/16/2015	14:00	BMH	SP	S	14:00	6	3	C	0	0	E	
5/16/2015	14:00	RPM	WM	GP	14:00	3	3	C	116	4	E	
5/17/2015	17:00	BMH	BC	S	17:22	5	2	C	0	0	E	
5/17/2015	17:00	BMH	CG	S	17:15	5	3	C	0	0	E	
5/17/2015	17:00	RPM	FB	S	17:45	4	3	C	0	0	E	
5/17/2015	17:00	RPM	FP	S	17:42	4	3	C	0	0	E	
5/17/2015	17:00	BMH	FR	S	17:36	5	2	C	0	0	E	
5/17/2015	17:00	BMH	MB	S	17:52	4	2	C	170	0	G	
5/17/2015	17:00	BMH	NBC	S	17:48	4	2	C	0	0	E	
5/17/2015	17:00	RPM	SB	S	17:38	4	3	C	0	0	E	
5/17/2015	17:00	RPM	SP	S	17:34	4	3	C	0	0	E	
5/17/2015	17:00	RPM	WM	GP	17:00	3	3	C	92	3	E	
5/18/2015	17:00	RPM	BC	S	17:25	1	0	C	0	0	E	
5/18/2015	17:00	RPM	CG	S	17:20	1	0	C	0	0	E	
5/18/2015	17:00	BMH	FB	S	17:35	0	1	C	0	0	E	
5/18/2015	17:00	BMH	FP	S	17:32	0	1	C	0	0	E	
5/18/2015	17:00	RPM	FR	S	17:30	1	0	C	0	0	E	
5/18/2015	17:00	RPM	MB	S	17:39	1	0	C	780	22	G	
5/18/2015	17:00	RPM	NBC	S	17:36	1	0	C	0	0	E	
5/18/2015	17:00	BMH	SB	S	17:27	0	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/18/2015	17:00	BMH	SP	S	17:24	0	1	C	0	0	E	
5/18/2015	17:00	RPM	WM	GP	17:00	2	3	C	53	1	E	
5/19/2015	17:00	BMH	BC	S	17:22	5	3	C	0	0	E	
5/19/2015	17:00	BMH	CG	S	17:17	5	3	C	0	0	E	
5/19/2015	17:00	RPM	FB	S	17:29	5	3	C	0	0	E	
5/19/2015	17:00	RPM	FP	S	17:27	5	3	C	0	0	E	
5/19/2015	17:00	BMH	FR	S	17:31	5	3	C	4	0	E	
5/19/2015	17:00	BMH	MB	S	17:37	5	3	C	795	8	G	
5/19/2015	17:00	BMH	NBC	S	17:35	5	3	C	0	0	E	
5/19/2015	17:00	RPM	SB	S	17:22	5	3	C	1	0	E	
5/19/2015	17:00	RPM	SP	S	17:19	5	3	C	0	0	E	
5/19/2015	17:00	RPM	WM	GP	17:00	2	2	C	212	3	E	
5/20/2015	17:00	RPM	BC	S	17:19	3	2	C	0	0	E	
5/20/2015	17:00	RPM	CG	S	17:15	3	2	C	0	0	E	
5/20/2015	17:00	BMH	FB	S	17:35	3	2	C	0	0	E	
5/20/2015	17:00	BMH	FP	S	17:33	3	2	C	0	0	E	
5/20/2015	17:00	RPM	FR	S	17:25	3	2	C	0	0	E	
5/20/2015	17:00	RPM	MB	S	17:34	3	2	C	102	2	G	
5/20/2015	17:00	RPM	NBC	S	17:31	3	2	C	0	0	E	
5/20/2015	17:00	BMH	SB	S	17:29	3	2	C	0	0	E	



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/20/2015	17:00	BMH	SP	S	17:25	3	2	C	0	0	E	
5/20/2015	17:00	RPM	WM	GP	17:00	2	2	C	84	0	E	
5/21/2015	9:00	BMH	BC	S	9:19	2	1	C	0	0	E	
5/21/2015	9:00	BMH	CG	S	9:16	2	1	C	0	0	E	
5/21/2015	9:00	RPM	FB	S	9:14	2	1	C	0	0	E	
5/21/2015	9:00	RPM	FP	S	9:21	2	1	C	0	0	E	
5/21/2015	9:00	BMH	FR	S	9:28	2	1	C	0	0	E	
5/21/2015	9:00	BMH	MB	S	9:37	2	1	C	145	17	G	
5/21/2015	9:00	BMH	NBC	S	9:32	2	1	C	0	0	E	
5/21/2015	9:00	RPM	SB	S	9:24	2	1	C	0	0	E	
5/21/2015	9:00	RPM	SP	S	9:34	2	1	C	0	0	E	
5/21/2015	9:00	RPM	WM	GP	9:00	2	2	C	170	11	E	
5/22/2015	9:00	RPM	BC	S	9:17	3	2	C	0	0	E	
5/22/2015	9:00	RPM	CG	S	9:14	3	2	C	0	0	E	
5/22/2015	9:00	BMH	FB	S	9:40	3	2	C	0	0	E	
5/22/2015	9:00	BMH	FP	S	9:38	3	2	C	0	0	E	
5/22/2015	9:00	RPM	FR	S	9:24	3	2	C	0	0	E	
5/22/2015	9:00	RPM	MB	S	9:30	3	2	C	201	16	G	
5/22/2015	9:00	RPM	NBC	S	9:29	3	2	C	0	1	E	
5/22/2015	9:00	BMH	SB	S	9:34	3	2	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/22/2015	9:00	BMH	SP	S	9:32	3	2	C	0	0	E	
5/22/2015	9:00	RPM	WM	GP	9:00	2	2	C	167	4	E	
5/23/2015	9:00	BMH	BC	S	9:28	6	3	C	0	0	E	
5/23/2015	9:00	BMH	CG	S	9:25	6	3	C	0	0	E	
5/23/2015	9:00	RPM	FB	S	9:29	6	3	C	0	1	E	
5/23/2015	9:00	RPM	FP	S	9:26	6	3	C	0	1	E	
5/23/2015	9:00	BMH	FR	S	9:36	6	3	C	0	0	E	
5/23/2015	9:00	BMH	MB	S	9:43	6	3	C	60	0	E	
5/23/2015	9:00	BMH	NBC	S	9:40	6	3	C	0	0	E	
5/23/2015	9:00	RPM	SB	S	9:23	6	3	C	0	0	E	
5/23/2015	9:00	RPM	SP	S	9:19	6	3	C	0	1	E	
5/23/2015	9:00	RPM	WM	GP	9:00	3	3	C	113	0	E	
5/24/2015	17:00	RPM	BC	S	17:15	2	1	C	0	0	E	
5/24/2015	17:00	RPM	CG	S	17:13	2	1	C	0	0	E	
5/24/2015	17:00	BMH	FB	S	17:16	2	2	C	0	0	E	
5/24/2015	17:00	BMH	FP	S	17:14	2	2	C	0	0	E	
5/24/2015	17:00	RPM	FR	S	17:21	2	1	C	0	0	E	
5/24/2015	17:00	RPM	MB	S	17:30	2	1	C	196	7	G	
5/24/2015	17:00	RPM	NBC	S	17:28	2	1	C	0	0	E	
5/24/2015	17:00	BMH	SB	S	17:09	2	2	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/24/2015	17:00	BMH	SP	S	17:07	2	2	C	0	0	E	
5/24/2015	17:00	RPM	WM	GP	17:00	2	3	C	139	0	E	
5/25/2015	9:00	RPM	BC	S	9:15	1	1	C	0	2	E	
5/25/2015	9:00	RPM	CG	S	9:11	1	1	C	0	2	E	
5/25/2015	9:00	BMH	FB	S	9:21	1	1	C	0	0	E	
5/25/2015	9:00	BMH	FP	S	9:27	1	1	C	0	0	E	
5/25/2015	9:00	RPM	FR	S	9:21	1	1	C	2	2	E	
5/25/2015	9:00	RPM	MB	S	9:33	1	1	C	193	42	G	
5/25/2015	9:00	RPM	NBC	S	9:30	1	1	C	0	4	E	
5/25/2015	9:00	BMH	SB	S	9:29	1	1	C	0	0	E	
5/25/2015	9:00	BMH	SP	S	9:34	1	1	C	0	0	E	
5/25/2015	17:00	RPM	WM	GP	9:00	4	3	C	42	0	E	
5/26/2015	17:00	RPM	BC	S	17:33	3	1	C	0	0	E	
5/26/2015	17:00	RPM	CG	S	17:30	3	1	C	0	0	E	
5/26/2015	17:00	BMH	FB	S	17:11	3	2	C	2	0	E	
5/26/2015	17:00	BMH	FP	S	17:09	3	2	C	0	0	E	
5/26/2015	17:00	RPM	FR	S	17:38	3	1	C	13	0	E	
5/26/2015	17:00	RPM	MB	GP		3	1	C	1455	0	E	
5/26/2015	17:00	RPM	NBC	S	17:44	3	1	C	0	0	E	
5/26/2015	17:00	BMH	SB	S	17:04	3	2	C	20	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/26/2015	17:00	BMH	SP	S	17:02	3	2	C	0	0	E	
5/26/2015	17:00	RPM	WM	GP	17:00	2	2	C	117	0	E	
5/27/2015	9:00	RPM	BC	S	9:13	2	2	C	0	7	E	
5/27/2015	9:00	RPM	CG	S	9:09	2	2	C	0	3	E	
5/27/2015	9:00	BMH	FB	S	9:35	3	3	C	0	2	E	
5/27/2015	9:00	BMH	FP	S	9:33	3	3	C	0	0	E	
5/27/2015	9:00	RPM	FR	S	9:18	2	2	C	5	5	E	
5/27/2015	9:00	RPM	MB	S	9:29	2	2	C	1,067	112	G	
5/27/2015	9:00	RPM	NBC	S	9:26	2	2	C	0	2	E	
5/27/2015	9:00	BMH	SB	S	9:29	3	2	C	4	1	E	
5/27/2015	9:00	BMH	SP	S	9:26	3	3	C	0	0	E	
5/27/2015	9:00	RPM	WM	GP	9:00	2	3	C	105	0	E	
5/28/2015	17:00	BMH	BC	S	17:31	3	0	C	0	2	E	
5/28/2015	17:00	BMH	CG	S	17:28	3	1	C	0	0	E	
5/28/2015	17:00	BMH	FB	S	17:11	3	1	C	0	0	E	
5/28/2015	17:00	BMH	FP	S	17:09	3	1	C	0	0	E	
5/28/2015	17:00	BMH	FR	S	17:38	3	0	C	0	0	E	
5/28/2015	17:00	BMH	MB	S	17:49	3	1	C	915	20	G	
5/28/2015	17:00	BMH	NBC	S	17:46	3	0	C	0	0	E	
5/28/2015	17:00	BMH	SB	S	17:05	3	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/28/2015	17:00	BMH	SP	S	17:03	3	1	C	0	0	E	
5/28/2015	17:00	RPM	WM	GP	17:00	2	2	C	99	7	E	
5/29/2015	14:00	BMH	BC	S	14:39	3	2	C	0	0	E	
5/29/2015	14:00	BMH	CG	S	14:37	3	2	C	0	0	E	
5/29/2015	14:00	RPM	FB	S	14:00	3	2	C	0	0	E	
5/29/2015	14:00	RPM	FP	S	14:26	3	2	C	0	0	E	
5/29/2015	14:00	BMH	FR	S	14:45	3	2	C	0	0	E	
5/29/2015	14:00	BMH	MB	GP		3	2	C	564	0	E	
5/29/2015	14:00	BMH	NBC	S	14:51	3	2	C	0	0	E	
5/29/2015	14:00	RPM	SB	S	14:28	3	2	C	0	0	E	
5/29/2015	14:00	RPM	SP	S	14:35	3	2	C	0	0	E	
5/29/2015	14:00	RPM	WM	GP	14:00	2	2	C	79	0	E	
5/30/2015	17:00	BMH	BC	S	18:16	1	0	C	0	0	E	
5/30/2015	17:00	BMH	CG	S	18:22	1	0	C	0	0	E	
5/30/2015	17:00	DCO	FB	S	17:27	1	1	C	3	0	E	
5/30/2015	17:00	DCO	FP	S	17:24	1	1	C	0	0	E	
5/30/2015	17:00	BMH	FR	S	18:14	1	0	C	0	0	E	
5/30/2015	17:00	BMH	MB	GP	18:00	1	0	C	826	0	E	
5/30/2015	17:00	BMH	NBC	S	18:09	1	0	C	0	0	E	
5/30/2015	17:00	DCO	SB	S	17:05	1	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
5/30/2015	17:00	DCO	SP	S	17:00	1	1	C	0	0	E	
5/30/2015	17:00	BMH	WM	S	17:15	2	2	C	17	0	E	
5/31/2015	14:00	BMH	BC	S	14:13	0	0	C	0	1	E	
5/31/2015	14:00	BMH	CG	S	14:09	0	0	C	0	2	E	
5/31/2015	14:00	DCO	FB	S	14:19	0	1	C	1	4	E	
5/31/2015	14:00	DCO	FP	S	14:16	0	1	C	0	0	E	
5/31/2015	14:00	BMH	FR	S	14:20	0	0	C	0	1	E	
5/31/2015	14:00	BMH	MB	S	14:30	0	0	C	700	64	G	
5/31/2015	14:00	BMH	NBC	S	14:23	0	0	C	0	4	E	
5/31/2015	14:00	DCO	SB	S	14:11	0	1	C	0	0	E	
5/31/2015	14:00	DCO	SP	S	14:05	0	1	C	0	0	E	
5/31/2015	14:00	RPM	WM	GP	14:00	2	2	C	0	0	E	
6/1/2015	9:00	DCO	BC	S	9:25	1	0	C	0	0	E	
6/1/2015	9:00	DCO	CG	S	9:20	1	0	C	0	0	E	
6/1/2015	9:00	BMH	FB	S	9:18	0	0	C	0	0	E	
6/1/2015	9:00	BMH	FP	S	9:25	0	0	C	0	0	E	
6/1/2015	9:00	DCO	FR	S	9:36	1	0	C	8	0	E	
6/1/2015	9:00	DCO	MB	S	9:41	1	0	C	880	14	G	
6/1/2015	9:00	DCO	NBC	S	9:38	1	0	C	0	0	E	
6/1/2015	9:00	BMH	SB	S	9:27	0	0	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/1/2015	9:00	BMH	SP	S	9:33	0	0	C	0	0	E	
6/1/2015	9:00	RPM	WM	GP	9:00	2	2	C	0	0	E	
6/2/2015	17:00	BMH	BC	S	17:12	0	1	C	0	0	E	
6/2/2015	17:00	BMH	CG	S	17:09	0	1	C	0	0	E	
6/2/2015	17:00	DCO	FB	S	17:42	1	1	C	4	0	E	
6/2/2015	17:00	DCO	FP	S	17:35	1	1	C	0	0	E	
6/2/2015	17:00	BMH	FR	S	17:20	0	1	C	15	0	E	
6/2/2015	17:00	BMH	MB	GP	17:30	0	1	C	1,015	0	E	
6/2/2015	17:00	BMH	NBC	S	17:25	0	0	C	0	0	E	
6/2/2015	17:00	DCO	SB	S	17:30	1	1	C	0	0	E	
6/2/2015	17:00	DCO	SP	S	17:20	1	1	C	0	0	E	
6/2/2015	17:00	RPM	WM	GP	17:00	1	1	C	0	0	E	
6/3/2015	17:00	BMH	BC	S	17:38	1	0	C	1	0	E	
6/3/2015	17:00	BMH	CG	S	17:46	1	0	C	0	1	E	
6/3/2015	17:00	BMH	FB	S	18:04	1	0	C	10	0	E	
6/3/2015	17:00	BMH	FP	S	18:25	1	0	C	0	1	E	
6/3/2015	17:00	BMH	FR	S	17:36	1	0	C	12	0	E	
6/3/2015	17:00	BMH	MB	S	17:10	1	0	C	980	16	G	
6/3/2015	17:00	BMH	NBC	S	17:29	1	0	C	1	0	E	
6/3/2015	17:00	BMH	SB	S	18:27	1	0	C	0	1	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/3/2015	17:00	BMH	SP	S	18:32	1	0	C	0	0	E	
6/3/2015	17:00	RPM	WM	GP	17:00	1	1	C	0	0	E	
6/4/2015	14:00	BMH	BC	S	14:14	2	0	C	1	0	E	
6/4/2015	14:00	BMH	CG	S	14:12	2	0	C	0	0	E	
6/4/2015	14:00	DCO	FB	S	14:07	1	1	C	10	0	E	
6/4/2015	14:00	DCO	FP	S	14:20	1	0	C	0	0	E	
6/4/2015	14:00	BMH	FR	S	14:22	2	0	C	4	0	E	
6/4/2015	14:00	BMH	MB	S	14:31	2	0	C	900	25	G	
6/4/2015	14:00	BMH	NBC	S	14:26	2	0	C	1	0	E	
6/4/2015	14:00	DCO	SB	S	14:23	1	0	C	1	0	E	
6/4/2015	14:00	DCO	SP	S	14:35	1	0	C	0	0	E	
6/4/2015	14:00	RPM	WM	GP	14:00	1	0	C	89	1	E	
6/5/2015	9:00	BMH	BC	S	9:14	4	2	C	0	0	E	
6/5/2015	9:00	BMH	CG	S	9:11	4	2	C	0	0	E	
6/5/2015	9:00	DCO	FB	S	9:33	4	1	C	34	6	E	
6/5/2015	9:00	DCO	FP	S	9:30	4	1	C	0	0	E	
6/5/2015	9:00	BMH	FR	S	9:20	4	2	C	2	5	E	
6/5/2015	9:00	BMH	MB	S	9:28	4	2	C	570	26	G	
6/5/2015	9:00	BMH	NBC	S	9:25	4	2	C	0	0	E	
6/5/2015	9:00	DCO	SB	S	9:23	4	0	C	4	2	E	



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/5/2015	9:00	DCO	SP	S	9:20	4	1	C	0	0	E	
6/5/2015	9:00	RPM	WM	GP	9:00	3	3	C	71	0	E	
6/6/2015	14:00	BMH	BC	S	14:20	1	0	C	0	0	E	
6/6/2015	14:00	BMH	CG	S	14:15	1	0	C	0	0	E	
6/6/2015	14:00	DCO	FB	S	14:24	2	1	C	3	0	E	
6/6/2015	14:00	DCO	FP	S	14:20	2	1	C	0	0	E	
6/6/2015	14:00	BMH	FR	S	14:33	1	0	C	0	0	E	
6/6/2015	14:00	BMH	MB	S	14:44	1	1	C	495	8	G	
6/6/2015	14:00	BMH	NBC	S	14:40	1	0	C	0	2	E	
6/6/2015	14:00	DCO	SB	S	14:15	2	1	C	2	0	E	
6/6/2015	14:00	DCO	SP	S	14:08	2	1	C	0	0	E	
6/6/2015	14:00	RPM	WM	GP	14:00	2	2	C	9	0	E	
6/7/2015	17:00	BMH	BC	S	17:12	2	0	C	0	2	E	
6/7/2015	17:00	BMH	CG	S	17:06	2	0	C	0	2	E	
6/7/2015	17:00	BMH	FB	S	16:27	2	0	C	0	0	E	
6/7/2015	17:00	BMH	FP	S	16:24	2	0	C	0	0	E	
6/7/2015	17:00	BMH	FR	S	17:20	2	0	C	5	0	E	
6/7/2015	17:00	BMH	MB	S	17:31	2	0	C	330	17	G	
6/7/2015	17:00	BMH	NBC	S	17:26	2	0	C	0	0	E	
6/7/2015	17:00	BMH	SB	S	16:19	2	0	C	2	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/7/2015	17:00	BMH	SP	S	16:13	2	0	C	0	0	E	
6/7/2015	17:00	RPM	WM	GP	17:00	2	2	C	0	0	E	
6/8/2015	14:00	BMH	BC	S	14:23	5	2	C	0	0	E	
6/8/2015	14:00	BMH	CG	S	14:17	5	3	C	0	0	E	
6/8/2015	14:00	DCO	FB	S	14:12	5	2	C	0	0	E	
6/8/2015	14:00	DCO	FP	S	14:17	5	2	C	0	0	E	
6/8/2015	14:00	BMH	FR	S	14:32	5	2	C	0	0	E	
6/8/2015	14:00	BMH	MB	S	14:42	5	2	C	165	1	G	
6/8/2015	14:00	BMH	NBC	S	14:38	5	2	C	0	0	E	
6/8/2015	14:00	DCO	SB	S	14:26	5	3	C	0	0	E	
6/8/2015	14:00	DCO	SP	S	14:30	5	3	C	0	0	E	
6/8/2015	14:00	RPM	WM	GP	14:00	2	2	C	0	0	E	
6/9/2015	17:00	DCO	BC	S	18:04	1	1	C	0	0	E	
6/9/2015	17:00	DCO	CG	S	18:00	2	1	C	0	0	E	
6/9/2015	17:00	DCO	FB	S	17:46	2	1	C	1	0	E	
6/9/2015	17:00	DCO	FP	S	17:41	2	1	C	0	0	E	
6/9/2015	17:00	DCO	FR	S	18:10	1	1	C	0	0	E	
6/9/2015	17:00	DCO	MB	S	19:48	1	0	C	260	10	G	
6/9/2015	17:00	DCO	NBC	S	19:45	1	0	C	0	0	E	
6/9/2015	17:00	DCO	SB	S	17:35	2	2	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/9/2015	17:00	DCO	SP	S	17:30	2	2	C	0	0	E	
6/9/2015	17:00	RPM	WM	GP	17:00	1	2	C	174	0	E	
6/10/2015	17:00	RPM	WM	GP	17:00	4	3	C	150	0	E	
6/10/2015	17:00	BMH	BC	S	17:09	4	2	C	0	0	E	
6/10/2015	17:00	BMH	CG	S	17:06	4	3	C	0	0	E	
6/10/2015	17:00	DCO	FB	S	17:39	4	1	C	42	0	E	
6/10/2015	17:00	DCO	FP	S	17:36	4	1	C	0	0	E	
6/10/2015	17:00	BMH	FR	S	17:17	4	3	C	8	0	E	
6/10/2015	17:00	BMH	MB	S	17:26	4	2	C	252	3	G	
6/10/2015	17:00	BMH	NBC	S	17:23	4	3	C	0	3	E	
6/10/2015	17:00	DCO	SB	S	17:28	4	1	C	0	0	E	
6/10/2015	17:00	DCO	SP	S	17:20	4	1	C	0	0	E	
6/11/2015	14:00	RPM	WM	GP	14:00	2	2	C	28	0	E	
6/11/2015	14:00	BMH	BC	S	14:18	2	1	C	0	0	E	
6/11/2015	14:00	BMH	CG	S	14:12	2	1	C	0	0	E	
6/11/2015	14:00	DCO	FB	S	14:45	1	1	C	52	0	E	
6/11/2015	14:00	DCO	FP	S	14:36	1	1	C	0	0	E	
6/11/2015	14:00	BMH	FR	S	14:25	2	1	C	11	1	E	
6/11/2015	14:00	BMH	MB	S	14:32	2	1	C	360	21	G	
6/11/2015	14:00	BMH	NBC	S	14:30	2	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/11/2015	14:00	DCO	SB	S	14:20	1	1	C	1	0	E	
6/11/2015	14:00	DCO	SP	S	14:10	1	1	C	0	0	E	
6/12/2015	17:00	RPM	WM	GP	17:00	2	3	C	0	0	E	
6/12/2015	17:00	BMH	BC	S	17:26	2	1	C	0	0	E	
6/12/2015	17:00	BMH	CG	S	17:34	2	1	C	0	0	E	
6/12/2015	17:00	DCO	FB	S	17:23	1	1	C	56	0	E	
6/12/2015	17:00	DCO	FP	S	17:15	1	1	C	0	0	E	
6/12/2015	17:00	BMH	FR	S	17:24	2	1	C	4	0	E	
6/12/2015	17:00	BMH	MB	S	17:10	2	0	C	420	8	G	
6/12/2015	17:00	BMH	NBC	S	17:20	2	1	C	0	0	E	
6/12/2015	17:00	DCO	SB	S	17:05	1	1	C	0	0	E	
6/12/2015	17:00	DCO	SP	S	17:00	1	1	C	0	0	E	
6/13/2015	9:00	BMH	BC	S	9:13	3	2	C	0	0	E	
6/13/2015	9:00	BMH	CG	S	9:10	3	1	C	0	0	E	
6/13/2015	9:00	DCO	FB	S	9:00	1	1	C	52	7	E	
6/13/2015	9:00	DCO	FP	S	9:12	1	1	C	0	0	E	
6/13/2015	9:00	BMH	FR	S	9:19	3	2	C	3	1	E	
6/13/2015	9:00	BMH	MB	S	9:28	3	1	C	520	18	G	
6/13/2015	9:00	BMH	NBC	S	9:24	3	2	C	0	3	E	
6/13/2015	9:00	DCO	SB	S	9:15	1	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/13/2015	9:00	DCO	SP	S	9:22	1	1	C	0	0	E	
6/13/2015	9:00	RPM	WM	GP	9:00	2	2	C	0	0	E	
6/14/2015	9:00	BMH	BC	S	9:14	3	2	C	2	0	E	
6/14/2015	9:00	BMH	CG	S	9:12	3	2	C	0	1	E	
6/14/2015	9:00	DCO	FB	S	9:14	2	1	C	127	0	E	
6/14/2015	9:00	DCO	FP	S	9:30	2	1	C	0	0	E	
6/14/2015	9:00	BMH	FR	S	9:23	3	2	C	9	0	E	
6/14/2015	9:00	BMH	MB	S	9:32	3	1	C	550	18	G	
6/14/2015	9:00	BMH	NBC	S	9:28	3	2	C	0	0	E	
6/14/2015	9:00	DCO	SB	S	9:40	2	1	C	12	0	E	
6/14/2015	9:00	DCO	SP	S	9:46	2	1	C	0	0	E	
6/14/2015	9:00	RPM	WM	GP	9:00	2	2	C	0	0	E	
6/15/2015	9:00	BMH	BC	S	9:27	2	2	C	0	0	E	
6/15/2015	9:00	BMH	CG	S	9:24	2	1	C	0	0	E	
6/15/2015	9:00	DCO	FB	S	9:18	2	1	C	129	2	E	
6/15/2015	9:00	DCO	FP	S	9:35	2	1	C	0	0	E	
6/15/2015	9:00	BMH	FR	S	9:34	2	2	C	12	0	E	
6/15/2015	9:00	BMH	MB	S	9:42	2	1	C	465	14	G	
6/15/2015	9:00	BMH	NBC	S	9:38	2	2	C	0	0	E	
6/15/2015	9:00	DCO	SB	S	9:38	2	1	C	50	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/15/2015	9:00	DCO	SP	S	9:52	2	1	C	0	0	E	
6/15/2015	9:00	RPM	WM	GP	9:00	2	3	C	0	0	E	
6/16/2015	17:00	BMH	BC	S	18:09	2	0	C	0	0	E	
6/16/2015	17:00	BMH	CG	S	18:05	2	0	C	0	3	E	
6/16/2015	17:00	BMH	FB	S	17:40	2	0	C	155	4	G	
6/16/2015	17:00	BMH	FP	S	17:36	2	0	C	0	0	E	
6/16/2015	17:00	BMH	FR	S	18:17	2	0	C	6	0	E	
6/16/2015	17:00	BMH	MB	GP		2	0	C	791	0	E	
6/16/2015	17:00	BMH	NBC	S	18:23	2	0	C	0	0	E	
6/16/2015	17:00	BMH	SB	S	17:26	2	0	C	45	2	E	
6/16/2015	17:00	BMH	SP	S	17:20	2	0	C	0	0	E	
6/16/2015	17:00	RPM	WM	GP	17:00	1	0	C	0	0	E	
6/17/2015	14:00	BMH	BC	S	15:13	2	0	C	1	0	E	
6/17/2015	14:00	BMH	CG	S	15:08	2	0	C	1	1	E	
6/17/2015	14:00	BMH	FB	S	14:46	2	0	C	107	13	E	
6/17/2015	14:00	BMH	FP	S	14:43	2	0	C	0	0	E	
6/17/2015	14:00	BMH	FR	S	15:21	2	0	C	16	0	E	
6/17/2015	14:00	BMH	MB	S	15:32	2	0	C	400	13	G	
6/17/2015	14:00	BMH	NBC	S	15:27	2	0	C	0	0	E	
6/17/2015	14:00	BMH	SB	S	14:35	2	0	C	26	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/17/2015	14:00	BMH	SP	S	14:29	2	0	C	0	0	E	
6/17/2015	14:00	RPM	WM	GP	14:00	1	1	C	0	0	E	
6/18/2015	9:00	BMH	BC	S	9:22	2	1	C	0	0	E	
6/18/2015	9:00	BMH	CG	S	9:17	2	1	C	0	1	E	
6/18/2015	9:00	DEJ	FB	S	9:47	2	0	C	118	11	G	
6/18/2015	9:00	DEJ	FP	S	9:42	2	1	C	2	1	E	
6/18/2015	9:00	BMH	FR	S	9:29	2	1	C	12	0	E	
6/18/2015	9:00	BMH	MB	S	9:37	2	1	C	270	13	G	
6/18/2015	9:00	BMH	NBC	S	9:34	2	1	C	0	0	E	
6/18/2015	9:00	DEJ	SB	S	9:34	2	0	C	27	1	E	
6/18/2015	9:00	DEJ	SP	S	9:30	2	0	C	0	0	E	
6/18/2015	9:00	RPM	WM	GP	9:00	2	1	C	0	0	E	
6/19/2015	14:00	BMH	BC	S	14:31	2	1	C	0	0	E	
6/19/2015	14:00	BMH	CG	S	14:28	2	1	C	0	2	E	
6/19/2015	14:00	DEJ	FB	S	14:34	2	1	C	107	11	G	
6/19/2015	14:00	DEJ	FP	S	14:31	2	1	C	1	0	E	
6/19/2015	14:00	BMH	FR	S	14:38	2	1	C	7	1	E	
6/19/2015	14:00	BMH	MB	S	14:47	2	1	C	315	8	G	
6/19/2015	14:00	BMH	NBC	S	14:44	2	1	C	0	0	E	
6/19/2015	14:00	DEJ	SB	S	14:22	2	0	C	13	3	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/19/2015	14:00	DEJ	SP	S	14:15	2	1	C	0	0	E	
6/19/2015	14:00	RPM	WM	GP	14:00	1	2	C	0	0	E	
6/20/2015	17:00	BMH	BC	S	17:24	1	0	C	6	0	E	
6/20/2015	17:00	BMH	CG	S	17:30	1	0	C	5	0	E	
6/20/2015	17:00	DEJ	FB	S	17:22	2	0	C	127	3	E	
6/20/2015	17:00	DEJ	FP	S	17:20	2	1	C	1	0	E	
6/20/2015	17:00	BMH	FR	S	17:22	1	0	C	11	2	E	
6/20/2015	17:00	BMH	MB	S	17:04	1	0	C	280	27	G	
6/20/2015	17:00	BMH	NBC	S	17:17	1	0	C	0	4	E	
6/20/2015	17:00	DEJ	SB	S	17:14	2	0	C	13	1	E	
6/20/2015	17:00	DEJ	SP	S	17:10	2	1	C	0	1	E	
6/20/2015	17:00	RPM	WM	GP	17:00	1	0	C	0	0	E	
6/21/2015	9:00	BMH	BC	S	9:31	2	1	C	25	6	E	
6/21/2015	9:00	BMH	CG	S	9:27	2	1	C	0	0	E	
6/21/2015	9:00	DEJ	FB	S	9:50	2	2	C	63	16	E	
6/21/2015	9:00	DEJ	FP	S	9:45	2	2	C	0	4	E	
6/21/2015	9:00	BMH	FR	S	9:46	2	1	C	12	6	E	
6/21/2015	9:00	BMH	MB	S	9:54	2	1	C	117	9	G	
6/21/2015	9:00	BMH	NBC	S	9:51	2	1	C	0	0	E	
6/21/2015	9:00	DEJ	SB	S	9:39	2	1	C	0	0	E	



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/21/2015	9:00	DEJ	SP	S	9:30	2	2	C	0	0	E	
6/21/2015	9:00	RPM	WM	GP	9:00	1	1	C	90	10	E	
6/22/2015	17:00	BMH	BC	S	17:24	1	0	C	0	0	E	
6/22/2015	17:00	BMH	CG	S	17:22	1	0	C	8	0	E	
6/22/2015	17:00	DEJ	FB	S	17:45	1	0	C	181	1	E	
6/22/2015	17:00	DEJ	FP	S	17:40	1	0	C	0	0	E	
6/22/2015	17:00	BMH	FR	S	17:31	1	0	C	8	0	E	
6/22/2015	17:00	BMH	MB	S	17:40	1	0	C	500	9	G	
6/22/2015	17:00	BMH	NBC	S	17:37	1	0	C	1	0	E	
6/22/2015	17:00	DEJ	SB	S	17:35	1	0	C	27	0	E	
6/22/2015	17:00	DEJ	SP	S	17:30	1	1	C	0	0	E	
6/22/2015	17:00	RPM	WM	GP	17:00	2	1	C	1	0	E	
6/23/2015	17:00	BMH	BC	S	17:16	1	0	C	1	0	E	
6/23/2015	17:00	BMH	CG	S	17:12	1	0	C	0	0	E	
6/23/2015	17:00	DEJ	FB	S	17:08	1	0	C	181	3	E	
6/23/2015	17:00	DEJ	FP	S	17:04	1	0	C	14	0	E	
6/23/2015	17:00	BMH	FR	S	17:24	1	0	C	3	1	E	
6/23/2015	17:00	BMH	MB	S	17:35	1	0	C	450	14	G	
6/23/2015	17:00	BMH	NBC	S	17:29	1	0	C	0	0	E	
6/23/2015	17:00	DEJ	SB	S	16:56	1	0	C	34	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/23/2015	17:00	DEJ	SP	S	16:47	1	0	C	0	0	E	
6/23/2015	17:00	RPM	WM	GP	17:00	1	0	C	0	0	E	
6/24/2015	14:00	BMH	BC	S	14:26	1	0	C	0	0	E	
6/24/2015	14:00	BMH	CG	S	14:18	1	0	C	0	2	E	
6/24/2015	14:00	DEJ	FB	S	15:02	1	0	C	161	0	E	
6/24/2015	14:00	DEJ	FP	S	14:59	1	0	C	0	0	E	
6/24/2015	14:00	BMH	FR	S	14:35	1	0	C	11	2	E	
6/24/2015	14:00	BMH	MB	S	14:43	1	0	C	360	10	G	
6/24/2015	14:00	BMH	NBC	S	14:40	1	0	C	0	1	E	
6/24/2015	14:00	DEJ	SB	S	14:50	1	0	C	54	10	E	
6/24/2015	14:00	DEJ	SP	S	14:48	1	0	C	1	0	E	
6/24/2015	14:00	RPM	WM	GP	14:00	0	0	C	0	0	E	
6/25/2015	14:00	BMH	BC	S	14:39	1	0	C	0	0	E	
6/25/2015	14:00	BMH	CG	S	14:33	1	0	C	4	0	E	
6/25/2015	14:00	DEJ	FB	S	15:05	1	0	C	173	4	E	
6/25/2015	14:00	DEJ	FP	S	15:00	1	0	C	0	1	E	
6/25/2015	14:00	BMH	FR	S	14:45	1	0	C	15	0	E	
6/25/2015	14:00	BMH	MB	S	14:52	1	0	C	295	14	G	
6/25/2015	14:00	BMH	NBC	S	14:49	1	0	C	0	0	E	
6/25/2015	14:00	DEJ	SB	S	14:51	1	0	C	57	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/25/2015	14:00	DEJ	SP	S	14:49	1	1	C	1	1	E	
6/25/2015	14:00	RPM	WM	GP	14:00	1	0	C	0	0	E	
6/26/2015	9:00	BMH	BC	S	9:27	3	2	C	0	1	E	
6/26/2015	9:00	BMH	CG	S	9:22	3	2	C	0	1	E	
6/26/2015	9:00	DEJ	FB	S	9:54	3	1	C	188	11	E	
6/26/2015	9:00	DEJ	FP	S	9:50	3	1	C	0	0	E	
6/26/2015	9:00	BMH	FR	S	9:34	3	2	C	9	0	E	
6/26/2015	9:00	BMH	MB	GP	9:45	3	2	C	236	0	E	
6/26/2015	9:00	BMH	NBC	S	9:38	3	2	C	0	0	E	
6/26/2015	9:00	DEJ	SB	S	9:36	3	1	C	72	9	E	
6/26/2015	9:00	DEJ	SP	S	9:32	3	1	C	0	9	E	
6/26/2015	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	
6/27/2015	9:00	BMH	BC	S	9:20	3	2	C	0	0	E	
6/27/2015	9:00	BMH	CG	S	9:15	3	1	C	0	0	E	
6/27/2015	9:00	DEJ	FB	S	9:41	3	1	C	137	13	E	
6/27/2015	9:00	DEJ	FP	S	9:38	3	1	C	0	0	E	
6/27/2015	9:00	BMH	FR	S	9:28	3	2	C	16	1	E	
6/27/2015	9:00	BMH	MB	S	9:35	3	2	C	244	3	G	
6/27/2015	9:00	BMH	NBC	S	9:32	3	2	C	0	1	E	
6/27/2015	9:00	DEJ	SB	S	9:31	3	1	C	41	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/27/2015	9:00	DEJ	SP	S	9:25	3	1	C	0	0	E	
6/27/2015	9:00	RPM	WM	GP	9:00	2	3	C	0	0	E	
6/28/2015	14:00	BMH	BC	S	14:38	5	3	C	0	0	E	
6/28/2015	14:00	BMH	CG	S	14:35	5	3	C	0	0	E	
6/28/2015	14:00	DEJ	FB	S	14:36	4	2	C	32	0	E	
6/28/2015	14:00	DEJ	FP	S	14:34	4	3	C	0	0	E	
6/28/2015	14:00	BMH	FR	S	14:45	5	3	C	2	0	E	
6/28/2015	14:00	BMH	MB	S	14:53	4	3	C	110	2	G	
6/28/2015	14:00	BMH	NBC	S	14:50	4	3	C	0	4	E	
6/28/2015	14:00	DEJ	SB	S	14:27	4	2	C	13	0	E	
6/28/2015	14:00	DEJ	SP	S	14:24	4	2	C	0	0	E	
6/28/2015	14:00	RPM	WM	GP	14:00	2	2	C	0	0	E	
6/29/2015	17:00	BMH	BC	S	17:26	2	1	C	0	0	E	
6/29/2015	17:00	BMH	CG	S	17:23	2	1	C	0	0	E	
6/29/2015	17:00	DEJ	FB	S	17:54	2	1	C	77	1	E	
6/29/2015	17:00	DEJ	FP	S	17:49	2	1	C	0	0	E	
6/29/2015	17:00	BMH	FR	S	17:33	2	1	C	0	0	E	
6/29/2015	17:00	BMH	MB	S	17:42	2	1	C	153	7	G	
6/29/2015	17:00	BMH	NBC	S	17:38	2	1	C	0	0	E	
6/29/2015	17:00	DEJ	SB	S	17:44	2	1	C	7	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
6/29/2015	17:00	DEJ	SP	S	17:40	2	1	C	0	0	E	
6/29/2015	17:00	RPM	WM	GP	17:00	1	1	C	0	0	E	
6/30/2015	9:00	BMH	BC	S	9:19	3	1	C	0	0	E	
6/30/2015	9:00	BMH	CG	S	9:15	3	2	C	0	0	E	
6/30/2015	9:00	DEJ	FB	S	9:44	2	2	C	134	11	E	
6/30/2015	9:00	DEJ	FP	S	9:40	2	2	C	0	0	E	
6/30/2015	9:00	BMH	FR	S	9:27	3	2	C	12	0	E	
6/30/2015	9:00	BMH	MB	S	9:35	2	2	C	211	1	G	
6/30/2015	9:00	BMH	NBC	S	9:33	2	2	C	0	0	E	
6/30/2015	9:00	DEJ	SB	S	9:34	2	2	C	2	0	E	
6/30/2015	9:00	DEJ	SP	S	9:32	2	1	C	0	0	E	
6/30/2015	9:00	RPM	WM	GP	9:00	1	1	C	0	0	E	
7/1/2015	9:00	BMH	BC	S	9:24	1	0	C	0	0	E	
7/1/2015	9:00	BMH	CG	S	9:20	1	0	C	2	1	E	
7/1/2015	9:00	DEJ	FB	S	9:45	1	0	C	154	4	E	
7/1/2015	9:00	DEJ	FP	S	9:42	1	0	C	0	0	E	
7/1/2015	9:00	BMH	FR	S	9:32	1	0	C	23	0	E	
7/1/2015	9:00	BMH	MB	GP	9:56	1	0	C	404	13	E	
7/1/2015	9:00	BMH	NBC	S	9:44	1	0	C	0	0	E	
7/1/2015	9:00	DEJ	SB	S	9:37	1	0	C	1	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/1/2015	9:00	DEJ	SP	S	9:31	1	0	C	1	0	E	
7/1/2015	9:00	RPM	WM	GP	9:00	2	1	C	72	0	E	
7/2/2015	9:00	BMH	BC	S	9:25	1	1	C	4	0	E	
7/2/2015	9:00	BMH	CG	S	9:20	1	0	C	10	4	E	
7/2/2015	9:00	DEJ	FB	S	9:47	1	0	C	157	8	E	
7/2/2015	9:00	DEJ	FP	S	9:44	1	1	C	0	0	E	
7/2/2015	9:00	BMH	FR	S	9:32	1	1	C	16	0	E	
7/2/2015	9:00	BMH	MB	S	9:41	2	1	C	341	9	G	
7/2/2015	9:00	BMH	NBC	S	9:37	1	1	C	0	0	E	
7/2/2015	9:00	DEJ	SB	S	9:37	1	0	C	1	3	E	
7/2/2015	9:00	DEJ	SP	S	9:32	1	0	C	0	1	E	
7/2/2015	9:00	RPM	WM	GP	9:00	2	2	C	8	0	E	
7/3/2015	14:00	BMH	BC	S	14:23	2	1	C	0	0	E	
7/3/2015	14:00	BMH	CG	S	14:14	2	1	C	6	0	E	
7/3/2015	14:00	DEJ	FB	S	14:15	2	1	C	209	9	E	
7/3/2015	14:00	DEJ	FP	S	14:10	2	1	C	0	0	E	
7/3/2015	14:00	BMH	FR	S	14:30	2	1	C	15	4	E	
7/3/2015	14:00	BMH	MB	S	14:37	2	1	C	413	15	G	
7/3/2015	14:00	BMH	NBC	S	14:34	2	1	C	1	1	E	
7/3/2015	14:00	DEJ	SB	S	14:04	2	1	C	4	1	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/3/2015	14:00	DEJ	SP	S	13:57	2	1	C	0	0	E	
7/3/2015	14:00	RPM	WM	GP	14:00	2	1	C	71	2	E	
7/4/2015	17:00	BMH	BC	S	17:13	4	3	C	0	0	E	
7/4/2015	17:00	BMH	CG	S	17:10	4	3	C	0	0	E	
7/4/2015	17:00	DEJ	FB	S	17:43	4	3	C	0	0	E	
7/4/2015	17:00	DEJ	FP	S	17:40	4	3	C	0	0	E	
7/4/2015	17:00	BMH	FR	S	17:19	4	3	C	0	0	E	
7/4/2015	17:00	BMH	MB	S	17:25	4	3	C	12	5	E	
7/4/2015	17:00	BMH	NBC	S	17:23	4	2	C	0	0	E	
7/4/2015	17:00	DEJ	SB	S	17:34	4	3	C	0	0	E	
7/4/2015	17:00	DEJ	SP	S	17:31	4	2	C	0	2	E	
7/4/2015	17:00	RPM	WM	GP	17:00	3	2	C	61	0	E	
7/5/2015	14:00	BMH	BC	S	14:16	5	3	C	0	0	E	
7/5/2015	14:00	BMH	CG	S	14:13	5	3	C	0	0	E	
7/5/2015	14:00	DEJ	FB	S	14:14	5	3	C	0	0	E	
7/5/2015	14:00	DEJ	FP	S	14:10	5	3	C	0	0	E	
7/5/2015	14:00	BMH	FR	S	14:22	5	3	C	0	0	E	
7/5/2015	14:00	BMH	MB	S	14:28	5	3	C	16	0	E	
7/5/2015	14:00	BMH	NBC	S	14:26	5	3	C	0	0	E	
7/5/2015	14:00	DEJ	SB	S	14:07	5	3	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/5/2015	14:00	DEJ	SP	S	14:03	5	3	C	0	0	E	
7/5/2015	14:00	RPM	WM	GP	14:00	3	2	C	77	0	E	
7/6/2015	17:00	BMH	BC	S	17:56	2	0	C	0	0	E	
7/6/2015	17:00	BMH	CG	S	17:53	2	1	C	0	0	E	
7/6/2015	17:00	DEJ	FB	S	18:17	2	2	C	0	1	E	
7/6/2015	17:00	DEJ	FP	S	18:15	2	2	C	0	0	E	
7/6/2015	17:00	BMH	FR	S	18:03	2	1	C	2	2	E	
7/6/2015	17:00	BMH	MB	S	18:09	2	1	C	15	4	E	
7/6/2015	17:00	BMH	NBC	S	18:07	2	1	C	0	3	E	
7/6/2015	17:00	DEJ	SB	S	18:11	2	1	C	0	0	E	
7/6/2015	17:00	DEJ	SP	S	18:06	2	1	C	0	0	E	
7/6/2015	17:00	RPM	WM	GP	17:00	3	3	C	8	0	E	
7/7/2015	14:00	BMH	BC	S	14:27	2	0	C	0	0	E	
7/7/2015	14:00	BMH	CG	S	14:23	2	0	C	0	0	E	
7/7/2015	14:00	DEJ	FB	S	14:32	2	1	C	0	0	E	
7/7/2015	14:00	DEJ	FP	S	14:30	2	1	C	0	0	E	
7/7/2015	14:00	BMH	FR	S	14:34	2	0	C	4	1	E	
7/7/2015	14:00	BMH	MB	S	14:42	2	0	C	137	6	G	
7/7/2015	14:00	BMH	NBC	S	14:38	2	0	C	0	0	E	
7/7/2015	14:00	DEJ	SB	S	14:25	2	1	C	0	0	E	



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/7/2015	14:00	DEJ	SP	S	14:20	2	1	C	0	0	E	
7/7/2015	14:00	RPM	WM	GP	14:00	3	3	C	1	0	E	
7/8/2015	9:00	BMH	BC	S	9:27	2	0	C	0	2	E	
7/8/2015	9:00	BMH	CG	S	9:24	2	1	C	1	1	E	
7/8/2015	9:00	DEJ	FB	S	9:37	3	2	C	0	4	E	
7/8/2015	9:00	DEJ	FP	S	9:34	3	2	C	0	0	E	
7/8/2015	9:00	BMH	FR	S	9:34	2	1	C	7	27	E	
7/8/2015	9:00	BMH	MB	S	9:45	2	2	C	110	16	G	
7/8/2015	9:00	BMH	NBC	S	9:43	2	1	C	0	4	E	
7/8/2015	9:00	DEJ	SB	S	9:30	3	2	C	0	2	E	
7/8/2015	9:00	DEJ	SP	S	9:25	3	2	C	0	0	E	
7/8/2015	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	
7/9/2015	17:00	BMH	BC	S	17:13	1	0	C	0	0	E	
7/9/2015	17:00	BMH	CG	S	17:07	1	0	C	0	2	E	
7/9/2015	17:00	DEJ	FB	S	17:20	1	0	C	111	3	E	
7/9/2015	17:00	DEJ	FP	S	17:17	1	0	C	2	4	E	
7/9/2015	17:00	BMH	FR	S	17:19	1	0	C	14	0	E	
7/9/2015	17:00	BMH	MB	S	17:28	1	0	C	505	12	G	
7/9/2015	17:00	BMH	NBC	S	17:24	1	0	C	2	0	E	
7/9/2015	17:00	DEJ	SB	S	17:11	1	0	C	6	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/9/2015	17:00	DEJ	SP	S	17:08	1	1	C	0	0	E	
7/9/2015	17:00	RPM	WM	GP	17:00	2	3	C	0	0	E	
7/10/2015	17:00	BMH	BC	S	18:03	1	0	C	0	0	E	
7/10/2015	17:00	BMH	CG	S	18:00	1	0	C	2	1	E	
7/10/2015	17:00	DEJ	FB	S	17:45	1	0	C	239	2	E	
7/10/2015	17:00	DEJ	FP	S	17:42	1	0	C	10	0	E	
7/10/2015	17:00	BMH	FR	S	18:53	1	0	C	1	0	E	
7/10/2015	17:00	BMH	MB	S	19:03	1	0	C	375	173	G	
7/10/2015	17:00	BMH	NBC	S	18:58	1	0	C	0	2	E	
7/10/2015	17:00	DEJ	SB	S	17:27	1	0	C	41	1	E	
7/10/2015	17:00	DEJ	SP	S	17:24	1	0	C	0	0	E	
7/10/2015	17:00	RPM	WM	GP	17:00	1	1	C	0	0	E	
7/11/2015	14:00	BMH	BC	S	14:28	1	0	C	0	2	E	
7/11/2015	14:00	BMH	CG	S	14:14	1	0	C	8	2	E	
7/11/2015	14:00	DEJ	FB	S	15:21	2	0	C	230	4	G	
7/11/2015	14:00	DEJ	FP	S	15:16	2	0	C	10	0	E	
7/11/2015	14:00	BMH	FR	S	14:38	1	0	C	15	2	E	
7/11/2015	14:00	BMH	MB	S	14:46	1	0	C	484	22	G	
7/11/2015	14:00	BMH	NBC	S	14:44	1	0	C	0	3	E	
7/11/2015	14:00	DEJ	SB	S	15:05	2	0	C	134	3	G	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/11/2015	14:00	DEJ	SP	S	14:56	2	1	C	1	0	E	
7/11/2015	14:00	RPM	WM	GP	14:00	2	2	C	0	0	E	
7/12/2015	17:00	BMH	BC	S	17:18	3	0	C	0	1	E	
7/12/2015	17:00	BMH	CG	S	17:14	3	0	C	2	1	E	
7/12/2015	17:00	DEJ	FB	S	18:11	3	1	C	43	9	E	
7/12/2015	17:00	DEJ	FP	S	18:08	3	1	C	0	0	E	
7/12/2015	17:00	BMH	FR	S	17:24	3	0	C	9	2	E	
7/12/2015	17:00	BMH	MB	S	17:36	3	1	C	245	12	G	
7/12/2015	17:00	BMH	NBC	S	17:33	3	0	C	0	1	E	
7/12/2015	17:00	DEJ	SB	S	18:03	3	1	C	20	3	E	
7/12/2015	17:00	DEJ	SP	S	18:00	3	1	C	0	1	E	
7/12/2015	17:00	RPM	WM	GP	17:00	3	1	C	0	0	E	
7/13/2015	17:00	BMH	BC	S	17:24	1	0	C	0	2	E	
7/13/2015	17:00	BMH	CG	S	17:21	1	0	C	0	2	E	
7/13/2015	17:00	DEJ	FB	S	17:20	1	0	C	57	9	G	
7/13/2015	17:00	DEJ	FP	S	17:30	1	0	C	0	0	E	
7/13/2015	17:00	BMH	FR	S	17:31	1	0	C	8	1	E	
7/13/2015	17:00	BMH	MB	S	17:39	1	0	C	107	29	G	
7/13/2015	17:00	BMH	NBC	S	17:36	1	0	C	0	1	E	
7/13/2015	17:00	DEJ	SB	S	17:34	1	0	C	5	1	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/13/2015	17:00	DEJ	SP	S	17:45	1	0	C	0	2	E	
7/13/2015	17:00	RPM	WM	GP	17:00	1	0	C	0	0	E	
7/14/2015	17:00	SKS	BC	S	19:30	2	0	C	0	0	E	
7/14/2015	17:00	SKS	CG	S	19:19	2	0	C	0	0	E	
7/14/2015	17:00	SKS	FB	S	18:57	2	0	C	28	0	E	
7/14/2015	17:00	SKS	FP	S	18:52	2	0	C	0	0	E	
7/14/2015	17:00	SKS	FR	S	19:40	2	0	C	0	0	E	
7/14/2015	17:00	SKS	MB	S	19:53	2	0	C	55	0	F	
7/14/2015	17:00	SKS	NBC	S	19:46	2	0	C	0	0	E	
7/14/2015	17:00	SKS	SB	S	18:40	2	1	C	6	0	E	
7/14/2015	17:00	SKS	SP	S	18:30	2	1	C	0	0	E	
7/14/2015	17:00	RPM	WM	GP	17:00	3	3	C	0	0	E	
7/15/2015	9:00	SKS	BC	S	10:12	4	2	C	0	0	E	
7/15/2015	9:00	SKS	CG	S	10:08	4	2	C	0	0	E	
7/15/2015	9:00	SKS	FB	S	9:49	4	2	C	3	3	E	
7/15/2015	9:00	SKS	FP	S	9:46	4	2	C	0	0	E	
7/15/2015	9:00	SKS	FR	S	10:22	4	3	C	0	0	E	
7/15/2015	9:00	SKS	MB	S	10:31	4	2	C	12	0	G	
7/15/2015	9:00	SKS	NBC	S	10:28	4	2	C	0	1	E	
7/15/2015	9:00	SKS	SB	S	9:38	4	2	C	1	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/15/2015	9:00	SKS	SP	S	9:30	4	2	C	0	0	E	
7/15/2015	9:00	RPM	WM	GP	9:00	2	2	C	0	0	E	
7/16/2015	14:00	SKS	BC	S		4	3	C	0	0	E	
7/16/2015	14:00	SKS	CG	S		4	3	C	0	0	E	
7/16/2015	14:00	SKS	FB	S		4	3	C	0	0	E	
7/16/2015	14:00	SKS	FP	S		4	3	C	0	0	E	
7/16/2015	14:00	SKS	FR	S		4	3	C	0	0	E	
7/16/2015	14:00	SKS	MB	S		4	3	C	0	0	E	
7/16/2015	14:00	SKS	NBC	S		4	3	C	0	0	E	
7/16/2015	14:00	SKS	SB	S		4	3	C	0	0	E	
7/16/2015	14:00	SKS	SP	S		4	3	C	0	0	E	
7/16/2015	14:00	RPM	WM	GP		4	3	C	0	0	E	
7/17/2015	9:00	KLL	BC	S	9:27	4	2	C	0	0	E	
7/17/2015	9:00	KLL	CG	S	9:25	4	2	C	0	0	E	
7/17/2015	9:00	KLL	FB	S	9:11	4	2	C	0	0	E	
7/17/2015	9:00	KLL	FP	S	9:07	4	1	C	0	0	E	
7/17/2015	9:00	KLL	FR	S	9:45	4	2	C	0	3	E	
7/17/2015	9:00	KLL	MB	S	10:00	4	2	C	14	2	G	
7/17/2015	9:00	KLL	NBC	S	9:53	4	2	C	0	0	E	
7/17/2015	9:00	KLL	SB	S	9:00	4	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/17/2015	9:00	KLL	SP	S	8:55	4	2	C	0	0	E	
7/17/2015	9:00	RPM	WM	GP		4	3	C	0	0	E	
7/18/2015	9:00	SKS	BC	S	9:28	2	1	C	0	0	E	
7/18/2015	9:00	SKS	CG	S	9:24	2	1	C	0	3	E	
7/18/2015	9:00	SKS	FB	S	9:10	2	1	C	0	0	E	
7/18/2015	9:00	SKS	FP	S	9:07	2	1	C	0	0	E	
7/18/2015	9:00	SKS	FR	S	9:35	2	1	C	1	0	E	
7/18/2015	9:00	SKS	MB	S	9:46	2	1	C	16	6	G	
7/18/2015	9:00	SKS	NBC	S	9:42	2	1	C	0	0	E	
7/18/2015	9:00	SKS	SB	S	9:02	2	1	C	0	0	E	
7/18/2015	9:00	SKS	SP	S	8:58	2	1	C	0	0	E	
7/18/2015	9:00	SKS	WM	O	18:30	2	1	C	0	0	E	
7/19/2015	9:00	SKS	BC	S	9:27	2	1	C	0	0	E	
7/19/2015	9:00	SKS	CG	S	9:24	2	1	C	0	0	E	
7/19/2015	9:00	SKS	FB	S	9:08	1	1	C	18	3	E	
7/19/2015	9:00	SKS	FP	S	9:05	1	1	C	0	0	E	
7/19/2015	9:00	SKS	FR	S	9:45	2	1	C	0	0	E	
7/19/2015	9:00	SKS	MB	S	9:57	2	1	C	101	4	G	
7/19/2015	9:00	SKS	NBC	S	9:52	2	1	C	0	0	E	
7/19/2015	9:00	SKS	SB	S	9:01	1	1	C	3	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/19/2015	9:00	SKS	SP	S	8:56	1	1	C	0	0	E	
7/19/2015	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	
7/20/2015	14:00	SKS	BC	S	14:37	3	1	C	0	0	E	
7/20/2015	14:00	SKS	CG	S	14:34	3	1	C	0	0	E	
7/20/2015	14:00	SKS	FB	S	14:11	3	1	C	132	1	E	
7/20/2015	14:00	SKS	FP	S	14:08	3	1	C	2	0	E	
7/20/2015	14:00	SKS	FR	S	14:44	3	1	C	13	0	E	
7/20/2015	14:00	SKS	MB	S	14:54	3	1	C	640	7	G	
7/20/2015	14:00	SKS	NBC	S	14:51	3	1	C	0	0	E	
7/20/2015	14:00	SKS	SB	S	13:59	3	1	C	35	0	E	
7/20/2015	14:00	SKS	SP	S	13:54	3	1	C	0	0	E	
7/20/2015	14:00	RPM	WM	GP	14:00	2	2	C	0	0	E	
7/21/2015	17:00	SKS	BC	S	16:58	3	1	C	2	0	E	
7/21/2015	17:00	SKS	CG	S	17:00	3	1	C	0	0	E	
7/21/2015	17:00	SKS	FB	S	17:10	3	1	C	132	2	E	
7/21/2015	17:00	SKS	FP	S	17:24	3	1	C	0	0	E	
7/21/2015	17:00	SKS	FR	S	16:59	4	1	C	10	2	E	
7/21/2015	17:00	SKS	MB	S	17:09	4	1	C	510	16	G	
7/21/2015	17:00	SKS	NBC	S	17:06	4	1	C	0	0	E	
7/21/2015	17:00	SKS	SB	S	17:27	3	0	C	31	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/21/2015	17:00	SKS	SP	S	17:35	3	1	C	0	0	E	
7/21/2015	17:00	RPM	WM	GP	17:00	4	3	C	0	0	E	
7/22/2015	9:00	SKS	BC	S	9:21	3	1	C	0	1	E	
7/22/2015	9:00	SKS	CG	S	9:21	3	1	C	0	0	E	
7/22/2015	9:00	SKS	FB	S	9:29	3	1	C	22	39	E	
7/22/2015	9:00	SKS	FP	S	9:37	3	1	C	0	0	E	
7/22/2015	9:00	SKS	FR	S	9:23	4	1	C	7	5	E	
7/22/2015	9:00	SKS	MB	S	9:31	4	1	C	190	5	F	
7/22/2015	9:00	SKS	NBC	S	9:28	4	1	C	0	0	E	
7/22/2015	9:00	SKS	SB	S	9:40	3	1	C	22	21	E	
7/22/2015	9:00	SKS	SP	S	9:47	3	1	C	0	0	E	
7/22/2015	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	
7/23/2015	17:00	BMH	BC	S	17:28	3	1	C	0	0	E	
7/23/2015	17:00	BMH	CG	S	17:25	3	1	C	0	0	E	
7/23/2015	17:00	DEJ	FB	S	17:15	3	1	C	0	0	E	
7/23/2015	17:00	DEJ	FP	S	17:20	3	1	C	0	0	E	
7/23/2015	17:00	BMH	FR	S	17:34	3	1	C	0	0	E	
7/23/2015	17:00	BMH	MB	S	17:40	3	1	C	13	3	E	
7/23/2015	17:00	BMH	NBC	S	17:38	3	1	C	0	0	E	
7/23/2015	17:00	DEJ	SB	S	17:22	3	1	C	6	0	E	



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/23/2015	17:00	DEJ	SP	S	17:29	3	1	C	0	0	E	
7/23/2015	17:00	RPM	WM	GP	17:00	3	3	C	0	0	E	
7/24/2015	14:00	BMH	BC	S	14:44	1	0	C	0	3	E	
7/24/2015	14:00	BMH	CG	S	14:50	1	0	C	0	0	E	
7/24/2015	14:00	BMH	FB	S	15:02	1	0	C	0	1	E	
7/24/2015	14:00	BMH	FP	S	15:19	1	0	C	4	4	E	
7/24/2015	14:00	BMH	FR	S	14:42	1	0	C	1	0	E	
7/24/2015	14:00	BMH	MB	S	14:25	1	0	C	23	16	E	
7/24/2015	14:00	BMH	NBC	S	14:35	1	0	C	0	2	E	
7/24/2015	14:00	BMH	SB	S	15:21	1	0	C	1	0	E	
7/24/2015	14:00	BMH	SP	S	15:29	1	0	C	0	0	E	
7/24/2015	14:00	BMH	WM	S	13:37	1	2	C	0	0	E	
7/25/2015	9:00	BMH	BC	S	9:20	2	0	C	0	0	E	
7/25/2015	9:00	BMH	CG	S	9:16	2	0	C	0	0	E	
7/25/2015	9:00	DEJ	FB	S	9:27	2	1	C	30	0	E	
7/25/2015	9:00	DEJ	FP	S	9:25	2	1	C	3	0	E	
7/25/2015	9:00	BMH	FR	S	9:27	2	0	C	0	0	E	
7/25/2015	9:00	BMH	MB	S	9:34	2	0	C	10	0	E	
7/25/2015	9:00	BMH	NBC	S	9:31	2	0	C	0	0	E	
7/25/2015	9:00	DEJ	SB	S	9:21	3	1	C	1	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/25/2015	9:00	DEJ	SP	S	9:17	3	1	C	0	0	E	
7/25/2015	9:00	RPM	WM	GP	9:00	3	3	C	0	0	E	
7/26/2015	9:00	BMH	BC	S	9:34	3	2	C	0	0	E	
7/26/2015	9:00	BMH	CG	S	9:29	3	1	C	0	0	E	
7/26/2015	9:00	DEJ	FB	S	9:50	2	1	C	58	0	E	
7/26/2015	9:00	DEJ	FP	S	9:48	2	1	C	0	0	E	
7/26/2015	9:00	BMH	FR	S	9:41	3	1	C	0	1	E	
7/26/2015	9:00	BMH	MB	S	9:48	3	1	C	14	0	E	
7/26/2015	9:00	BMH	NBC	S	9:45	3	2	C	0	0	E	
7/26/2015	9:00	DEJ	SB	S	9:45	2	1	C	1	0	E	
7/26/2015	9:00	DEJ	SP	S	9:40	2	1	C	0	0	E	
7/26/2015	9:00	RPM	WM	GP	9:00	4	3	C	0	0	E	
7/27/2015	14:00	BMH	BC	S	14:32	2	2	C	0	0	E	
7/27/2015	14:00	BMH	CG	S	14:37	2	2	C	0	0	E	
7/27/2015	14:00	DEJ	FB	S	14:42	2	1	C	67	3	E	
7/27/2015	14:00	DEJ	FP	S	14:38	2	1	C	0	0	E	
7/27/2015	14:00	BMH	FR	S	14:30	2	2	C	0	0	E	
7/27/2015	14:00	BMH	MB	S	14:21	2	1	C	10	2	E	
7/27/2015	14:00	BMH	NBC	S	14:25	2	2	C	0	0	E	
7/27/2015	14:00	DEJ	SB	S	14:35	2	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/27/2015	14:00	DEJ	SP	S	14:32	2	1	C	0	0	E	
7/27/2015	14:00	BMH	WM	S	12:14	3	2	C	0	0	E	
7/28/2015	14:00	BMH	BC	S	14:29	2	2	C	0	0	E	
7/28/2015	14:00	BMH	CG	S	14:25	2	2	C	0	0	E	
7/28/2015	14:00	DEJ	FB	S	14:44	2	1	C	87	0	E	
7/28/2015	14:00	DEJ	FP	S	14:41	2	1	C	0	0	E	
7/28/2015	14:00	BMH	FR	S	14:35	2	2	C	0	0	E	
7/28/2015	14:00	BMH	MB	S	14:42	2	1	C	14	1	E	
7/28/2015	14:00	BMH	NBC	S	14:39	2	2	C	0	0	E	
7/28/2015	14:00	DEJ	SB	S	14:38	2	1	C	0	0	E	
7/28/2015	14:00	DEJ	SP	S	14:35	2	1	C	0	0	E	
7/28/2015	14:00	RPM	WM	GP	14:00	3	3	C	0	0	E	
7/29/2015	14:00	BMH	BC	S	14:19	1	0	C	0	0	E	
7/29/2015	14:00	BMH	CG	S	14:27	1	0	C	0	0	E	
7/29/2015	14:00	BMH	FB	S	14:51	1	0	C	136	0	G	
7/29/2015	14:00	BMH	FP	S	15:07	1	0	C	0	0	E	
7/29/2015	14:00	BMH	FR	S	14:18	1	0	C	6	0	E	
7/29/2015	14:00	BMH	MB	GP	14:00	1	0	C	280	0	E	
7/29/2015	14:00	BMH	NBC	S	14:13	1	1	C	0	0	E	
7/29/2015	14:00	BMH	SB	S	15:09	1	0	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/29/2015	14:00	BMH	SP	S	15:13	1	0	C	0	0	E	
7/29/2015	14:00	RPM	WM	GP	14:00	2	2	C	0	0	E	
7/30/2015	17:00	RPM	BC	S	17:36	1	0	C	0	0	E	
7/30/2015	17:00	RPM	CG	S	17:43	1	0	C	1	0	E	
7/30/2015	17:00	BMH	FB	S	17:09	1	0	C	177	4	G	
7/30/2015	17:00	BMH	FP	S	17:06	1	0	C	0	0	E	
7/30/2015	17:00	RPM	FR	S	17:34	1	0	C	5	1	E	
7/30/2015	17:00	RPM	MB	S	17:02	1	0	C	827	4	G	
7/30/2015	17:00	RPM	NBC	S	17:29	1	0	C	0	0	E	
7/30/2015	17:00	BMH	SB	S	17:01	1	0	C	0	0	E	
7/30/2015	17:00	BMH	SP	S	16:58	1	0	C	0	0	E	
7/30/2015	17:00	RPM	WM	GP	17:00	1	0	C	0	0	E	
7/31/2015	14:00	BMH	MB	GP		2	0	C	754	0	E	
7/31/2015	14:00	RPM	BC	S	14:06	2	1	C	0	0	E	
7/31/2015	14:00	RPM	CG	S	14:03	2	1	C	0	0	E	
7/31/2015	14:00	RPM	FB	S	13:49	2	0	C	162	7	G	
7/31/2015	14:00	RPM	FP	S	13:46	2	0	C	0	0	E	
7/31/2015	14:00	RPM	FR	S	14:11	2	1	C	17	0	E	
7/31/2015	14:00	RPM	NBC	S	14:19	2	1	C	0	3	E	
7/31/2015	14:00	RPM	SB	S	13:40	2	0	C	3	1	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
7/31/2015	14:00	RPM	SP	S	13:33	2	0	C	0	0	E	
7/31/2015	14:00	BMH	WM	S	15:44	2	2	C	0	0	E	
8/1/2015	17:00	BMH	BC	S	17:50	2	1	C	0	0	E	
8/1/2015	17:00	BMH	CG	S	17:42	2	1	C	0	0	E	
8/1/2015	17:00	BMH	FB	S	17:26	2	0	C	109	19	E	
8/1/2015	17:00	BMH	FP	S	17:23	2	0	C	0	0	E	
8/1/2015	17:00	BMH	FR	S	17:58	2	1	C	0	0	E	
8/1/2015	17:00	RPM	MB	S	17:25	2	0	C	295	11	G	
8/1/2015	17:00	RPM	NBC	S	17:21	2	0	C	0	0	E	
8/1/2015	17:00	BMH	SB	S	17:16	2	0	C	0	0	E	
8/1/2015	17:00	BMH	SP	S	17:10	2	0	C	0	0	E	
8/1/2015	17:00	RPM	WM	GP	17:00	2	1	C	0	0	E	
8/2/2015	17:00	BMH	BC	S	17:26	1	0	C	0	0	E	
8/2/2015	17:00	BMH	CG	S	17:33	1	0	C	0	0	E	
8/2/2015	17:00	RPM	FB	S	17:30	1	0	C	110	44	G	
8/2/2015	17:00	RPM	FP	S	17:41	1	0	C	0	0	E	
8/2/2015	17:00	BMH	FR	S	17:24	1	0	C	0	0	E	
8/2/2015	17:00	BMH	MB	S	17:05	1	0	C	111	26	E	
8/2/2015	17:00	BMH	NBC	S	17:20	1	0	C	0	0	E	
8/2/2015	17:00	RPM	SB	S	17:44	1	0	C	1	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
8/2/2015	17:00	RPM	SP	S	17:54	1	0	C	0	0	E	
8/2/2015	17:00	RPM	WM	GP	17:00	1	1	C	0	0	E	
8/3/2015	14:00	RPM	BC	S	14:26	2	1	C	0	1	E	
8/3/2015	14:00	RPM	CG	S	14:31	2	1	C	0	0	E	
8/3/2015	14:00	BMH	FB	S	14:14	2	2	C	88	17	G	
8/3/2015	14:00	BMH	FP	S	14:24	2	2	C	0	0	E	
8/3/2015	14:00	RPM	FR	S	14:25	2	1	C	0	2	E	
8/3/2015	14:00	RPM	MB	S	14:16	2	1	C	12	10	E	
8/3/2015	14:00	RPM	NBC	S	14:21	2	1	C	0	4	E	
8/3/2015	14:00	BMH	SB	S	14:26	2	2	C	0	0	E	
8/3/2015	14:00	BMH	SP	S	14:32	2	2	C	0	0	E	
8/3/2015	14:00	RPM	WM	GP	14:00	1	0	C	0	0	E	
8/4/2015	14:00	BMH	BC	S	14:14	2	1	C	0	1	E	
8/4/2015	14:00	BMH	CG	S	14:11	2	1	C	0	2	E	
8/4/2015	14:00	RPM	FB	S	14:22	2	1	C	66	3	E	
8/4/2015	14:00	RPM	FP	S	14:44	2	1	C	0	0	E	
8/4/2015	14:00	BMH	FR	S	14:21	2	1	C	0	0	E	
8/4/2015	14:00	BMH	MB	S	14:46	2	1	C	0	0	E	
8/4/2015	14:00	BMH	NBC	S	14:42	2	1	C	0	1	E	
8/4/2015	14:00	RPM	SB	S	14:47	2	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
8/4/2015	14:00	RPM	SP	S	14:57	2	1	C	0	0	E	
8/4/2015	14:00	BMH	WM	S	15:35	1	1	C	0	0	E	
8/5/2015	9:00	RPM	BC	S	9:26	1	0	C	0	0	E	
8/5/2015	9:00	RPM	CG	S	9:21	1	0	C	0	0	E	
8/5/2015	9:00	BMH	FB	S	9:26	1	0	C	94	16	G	
8/5/2015	9:00	BMH	FP	S	9:23	1	0	C	0	0	E	
8/5/2015	9:00	RPM	FR	S	9:33	1	0	C	3	0	E	
8/5/2015	9:00	RPM	MB	S	9:43	1	0	C	0	4	E	
8/5/2015	9:00	RPM	NBC	S	9:40	1	0	C	0	3	E	
8/5/2015	9:00	BMH	SB	S	9:20	1	0	C	0	0	E	
8/5/2015	9:00	BMH	SP	S	9:17	1	0	C	0	0	E	
8/5/2015	9:00	RPM	WM	GP	9:00	2	1	C	0	0	E	
8/6/2015	17:00	BMH	BC	S	17:14	1	0	C	0	0	E	
8/6/2015	17:00	BMH	CG	S	17:20	1	0	C	0	6	E	
8/6/2015	17:00	RPM	FB	GP	17:07	2	0	C	201	27	E	
8/6/2015	17:00	RPM	FP	S	17:17	2	0	C	0	0	E	
8/6/2015	17:00	BMH	FR	S	17:12	1	0	C	0	0	E	
8/6/2015	17:00	BMH	MB	S	17:02	1	0	C	0	0	E	
8/6/2015	17:00	BMH	NBC	S	17:07	1	0	C	0	4	E	
8/6/2015	17:00	RPM	SB	S	17:20	2	0	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
8/6/2015	17:00	RPM	SP	S	17:28	2	1	C	0	0	E	
8/6/2015	17:00	BMH	WM	S	18:21	2	2	C	0	0	E	
8/7/2015	9:00	RPM	BC	S	9:19	3	2	C	0	0	E	
8/7/2015	9:00	RPM	CG	S	9:15	3	2	C	0	0	E	
8/7/2015	9:00	BMH	FB	S	9:28	3	0	C	172	35	G	
8/7/2015	9:00	BMH	FP	S	9:25	3	0	C	1	0	E	
8/7/2015	9:00	RPM	FR	S	9:25	3	2	C	0	0	E	
8/7/2015	9:00	RPM	MB	S	9:34	3	1	C	0	2	E	
8/7/2015	9:00	RPM	NBC	S	9:31	3	2	C	0	0	E	
8/7/2015	9:00	BMH	SB	S	9:21	3	0	C	0	0	E	
8/7/2015	9:00	BMH	SP	S	9:17	3	0	C	0	0	E	
8/7/2015	9:00	RPM	WM	GP	9:00	3	3	C	0	1	E	
8/8/2015	9:00	BMH	BC	S	9:23	1	0	C	0	1	E	
8/8/2015	9:00	BMH	CG	S	9:15	1	0	C	0	3	E	
8/8/2015	9:00	RPM	FB	S	9:15	1	0	C	211	60	G	
8/8/2015	9:00	RPM	FP	S	9:28	1	0	C	0	0	E	
8/8/2015	9:00	BMH	FR	S	9:30	1	0	C	0	2	E	
8/8/2015	9:00	BMH	MB	S	9:37	1	0	C	25	7	E	
8/8/2015	9:00	BMH	NBC	S	9:34	1	0	C	0	0	E	
8/8/2015	9:00	RPM	SB	S	9:31	1	0	C	0	0	E	



Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
8/8/2015	9:00	RPM	SP	S	9:40	1	0	C	0	0	E	
8/8/2015	9:00	RPM	WM	GP	9:00	2	2	C	0	0	E	
8/9/2015	9:00	RPM	BC	S	9:12	5	2	C	0	0	E	
8/9/2015	9:00	RPM	CG	S	9:07	5	2	C	0	1	E	
8/9/2015	9:00	BMH	FB	S	9:24	5	3	C	55	2	E	
8/9/2015	9:00	BMH	FP	S	9:22	5	2	C	0	0	E	
8/9/2015	9:00	RPM	FR	S	9:19	5	2	C	5	0	E	
8/9/2015	9:00	RPM	MB	S	9:31	5	1	C	88	2	G	
8/9/2015	9:00	RPM	NBC	S	9:27	5	1	C	0	0	E	
8/9/2015	9:00	BMH	SB	S	9:17	5	2	C	0	0	E	
8/9/2015	9:00	BMH	SP	S	9:13	5	3	C	0	0	E	
8/9/2015	9:00	RPM	WM	GP	9:00	5	3	C	0	0	E	
8/10/2015	9:00	BMH	BC	S	9:36	5	1	C	0	0	E	
8/10/2015	9:00	BMH	CG	S	9:32	5	1	C	0	0	E	
8/10/2015	9:00	RPM	FB	S	9:08	4	2	C	47	2	E	
8/10/2015	9:00	RPM	FP	S	9:17	4	2	C	0	0	E	
8/10/2015	9:00	BMH	FR	S	9:42	5	1	C	0	0	E	
8/10/2015	9:00	BMH	MB	S	9:47	5	2	C	46	0	E	
8/10/2015	9:00	BMH	NBC	S	9:45	5	1	C	0	0	E	
8/10/2015	9:00	RPM	SB	S	9:20	4	1	C	0	0	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
8/10/2015	9:00	RPM	SP	S	9:30	4	1	C	0	0	E	
8/10/2015	9:00	RPM	WM	GP	9:00	4	3	C	0	0	E	
8/11/2015	17:00	RPM	BC	S	17:20	3	1	C	0	0	E	
8/11/2015	17:00	RPM	CG	S	17:17	3	1	C	0	1	E	
8/11/2015	17:00	BMH	FB	S	17:03	3	1	C	141	5	E	
8/11/2015	17:00	BMH	FP	S	17:11	3	0	C	0	1	E	
8/11/2015	17:00	RPM	FR	S	17:28	3	1	C	0	0	E	
8/11/2015	17:00	RPM	MB	S	17:39	3	0	C	170	0	G	
8/11/2015	17:00	RPM	NBC	S	17:35	3	1	C	0	0	E	
8/11/2015	17:00	BMH	SB	S	17:14	3	0	C	0	0	E	
8/11/2015	17:00	RPM	WM	GP	17:00	3	2	C	0	0	E	
8/11/2015	17:00	BMH	SP	S	17:18	3	0	C	0	0	E	
8/12/2015	14:00	BMH	BC	S	14:20	1	0	C	0	1	E	
8/12/2015	14:00	BMH	CG	S	14:17	1	0	C	0	4	E	
8/12/2015	14:00	RPM	FB	S	14:19	1	0	C	66	51	E	
8/12/2015	14:00	RPM	FP	S	14:29	1	0	C	0	0	E	
8/12/2015	14:00	BMH	FR	S	14:27	1	0	C	0	0	E	
8/12/2015	14:00	BMH	MB	S	14:35	1	0	C	122	24	G	
8/12/2015	14:00	BMH	NBC	S	14:33	1	0	C	0	1	E	
8/12/2015	14:00	RPM	SB	S	14:32	1	0	C	0	1	E	

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
8/12/2015	14:00	RPM	WM	GP	14:00	1	2	C	0	0	E	
8/12/2015	14:00	RPM	SP	S	14:40	1	0	C	0	1	E	
8/13/2015	9:00	RPM	BC	S	9:26	1	0	C	0	0	E	
8/13/2015	9:00	RPM	CG	S	9:22	1	0	C	0	1	E	
8/13/2015	9:00	BMH	FB	S	9:24	1	0	C	83	3	E	
8/13/2015	9:00	BMH	FP	S	9:22	1	0	C	0	0	E	
8/13/2015	9:00	RPM	FR	S	9:33	1	0	C	4	4	E	
8/13/2015	9:00	RPM	MB	S	9:46	1	0	C	186	3	G	
8/13/2015	9:00	RPM	NBC	S	9:42	1	0	C	0	0	E	
8/13/2015	9:00	BMH	SB	S	9:18	1	0	C	0	0	E	
8/13/2015	9:00	BMH	SP	S	9:15	1	0	C	0	0	E	
8/13/2015	9:00	RPM	WM	GP	9:00	2	2	C	0	0	E	
8/14/2015	9:00	RPM	BC	O	8:32	1	0	C	0	0	E	
8/14/2015	9:00	RPM	CG	O	8:30	1	0	C	0	0	E	
8/14/2015	9:00	RPM	FB	O	7:30	1	0	C	70	12	G	
8/14/2015	9:00		FP								N	No survey of FP.
8/14/2015	9:00	RPM	FR	O	8:33	1	0	C	6	0	E	
8/14/2015	9:00	RPM	MB	B	8:36	1	0	C	250	0	F	
8/14/2015	9:00	RPM	NBC	B	8:34	1	0	C	0	0	E	
8/14/2015	9:00		SB								N	No survey of SB.

Date	Sched time	Observ <sup>a</sup>	Beach <sup>b</sup>	Method <sup>c</sup>	Start time	BSS <sup>d</sup>	Beach cond.	Visibility <sup>e</sup>	Land count	Water count	Count quality <sup>f</sup>	Comments <sup>g</sup>
8/14/2015	9:00		SP								N	No survey of SP.
8/14/2015	9:00		WM								N	No survey of WM.

<sup>a</sup> BMH = Benjamin M. Histan; DEJ = Dianna E. Johnson; DCO = Diane Calamar Okonek; EWW = Edward E. Weiss; SKS = Stephanie K. Sell; KLL = Kelsey L. Loper; RPM = Ryan P. Morrill.

<sup>b</sup> 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.

<sup>c</sup> B = boat survey; GP = ground photo; O = opportunistic; S = field survey.

<sup>d</sup> BSS = Bering Sea state.

<sup>e</sup> C = clear; O = obscured; P = partially obscured.

<sup>f</sup> E = excellent; F = fair; G = good; N = no survey; P = poor.

<sup>g</sup> BLKI = black-legged kittiwake; COMU = common murre; CORA = common raven; PAWA = Pacific walrus; PECO = pelagic cormorant; TLC = time lapse camera.

**Appendix C. Walrus monitoring count variability summary, Round Island, Alaska, 2015.**

Date	Beach	Observer Count		Photo Count		Mean of all Counts	RPM Observer Difference from Photo Count or Mean Count	BMH Observer Difference from Photo Count
		RPM	BMH	RPM	BMH			
4/21/2015	MB	761			737	749	3.26%	
4/22/2015	MB		1500	1343	1401	1415		7.07%
4/27/2015	MB	978			863	921	13.33%	
4/30/2015	MB		535	508		522		5.31%
5/7/2015	MB		404	401		403		0.75%
5/9/2015	MB	779			721	750	8.04%	
5/16/2015	MB	396			360	378	10.00%	
5/19/2015	MB		803	754		779		6.50%
5/26/2015	MB	1251			1455	1353	-14.02%	
5/28/2015	MB		935	711		823		31.50%
5/29/2015	MB		655	564		610		16.13%
5/30/2015	MB		778	826		802		-5.81%
6/2/2015	MB		1163	1015		1089		14.58%
6/16/2015	MB		649	791		720		-17.95%
6/26/2015	MB		195	236		216		-17.37%
7/1/2015	MB		364	417		391		-12.71%
7/29/2015	MB		210	280	275	257		-23.64%
7/31/2015	MB		497	754	737	663		-32.56%
8/6/2015	FB		245		228	237		7.46%

Beach: FB = First Beach; MB = Main Beach.

Observers: RPM = Ryan P. Morrill; BMH = Benjamin M. Hestand.

## Appendix D. Anthropogenic and disturbance events, Round Island, Alaska, 2015.

Date	Start time	End time	Source ID <sup>a</sup>	Stimuli type A/V/O <sup>b</sup>	BMP <sup>c</sup> /regs violation	Closest approach (m)	Altitude (mAGL <sup>d</sup> )	Beach ID <sup>e</sup>	Walrus # on beach	# Walrus disturbed	ND <sup>f</sup>	HR <sup>g</sup>	OR <sup>h</sup>	DS <sup>i</sup>
4/20/15	16:40	16:55	HEL	A/V	No	1,500	135	MB	360	0	360	0	0	0
4/20/15	20:30	20:35	HEL	A/V	No	1,500	150	MB	360	0	360	0	0	0
4/21/15	12:52	15:44	HEL	A/V	No	250	150	FR	5	5	0	0	0	5
4/21/15	12:52	15:44	HEL	A/V	No	1,500	150	MB	1,343	0	1,343	0	0	0
4/24/15	16:15	19:30	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
4/25/15	13:30	20:30	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
4/25/15	13:30	20:30	SKF	A/V	No	10	0	MB	700	20	680	0	0	20
4/26/15	14:30	21:30	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
4/26/15	14:30	21:30	SKF	A/V	No	50	0	MB	900	0	900	0	0	0
4/27/15	10:15	10:22	LGB	A/V	No	1,500	0	MB	890	0	890	0	0	0
4/27/15	11:10	11:45	HEL	A/V	No	1,500	150	MB	890	0	890	0	0	0
4/27/15	12:08	12:15	LGB	A/V	No	1,500	0	MB	890	0	890	0	0	0
4/27/15	14:24	14:25	SMP	A/V	Yes	0	2,500	MB	890	0	890	0	0	0
4/28/15	13:00	23:00	SKF	A/V	No	180	0	FR	5	0	5	0	0	0
4/28/15	13:00	23:00	SKF	A/V	No	50	0	MB	1,200	2	1,198	0	0	2
4/29/15	12:00	15:30	SKF	A/V	No	180	0	FR	10	0	10	0	0	0
4/29/15	12:00	15:30	SKF	A/V	No	50	0	MB	923	0	923	0	0	0
4/29/15	17:00	23:15	SKF	A/V	No	180	0	FR	10	0	10	0	0	0
4/29/15	17:00	23:15	SKF	A/V	No	50	0	MB	923	0	923	0	0	0
4/29/15	18:20	18:40	MNT	A	No	4	0	MB	923	5	918	5	0	0
5/1/15	10:00	22:00	SKF	A/V	No	50	0	MB	475	0	475	0	0	0
5/1/15	10:00	22:00	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
5/1/15	14:59	17:00	SMB	A/V	No	50	0	FR	0	0	0	0	0	0
5/2/15	14:30	17:00	SKF	A/V	No	50	0	MB	420	18	402	0	0	18
5/2/15	14:30	17:00	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
5/2/15	20:45	22:00	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
5/2/15	20:45	22:00	SKF	A/V	No	50	0	MB	402	0	402	0	0	0
5/3/15	13:00	22:00	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
5/3/15	13:00	22:00	SKF	A/V	No	50	0	MB	400	0	400	0	0	0
5/3/15	15:24	15:36	LGB	A/V	No	4,828	0	FB	0	0	0	0	0	0
5/3/15	15:24	15:36	LGB	A/V	No	4,828	0	MB	400	0	400	0	0	0
5/4/15	17:30	18:00	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
5/4/15	17:30	18:00	SKF	A/V	No	50	0	MB	190	0	190	0	0	0
5/4/15	18:00	23:00	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
5/4/15	18:00	23:00	SKF	A/V	No	50	0	MB	190	0	190	0	0	0
5/4/15	23:00	23:30	SKF	A/V	No	180	0	FR	0	0	0	0	0	0
5/4/15	23:00	23:30	SKF	A/V	No	50	0	MB	190	0	190	0	0	0
5/5/15	13:55	15:48	HEL	A/V	No	250	0	FR	0	0	0	0	0	0

Date	Start time	End time	Source ID <sup>a</sup>	Stimuli type A/V/O <sup>b</sup>	BMP <sup>c</sup> /regs violation	Closest approach (m)	Altitude (mAGL <sup>d</sup> )	Beach ID <sup>e</sup>	Walus # on beach	# Walrus disturbed	ND <sup>f</sup>	HR <sup>g</sup>	OR <sup>h</sup>	DS <sup>i</sup>
5/5/15	13:55	15:48	HEL	A/V	No	1,500	0	MB	300	0	300	0	0	0
5/5/15	18:25	18:35	HEL	A/V	No	250	0	FR	0	0	0	0	0	0
5/5/15	18:25	18:35	HEL	A/V	No	1,500	0	MB	300	0	300	0	0	0
5/30/15	8:43	9:30	SMB	A/V	No	500	0	FB	1	0	1	0	0	0
5/30/15	8:43	9:30	SMB	A/V	No	180	0	FR	0	0	0	0	0	0
5/31/15	8:30	9:00	SMB	A/V	No	500	0	FB	0	0	0	0	0	0
5/31/15	8:30	9:00	SMB	A/V	No	180	0	FR	1	1	0	0	0	1
6/6/15	11:00	11:30	SMB	A/V	No	500	0	FB	3	0	3	0	0	0
6/6/15	11:00	11:30	SMB	A/V	No	180	0	FR	0	0	0	0	0	0
6/6/15	20:09	20:11	UNK	UNK	No			MB	144	83	61	11	60	12
6/12/15	19:09	19:25	UNK	UNK	No			FB	55	55	0	0	18	37
6/16/15	14:50	15:35	SMB	A/V	No	500	0	FB	150	0	150	0	0	0
6/16/15	14:50	15:35	SMB	A/V	No	180	0	FR	6	0	6	0	0	0
6/23/15	8:48	9:53	SMB	A/V	No	50	0	BC	1	1	0	0	0	1
6/23/15	8:48	9:53	SMB	A/V	No	500	0	FB	120	0	120	0	0	0
6/23/15	8:48	9:53	SMB	A/V	No	180	0	FR	8	3	5	3	0	0
6/23/15	12:31	12:50	LGB	A/V	Yes	3,200	0	FB	181	0	181	0	0	0
6/24/15	9:35	10:32	SMB	A/V	No	500	0	FB	95	0	95	0	0	0
6/24/15	9:35	10:32	SMB	A/V	No	180	0	FR	7	0	7	0	0	0
6/29/15	11:13	11:52	SMB	A/V	No	500	0	FB	60	0	60	0	0	0
6/29/15	11:13	11:52	SMB	A/V	No	180	0	FR	6	0	6	0	0	0
7/12/15	18:11	18:17	PER	O	No	10	100	FB	43	4	39	1		3
7/14/15	16:15	16:45	SMB	A/V	No	500	0	FB	27	0	27	0	0	0
7/14/15	16:15	16:45	SMB	A/V	No	100	0	FR	0	0	0	0	0	0
7/18/15	10:07	10:09	SMB	A/V	No	500	0	FB	0	0	0	0	0	0
7/18/15	10:07	10:09	SMB	A/V	No	100	0	FR	0	0	0	0	0	0
7/22/15	9:00	9:17	SMB	A/V	No	500	0	FB	45	0	45	0	0	0
7/22/15	9:00	9:17	SMB	A/V	No	180	0	FR	10	2	8	0	0	2
7/22/15	14:35	14:40	PLANE	A	Unk	0	UNK	FB	22	7	12	3	0	10
7/22/15	20:45	20:50	NAT	V	No	5	5	FB	6	6	0	0		6
7/23/15	14:45	15:03	HEL	A/V	No	250	135	FR	0	0	0	0	0	0
7/26/15	22:10	22:16	UNK	UNK	No			FB	77	77	0	10	0	67
7/27/15	15:01	15:15	UNK	UNK	No			FB	66	66	0	10	11	45
7/29/15	8:19	8:43	SMB	A/V	No	500	0	FB	102	0	102	0	0	0
7/29/15	8:19	8:43	SMB	A/V	No	200	0	FR	2	0	2	0	0	0
7/29/15	15:16	15:25	JET	A	No	0	9144	FB	123	123	1	12	42	68
7/29/15	17:02	17:15	UNK	UNK	No			FB	103	93	10	50	10	33
7/30/15	19:54	20:00	UNK	UNK	No			FB	156	150	6	15	98	37
8/2/15	20:19	20:55	UNK	UNK	No			FB	119	119	0	0	0	119

Date	Start time	End time	Source ID <sup>a</sup>	Stimuli type A/V/O <sup>b</sup>	BMP <sup>c</sup> /regs violation	Closest approach (m)	Altitude (mAGL <sup>d</sup> )	Beach ID <sup>e</sup>	Walus # on beach	# Walrus disturbed	ND <sup>f</sup>	HR <sup>g</sup>	OR <sup>h</sup>	DS <sup>i</sup>
8/2/15	21:45	21:50	NAT	A/V	No	0	0	FB	115	115	25	6	25	59
8/4/15	9:40	9:58	SMB	A/V	No	500	0	FB	44	0	44	0	0	0
8/4/15	9:40	9:58	SMB	A/V	No	200	0	FR	0	0	0	0	0	0
8/5/15	15:43	15:50	NAT	UNK	No			FB	128	122	6	5	111	6
8/6/15	18:02	18:03	UNK	UNK	No			FB	143	143	0	30	59	54
8/7/15	14:21	14:23	NAT	A	No	0	50	FB	210	170	40	70	60	40
8/8/15	13:19	13:20	UNK	UNK	No			FB	137	137	0	57	25	55
8/8/15	15:22	15:27	UNK	UNK	No			FB	178	99	79	52	15	32
8/12/15	10:38	10:50	UNK	UNK	No			FB	98	98	0	4	11	84
8/12/15	17:16	17:18	SMP	A	No			FB	83	83	0	10	53	20
8/14/15	8:00	8:30	SMB	A/V	No	180	0	FR	6	0	6	0	0	0

<sup>a</sup> HEL = helicopter; JET = high altitude commercial jet; LGB = large boat; MNT = maintenance work/weed whacker; NAT= natural; PER = Person; PLANE = fixed wing; SKF = small skiff or inflatable; SMB = small boat; SMP = Small Plane; UNK = unknown.

<sup>b</sup> A = auditory; O = olfactory; UNK = unknown; V = visual.

<sup>c</sup> BMP = best management practices.

<sup>d</sup> mAGL = meters above ground level.

<sup>e</sup> BC = Boat Cove; FB = First Beach; FR = Flat Rock; MB = Main Beach.

<sup>f</sup> ND = no disturbance.

<sup>g</sup> HR = head raises.

<sup>h</sup> OR = reorient.

<sup>i</sup> DS = dispersal.



**Appendix E. Steller sea lion daily count data, Round Island, Alaska, 2015.**

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
04/20/15	20:07	21:10	RPM	30+	E	N	B	1.5	A653	Y	100	145	391
04/20/15									A713	Y	85		
04/20/15									A729	Y	85		
04/20/15									A778	Y	100		
04/20/15									X168	Y	85		
04/21/15	10:30	11:57	BMH	1.9	S	N	B	1	T388	Y	100	167	347
04/21/15									A196	Y	100		
04/21/15									A729	Y	100		
04/21/15									A583	Y	100		
04/21/15									A637	Y	100		
04/21/15									A801	Y	100		
04/21/15									X168	Y	100		
04/21/15									A415	Y	100		
04/21/15									A713	Y	100		
04/21/15	18:30	19:30	BMH	5.6	N	N	C	1	T388	Y	100		
04/21/15									X168	Y	100		
04/21/15									A729	Y	100		
04/21/15									A801	Y	75		
04/21/15									T278	Y	100		
04/22/15	11:50	14:00	RPM	0	VAR	N	S	0	A868	Y	100	473	501
04/22/15									T278	Y	100		
04/22/15									A420	Y	100		
04/22/15									A415	Y	100		
04/22/15									A653	Y	100		
04/22/15									A745	Y	100		
04/22/15									A372	Y	100		
04/22/15									A801	Y	100		
04/22/15									A655	Y	100		
04/22/15									A729	Y	100		
04/22/15									T388	Y	100		
04/22/15									A554	Y	100		
04/22/15									A870	Y	100		
04/22/15	16:23	18:51	BMH	10	S	N	S	0.5	T278	Y	100	340	414
04/22/15									A653	Y	100		
04/22/15									A729	Y	100		
04/22/15									A870	Y	100		
04/22/15									A420	Y	100		
04/22/15									A377	Y	100		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
04/22/15									A583	Y	100		
04/22/15									A372	Y	100		
04/22/15									A745	Y	100		
04/22/15									A868	Y	100		
04/23/15	11:25	12:15	RPM	12	S	R	O	2	A809	Y	100	141	344
04/23/15									A230	Y	100		
04/23/15									X442	Y	100		
04/23/15									A291	Y	100		
04/23/15	16:30	19:30	BMH	14.6	SE	R	O	1.5	A291	Y	100	175	425
04/23/15									A870	Y	100		
04/23/15									A196	Y	100		
04/23/15									X442	Y	100		
04/23/15									A230	Y	100		
04/23/15									A415	Y	100		
04/24/15	9:45	10:50	BMH	12.6	SE	N	O	1.5	A745	Y	100	168	312
04/24/15									A737	Y	100		
04/24/15									A801	Y	50		
04/24/15	14:52	16:40	RPM	4.4	N	N	C	1.5	A809	Y	100	426	529
04/24/15									T278	Y	100		
04/24/15									A745	Y	100		
04/24/15									T388	Y	100		
04/24/15									A7	Y	100		
04/24/15									A655	Y	100		
04/24/15									A729	Y	100		
04/24/15									A372	Y	100		
04/24/15									A737	Y	100		
04/24/15									A554	Y	100		
04/24/15									A868	Y	100		
04/24/15									A230	Y	90		
04/24/15									X442	Y	100		
04/25/15	10:01	10:58	BMH	19.3	N	N	B	1	A870	Y	100	252	398
04/25/15									A291	Y	100		
04/25/15									A196	Y	100		
04/25/15									T278	Y	100		
04/26/15	10:26	11:12	BMH	20.4	N	N	C	0.5	A870	Y	100	329	476
04/26/15									A415	Y	100		
04/26/15									A583	Y	100		
04/26/15									A230	Y	100		
04/26/15									A868	Y	100		
04/26/15									A655	Y	100		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
04/27/15	10:20	12:35	RPM	1.6	E	N	C	0.3	A713	Y	100	370	458
04/27/15									A415	Y	100		
04/27/15									T81	Y	100		
04/27/15									X442	Y	100		
04/27/15									A462	Y	100		
04/27/15									A583	Y	100		
04/27/15									A870	Y	100		
04/27/15									T388	Y	100		
04/27/15									A196	Y	100		
04/27/15									A420	Y	100		
04/27/15									A460	Y	100		
04/27/15	17:32	18:14	BMH	15	S	N	C	0.25	A868	Y	100	512	518
04/27/15									A230	Y	100		
04/27/15									A745	Y	100		
04/27/15									A415	Y	100		
04/27/15									A868	Y	100		
04/27/15									A637	Y	100		
04/27/15									A583	Y	100		
04/27/15									A870	Y	100		
04/27/15									A462	Y	100		
04/27/15									A713	Y	100		
04/27/15									A196	Y	100		
04/27/15									A729	Y	100		
04/28/15	9:44	10:23	BMH	0	n/a	F	O	0.25	A778	Y	100	212	244
04/28/15									A460	Y	100		
04/28/15									A462	Y	100		
04/28/15									A653	Y	100		
04/28/15									A801	Y	50		
04/29/15	10:30	11:45	RPM	9.2	SE	N	S	0.5	A868	Y	100	322	409
04/29/15									A230	Y	100		
04/29/15									A778	Y	100		
04/29/15									A653	Y	100		
04/29/15									A196	Y	100		
04/29/15									A420	Y	100		
04/29/15									A460	Y	100		
04/29/15	21:32	22:40	BMH	14.3	S	N	S	0.5	A230	Y	100	394	435
04/29/15									A583	Y	100		
04/29/15									E146	Y	100		
04/29/15									A809	Y	100		
04/29/15									A196	Y	100		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
04/29/15									A554	Y	100		
04/29/15									A868	Y	100		
04/29/15									T278	Y	100		
04/30/15	10:29	12:04	BMH	7.6	S	N	C	1	A4??	Y	50	253	319
04/30/15									A713	Y	100		
04/30/15									T278	Y	100		
04/30/15									A583	Y	100		
04/30/15									A230	Y	100		
04/30/15									A462	Y	100		
04/30/15									A420	Y	100		
04/30/15	17:45	19:10	RPM	17.9	N	N	O	0.5	A868	Y	100	324	415
04/30/15									A713	Y	100		
04/30/15									X168	Y	100		
04/30/15									A868	Y	100		
04/30/15									A230	Y	100		
04/30/15									T278	Y	100		
04/30/15									A462	Y	100		
04/30/15									A801	Y	100		
04/30/15									A420	Y	100		
04/30/15									A230	Y	100		
04/30/15									E146	Y	100		
05/01/15	9:50	10:40	BMH	15.4	S	N	B	1	A870	Y	100	367	434
05/01/15									A7	Y	100		
05/01/15									A778	Y	100		
05/01/15									A420	Y	100		
05/01/15									A196	Y	100		
05/01/15									E146	Y	100		
05/01/15									A801	Y	100		
05/01/15									A809	Y	100		
05/01/15	18:10	19:15	BMH	12.4	S	N	C	0.5	A420	Y	100	396	427
05/01/15									X425	Y	100		
05/01/15									A583	Y	100		
05/01/15									E146	Y	100		
05/01/15									A729	Y	100		
05/01/15									A554	Y	100		
05/01/15									A196	Y	100		
05/02/15	10:55	12:20	RPM	6	NE	N	O	0	T278	Y	100	488	565
05/02/15									A713	Y	100		
05/02/15									A778	Y	100		
05/02/15									A745	Y	100		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
05/02/15									X442	Y	100		
05/02/15									A870	Y	100		
05/02/15									A230	Y	100		
05/02/15									E146	Y	100		
05/02/15									A462	Y	100		
05/02/15									A196	Y	100		
05/02/15	19:41	20:18	BMH	0	n/a	R	O	0	A230	Y	100	331	355
05/02/15									A745	Y	100		
05/02/15									A801	Y	100		
05/02/15									T278	Y	100		
05/02/15									A778	Y	100		
05/02/15									A196	Y	100		
05/03/15	11:16	13:45	BMH	0	n/a	N	O	0.25	A637	Y	100	358	380
05/03/15									A809	Y	100		
05/03/15									A460	Y	100		
05/03/15									X442	Y	100		
05/03/15									A729	Y	100		
05/04/15	9:55	11:25	RPM	17	SE	N	B	0.5	A230	Y	100	456	591
05/04/15									A870	Y	100		
05/04/15									T278	Y	100		
05/04/15									X442	Y	100		
05/04/15									A801	Y	100		
05/04/15									A415	Y	100		
05/04/15									A291	Y	100		
05/04/15									A868	Y	100		
05/04/15									E146	Y	100		
05/04/15									T388	Y	100		
05/04/15									A196	Y	100		
05/04/15									A291	Y	100		
05/04/15									A655	Y	100		
05/04/15									A729	Y	30		
05/04/15									A	Y	25		
05/05/15	19:29	20:30	BMH	9.1	E	N	B	1.5	A809	Y	100	247	365
05/05/15									A745	Y	100		
05/05/15									A729	Y	100		
05/05/15									A291	Y	100		
05/05/15									X168	Y	100		
05/06/15	10:00	12:00	RPM	23.6	N	N	O	0.5	A809	Y	100	454	582
05/06/15									A653	Y	100		
05/06/15									A778	Y	75		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
05/06/15									A868	Y	100		
05/06/15									A637	Y	100		
05/06/15									A870	Y	100		
05/06/15									A146	Y	100		
05/06/15									A460	Y	100		
05/06/15	15:35	18:35	BMH	25.9	N	R	O	1	A778	Y	100	512	602
05/06/15									A637	Y	100		
05/06/15									A19	Y	100		
05/06/15									A415	Y	100		
05/06/15									A809	Y	100		
05/06/15									E146	Y	100		
05/06/15									A868	Y	100		
05/06/15									A729	Y	100		
05/06/15									A745	Y	100		
05/07/15	8:25	9:30	BMH	10.2	N	RF	O	1	A230	Y	100	272	374
05/07/15									A809	Y	100		
05/07/15									A729	Y	100		
05/07/15									A713	Y	100		
05/07/15									A420	Y	100		
05/07/15									A146	Y	100		
05/07/15									E146	Y	100		
05/07/15									A653	Y	100		
05/07/15	14:55	17:20	RPM	3.8	N	R	O	0.25	T278	Y	100	382	460
05/07/15									A713	Y	100		
05/07/15									A801	Y	100		
05/07/15									A7	Y	100		
05/07/15									A230	Y	100		
05/07/15									E146	Y	100		
05/07/15									A291	Y	100		
05/07/15									A420	Y	100		
05/08/15	11:05	12:32	RPM	5.2	W	N	O	0	A729	Y	100	490	602
05/08/15									A745	Y	100		
05/08/15									A809	Y	100		
05/08/15									A19	Y	100		
05/08/15									A655	Y	100		
05/08/15									A737	N	-		
05/08/15									E146	Y	100		
05/08/15									A420	Y	100		
05/08/15									A196	Y	100		
05/08/15									A462	Y	75		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>		
05/08/15	16:45	19:45	BMH	5.9	S	N	C	0.5	A420	Y	100	536	643		
05/08/15									A870	Y	100				
05/08/15									A778	Y	100				
05/08/15									A19	Y	100				
05/08/15									A713	Y	100				
05/08/15									A809	Y	100				
05/08/15									X168	Y	100				
05/08/15									A801	Y	100				
05/08/15									T388	Y	100				
05/08/15									A745	Y	100				
05/08/15									A655	Y	100				
05/08/15									A372	Y	100				
05/08/15									A462	Y	100				
05/08/15									A737	Y	100				
05/08/15									A868	Y	100				
05/08/15									A196	Y	100				
05/08/15									A460	Y	100				
05/08/15									A637	Y	100				
05/09/15	12:20	15:00	RPM	2.6	SW	N	C	0	A653	Y	100	571	589		
05/09/15									A745	Y	100				
05/09/15									A809	Y	100				
05/09/15									T388	Y	100				
05/09/15									T278	Y	100				
05/09/15									A655	Y	100				
05/09/15									T404	Y	100				
05/09/15									A729	Y	75				
05/09/15									A230	Y	100				
05/09/15									A291	Y	100				
05/09/15									A868	Y	100				
05/09/15									A146	Y	100				
05/09/15									A554	Y	100				
05/09/15	19:05	20:30	BMH	calm		N	C	0.5	A230	Y	100			439	488
05/09/15									A653	Y	100				
05/09/15									A377	Y	100				
05/09/15									T278	Y	100				
05/09/15									T404	Y	100				
05/09/15									A868	Y	100				
05/09/15									E146	Y	100				
05/09/15									A554	Y	100				
05/09/15									A655	Y	100				

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E, V2,V3,V4,V5) <sup>d</sup>
05/09/15									A729	Y	100		
05/09/15									A291	Y	100		
05/10/15	11:00	13:45	BMH	9.7	E	N	C	2	A377	Y	100	212	403
05/10/15									A870	Y	100		
05/10/15									A230	Y	100		
05/10/15	18:22	19:22	RPM	5.6	SW	N	C	2	A637	Y	100	423	446
05/10/15									T404	Y	100		
05/10/15									A778	Y	80		
05/10/15									A809	Y	100		
05/10/15									A430	Y	100		
05/11/15	8:45	9:45	BMH	8	E	N	B	1.5	A655	Y	100	214	358
05/11/15									A801	Y	100		
05/11/15									A713	Y	100		
05/11/15									A420	Y	100		
05/11/15									A737	Y	100		
05/11/15									A291	Y	100		
05/11/15	14:43	16:45	RPM	30.2	W	R	O	0.5	A713	Y	100	538	553
05/11/15									A653	Y	100		
05/11/15									A778	Y	100		
05/11/15									A729	Y	100		
05/11/15									A809	Y	100		
05/11/15									T404	Y	100		
05/11/15									T278	Y	100		
05/11/15									A655	Y	100		
05/11/15									A7	Y	100		
05/11/15									A745	Y	100		
05/11/15									A372	Y	100		
05/11/15									E146	Y	100		
05/11/15									A420	Y	100		
05/11/15									T388	Y	100		
05/11/15									A801	Y	100		
05/11/15									A146	Y	100		
05/11/15									A291	Y	100		
05/11/15									A737	Y	80		
05/12/15	10:10	12:00	RPM	4.1	E	N	C	1	T278	Y	100	249	352
05/12/15									A745	Y	100		
05/12/15									A801	Y	100		
05/12/15									A737	Y	100		
05/12/15									A7	Y	100		
05/12/15									A372	Y	100		



Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
05/12/15									A778	Y	100		
05/12/15									E146	Y	100		
05/12/15									A430	Y	100		
05/12/15									A729	Y	100		
05/12/15									A146	Y	100		
05/12/15									A291	Y	100		
05/12/15									A637	Y	100		
05/12/15	14:42	17:54	BMH	13	SE	N	F	0.5	A801	Y	100	386	385
05/12/15									A372	Y	100		
05/12/15									A778	Y	100		
05/12/15									A430	Y	100		
05/12/15									A870	Y	100		
05/12/15									A146	Y	100		
05/12/15									A868	Y	100		
05/12/15									A729	Y	100		
05/12/15									E146	Y	100		
05/13/15	8:53	9:30	BMH	17	SE	R	O	2.5	A230	N	100	102	229
05/13/15									A462	N	100		
05/13/15	14:44	16:45	RPM	9.9	S	N	O	3	A712	Y	100	177	337
05/13/15									A554	Y	100		
05/13/15									A653	Y	100		
05/13/15									A809	Y	100		
05/13/15									A778	Y	80		
05/13/15									A868	Y	100		
05/13/15									A870	Y	100		
05/14/15	14:50	17:50	BMH	6.1	E	N	O	1	A462	Y	100	296	441
05/14/15									A420	Y	100		
05/14/15									A712	Y	100		
05/14/15									T404	Y	100		
05/14/15									A554	Y	100		
05/14/15									E146	Y	100		
05/14/15									A745	Y	100		
05/14/15									A146	Y	100		
05/14/15									A291	Y	100		
05/14/15									A653	Y	100		
05/15/15	9:58	12:32	RPM	15	E	R	O	1.5	A712	Y	100	221	474
05/15/15									T404	Y	100		
05/15/15									A778	Y	100		
05/15/15									A801	Y	100		
05/15/15									A809	Y	100		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
05/15/15									A737	Y	100		
05/15/15									A729	Y	100		
05/15/15									A868	Y	100		
05/15/15									A870	Y	100		
05/15/15									A230	Y	100		
05/15/15									A460	Y	100		
05/15/15	17:10	18:20	BMH			N	O	1	A870	Y	100	297	466
05/15/15									A230	Y	100		
05/15/15									A712	Y	100		
05/15/15									A737	Y	100		
05/15/15									A745	Y	100		
05/15/15									A778	Y	100		
05/15/15									A868	Y	100		
05/15/15									A653	Y	100		
05/15/15									E146	Y	100		
05/16/15	11:00	13:45	BMH	35.1	SE	RF	O	3	A462	Y	100	159	308
05/16/15									A230	Y	100		
05/16/15									A870	Y	100		
05/16/15									A291	Y	100		
05/16/15									A809	Y	100		
05/16/15									T404	Y	100		
05/16/15									A554	Y	100		
05/17/15	11:22	14:11	RPM	20.3	SE	N	O	2	A4__	Y	50	77	298
05/17/15									A809	Y	100		
05/17/15									A712	Y	100		
05/17/15									T388	Y	100		
05/17/15									A637	Y	100		
05/17/15									A778	Y	100		
05/17/15									A291	Y	100		
05/17/15									A870	Y	100		
05/17/15									A868	Y	100		
05/17/15									A196	Y	100		
05/18/15	11:53	15:00	BMH	10.2	SE	N	B	1	A230	Y	100	371	427
05/18/15									A801	Y	100		
05/18/15									A745	Y	100		
05/18/15									T404	Y	100		
05/18/15									A554	Y	100		
05/18/15									E146	Y	100		
05/18/15									A729	N	100		
05/18/15									A712	Y	100		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
05/18/15									A146	Y	100		
05/18/15	20:30	21:25	RPM	trace	-	F	O	0.75	A712	Y	100	477	506
05/18/15									A801	Y	100		
05/18/15									A745	Y	75		
05/18/15									A146	Y	100		
05/18/15									A230	Y	100		
05/18/15									A729	Y	100		
05/18/15									T388	Y	100		
05/19/15	13:15	15:00	RPM	13.4	SE	N	O	1.5	A778	Y	100	276	382
05/19/15									E146	Y	100		
05/19/15									A737	Y	100		
05/19/15									A420	Y	100		
05/19/15									A230	Y	100		
05/19/15									A291	Y	100		
05/19/15									A809	Y	100		
05/19/15									A729	Y	100		
05/19/15	18:30	19:30	BMH	24.3	E	R	O	3	A778	Y	100	133	234
05/19/15									A737	Y	100		
05/19/15									A420	Y	100		
05/19/15									A870	Y	100		
05/19/15									E146	Y	100		
05/20/15	11:37	12:37	BMH	31.6	SE	RF	O	2.5	none			62	73
05/20/15	19:40	20:20	RPM	7.2	E	N	O	1	A778	Y	100	132	166
05/21/15	9:55	12:25	RPM	7	S	N	O	0.7	A230	Y	100	325	401
05/21/15									X543	Y	100		
05/21/15									A420	Y	100		
05/21/15									T388	Y	100		
05/21/15									A801	Y	100		
05/21/15									A809	Y	100		
05/21/15									T404	Y	100		
05/21/15									A868	Y	100		
05/21/15									A729	Y	100		
05/21/15									A291	Y	100		
05/21/15									A737	Y	75		
05/21/15	16:45	18:15	BMH	0	n/a	N	O	0.5	E146	Y	100	338	360
05/21/15									A868	N	100		
05/21/15									A291	N	100		
05/22/15	13:35	16:35	BMH	14.5	SE	N	O	1.5	A230	Y	100	260	279
05/22/15									A737	Y	100		
05/22/15									A146	Y	100		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
05/22/15									A420	Y	100		
05/22/15									A870	Y	100		
05/22/15									A196	Y	100		
05/22/15									X543	Y	100		
05/22/15									T388	Y	100		
05/23/15	14:10	16:10	RPM	20.2	S	N	O	3	A809	Y	100	57	129
05/24/15	13:45	16:50	BMH	15	SE	N	S	1	T388	Y	100	303	327
05/24/15									A637	Y	100		
05/24/15									A420	Y	100		
05/24/15									A870	Y	100		
05/24/15									A230	Y	100		
05/24/15									A460	Y	100		
05/24/15									A55-	Y	50		
05/24/15									A146	Y	100		
05/24/15									A778	Y	100		
05/24/15									A737	N	100		
05/25/15	9:54	11:05	BMH	6.1	E	N	O	1	A230	Y	100	263	254
05/25/15									A870	Y	100		
05/25/15									A460	Y	100		
05/25/15									A637	Y	100		
05/25/15									A14_	Y	50		
05/25/15									A5__	Y	50		
05/25/15	16:15	18:45	RPM	15.1	SE	N	C	1	A420	Y	100	319	332
05/25/15									A146	Y	100		
05/25/15									A868	Y	100		
05/25/15									A230	Y	100		
05/25/15									A573	Y	100		
05/25/15									T388	Y	100		
05/25/15									A870	Y	100		
05/25/15									A809	Y	100		
05/25/15									A460	Y	100		
05/26/15	9:45	10:45	RPM	12.4	E	N	C	1.2	A146	Y	75	189	242
05/26/15									T388	Y	100		
05/26/15									A737	Y	25		
05/26/15									A870	Y	100		
05/26/15	13:45	16:45	BMH	10.3	E	N	S	1.5	T388	Y	100	176	203
05/26/15									A809	Y	100		
05/26/15									A146	Y	100		
05/26/15									A554	Y	100		
05/26/15									A8__	Y	50		

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
05/27/15	8:15	9:10	BMH	24	E	RF	O	1.5	A637	Y	100	64	77
05/27/15	13:55	15:05	RPM	11.7	SE	R	O	2	A809	Y	100	102	143
05/27/15									A637	Y	100		
05/28/15	10:15	11:15	RPM	4.2	SE	N	O	1	A868	Y	100	228	291
05/28/15									A801	Y	100		
05/28/15									A573	Y	100		
05/28/15									A870	Y	100		
05/28/15	14:00	16:45	BMH	7.2	E	N	S	1	A870	Y	100	254	278
05/28/15									A573	Y	100		
05/28/15									A868	Y	100		
05/28/15									A801	Y	100		
05/29/15	14:45	15:20	RPM	24.9	SE	N	B	1	A801	Y	100	162	192
05/29/15									A870	Y	100		
05/29/15	9:15	10:15	BMH	6.8	E	N	B	1.5	A737	Y	100	145	182
05/29/15									A870	Y	100		
05/29/15									A8__	Y	50		
05/30/15	13:20	16:20	DCO	15	SE	N	F	1	A573	Y	100	119	
05/31/15	10:20	12:45	DCO	0	n/a	N	B	0.5	X543	Y	100	136	
05/31/15									A729	Y	100		
05/31/15									A801	Y	100		
06/01/15	9:52	10:52	BMH	0	n/a	N	C	0.25	A870	Y	100	147	
06/01/15									A729	Y	100		
06/01/15									A801	Y	100		
06/02/15	10:15	no data	DCO	2	SE	R	O	0.5	A870	Y	100	111	
06/03/15	19:00	20:00	BMH	20.7	W	N	B	0	A809	Y	100	175	
06/03/15									A870	Y	100		
06/03/15									X543	Y	100		
06/03/15									A737	Y	100		
06/04/15	15:10	16:10	DCO	0	n/a	N	S	1	none			93	
06/05/15	12:25	13:25	BMH	8.7	S	N	C	0.25	X543	Y	100	104	
06/06/15	12:45	no data	DCO	12	E	N	O	1.5	A870	N	100	50	
06/07/15	15:05	15:40	DCO	17	S	N	S	1.5	A870	Y	100	87	
06/07/15									A737	Y	100		
06/08/15	14:50	15:50	DCO	16	E	N	O	2	none			37	
06/09/15 <sup>e</sup>													
06/10/15	7:00	8:00	DCO	no data	S	N	B	1	none			60	
06/11/15	13:00	14:00	DCO	calm	n/a	N	B	1	none			51	

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
06/12/15	15:25	16:25	DCO	9	SE	N	O	0.75	none			46	
06/13/15	9:40	10:40	DCO	0	n/a	N	F	1	none			47	
06/14/15	10:25	11:25	DCO	0	n/a	N	C	0.5	none			62	
06/15/15	10:15	11:15	DCO	6	NW	N	C	0.5	none			53	
06/16/15	10:16	11:16	DCO	0	n/a	N	C	0.5	none			84	
06/17/15	11:51	13:05	BMH	12.6	N	N	C	0.25	A830	Y	100	106	
06/18/15	12:27	13:37	BMH	3.2	NW	N	C	0.25	none			99	
06/19/15	12:48	13:55	DEJ	2.1	NW	N	C	0.5	A73-	Y	50	72	
06/20/15	18:30	19:30	BMH	0	n/a	N	F	0.25	A885	Y	100	99	
06/21/15	15:00	16:00	DEJ	9	SE	N	B	0.5	A729	Y	100	100	
06/22/15	15:55	16:55	BMH	3.3	S	N	F	0.75	A737	Y	100	78	
06/23/15	15:30	16:30	DEJ	7.1	S	N	C	0.2	none			90	
06/24/15	18:55	19:55	BMH	0	n/a	N	B	0.5	A868	Y	100	104	
06/24/15									A729	Y	100		
06/24/15									X543	Y	100		
06/25/15	15:45	16:45	DEJ	2.2	SE	N	C	0.25	A737	Y	100	116	
06/25/15									X543	Y	100		
06/25/15									A868	Y	100		
06/26/15	18:05	19:05	BMH	8	S	N	S	0.25	X543	Y	100	76	
06/26/15									A778	Y	100		
06/27/15	15:50	16:45	DEJ	17.1	S	R	S	0.25	A737	Y	100	74	
06/28/15	11:26	12:26	BMH	13.3	NE	N	B	1.5	X543	Y	100	47	
06/28/15									A737	Y	100		
06/29/15	16:05	17:05	DEJ	4.6	no data	N	F	0.25	X543	Y	100	98	
06/30/15	16:35	17:35	BMH	4.8	S	N	B	0	A778	Y	100	112	
06/30/15									A737	Y	100		
07/01/15	13:05	14:15	DEJ	3.4	no data	N	O	0.25	A778	Y	100	99	
07/02/15	19:45	20:45	BMH	5.4	N	N	C	0	A868	Y	100	118	
07/02/15									A737	Y	100		
07/03/15	12:00	13:00	DEJ	6.9	N	N	C	0.5	A868	Y	100	73	
07/03/15									A778	Y	100		
07/03/15									X543	Y	100		
07/03/15									A737	Y	100		
07/04/15	11:57	12:57	BMH	20.5	E	RF	O	2	X543	Y	100	42	
07/05/15	12:40	13:40	DEJ	18	E	N	O	1.75	T388	Y	100	58	
07/05/15									A737	Y	100		
07/06/15	19:23	20:23	BMH	22.8	S	R	O	1	none			77	
07/07/15	15:00	16:00	DEJ	13	S	N	F	0.5	A737	Y	100	117	
07/07/15									A801	Y	100		
07/08/15	17:20	18:20	BMH	10	S	N	B	0.5	none			102	

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
07/09/15	15:45	16:45	DEJ	12.7	SE	N	O	0.25	T388	Y	100	135	
07/10/15	16:20	17:20	BMH	9.3	S	N	C	0	T388	Y	100	113	
07/11/15	16:55	17:55	DEJ	13	S	N	F	0.1	T388	Y	100	154	
07/11/15									A868	Y	100		
07/12/15	18:15	19:50	DEJ	5.5	SE	R	O	0.75	T388	Y	100	102	
07/13/15	18:05	19:10	DEJ	7.2	S	N	B	0.2	T388	Y	100	137	
07/13/15									A801	Y	100		
07/13/15									A737	Y	100		
07/14/15	10:15	11:15	BMH	21.6	NE	N	S	1	A801	Y	100	50	
07/15/15	12:36	13:17	SKS/ KLL	7.9	NE	N	B	1.5	none			68	
07/16/15	10:41	11:08	SKS/ KLL	14.9	ENE	R	O	2.5	none			36	
07/17/15	13:45	14:36	SKS/ KLL	30.9	SE	R	B	2	T388	Y	100	113	
07/18/15	14:46	15:43	SKS/ KLL	8.4	W	N	O	0.5	T388	Y	100	118	
07/18/15									A737	Y	100		
07/18/15									A801	Y	100		
07/19/15	14:10	14:50	SKS/ KLL	2	SE	N	O	0.5	none			136	
07/20/15	12:23	13:30	SKS/ KLL	6.4	SE	N	O	0.25	T388	Y	100	111	
07/21/15	13:13	13:55	SKS/ KLL	22.2	SE	R	O	0.75	none			93	
07/22/15	15:23	16:04	SKS/ KLL	24.8	W	N	O	0.75	A801	Y	100	117	
07/23/15	17:45	18:52	DEJ	5	W	N	B	1	A801	Y	100	139	
07/23/15									T388	Y	100		
07/24/15	17:10	18:25	DEJ	10	S	N	F	0.5	A801	Y	100	145	
07/24/15									T388	Y	75		
07/24/15									A729	Y	100		
07/24/15									A737	Y	100		
07/25/15	17:09	18:09	BMH	24.7	S	N	B	1	T388	Y	100	105	
07/26/15	16:30	17:30	DEJ	4	N	N	B	1	T388	Y	100	159	
07/27/15	16:50	18:00	DEJ	9	NW	N	C	0.25	T388	Y	100	180	
07/27/15									A801	Y	100		
07/27/15									A729	Y	100		
07/27/15									A86-	Y	75		
07/28/15	19:17	20:17	BMH	20	SW	N	S	0.5	A801	Y	100	166	

Date	Start time	End time	Obs. <sup>a</sup>	Wind km/hr	Wind direction	Precip <sup>b</sup>	Cloud cover <sup>c</sup>	Swell (m)	Brand (preliminary data)	Photo	% Sure	Totals traditional (V1,V2,V3,V4) <sup>d</sup>	Totals expanded (V1W,V1L,V1E,V2,V3,V4,V5) <sup>d</sup>
07/28/15									A737	Y	100		
07/29/15	15:42	16:42	BMH	26.2	S	N	F	0.25	A801	Y	100	135	
07/29/15									A729	Y	100		
07/29/15									A737	Y	100		
07/30/15	15:32	16:42	BMH	3	S	N	O	0.25	A868	Y	100	146	
07/30/15									A801	Y	100		
07/31/15	11:02	12:04	RPM	3.3	SE	N	F	0	T388	Y	100	167	
07/31/15									A868	Y	100		
07/31/15									A801	Y	100		
08/01/15	10:46	11:46	BMH	13.4	VAR	N	C	0	A729	Y	100	134	
08/01/15									T388	Y	100		
08/02/15	13:45	14:48	RPM	1.2	VAR	N	C	0	T388	Y	100	153	
08/02/15									A737	Y	100		
08/03/15	14:48	16:20	BMH	8.6	N	N	F	0.25	A729	Y	100	142	
08/03/15									T388	Y	100		
08/04/15	15:15	16:15	RPM	1	SE	N	F	0.5	none			145	
08/05/15	14:46	15:46	BMH	0	n/a	N	C	0	A729	Y	100	178	
08/05/15									A868	Y	100		
08/05/15									A737	Y	100		
08/06/15	17:50	18:50	RPM	19.1	SW	N	C	1	none			155	
08/07/15													
08/08/15	16:00	17:00	RPM	11.2	SE	N	O	1	A729	Y	100	236	
08/09/15	16:22	17:28	BMH	10	N	N	S	1	A7--	N	50	88	
08/10/15	14:20	15:25	RPM	5.2	W	N	F	0.5	A72-	Y	75	151	
08/11/15	17:34	18:34	BMH	12	NW	N	S	0	A801	Y	100	147	
08/11/15									A729	Y	100		
08/12/15	14:50	15:20	RPM	3.3	SW	N	O	0.5	A729	Y	100	167	
08/12/15									A801	Y	100		

<sup>a</sup> Observers: BMH = Benjamin M. Hestand; DEJ = Dianna E. Johnson; DCO = Diane Calamar Okonek; SKS = Stephanie K. Sell; KLL = Kelsey L. Loper; RPM = Ryan P. Morrill.

<sup>b</sup> Precipitation: F = fog; N = none; R = rain; S = snow.

<sup>c</sup> B = broken; C = clear; F = fog; O = overcast; S = scattered.

<sup>d</sup> Viewpoints = V1, V2, V3, V4, V5, V1E, V1L, and V1W.

<sup>e</sup> 06/09/15 = no count, troubleshooting MB camera.



**Appendix F. Black-legged kittiwake productivity data, Observation Point index plots, Round Island, Alaska, 2015.**

2015 BLKI Productivity Plot 2 - Observation Point	Date																									
	Nest#	5/31	6/3	6/6	6/12	6/17	6/20	6/23	6/26	6/29	7/2	7/5	7/8	7/11	7/14	7/17	7/20	7/23	7/26	7/29	8/1	8/4	8/7	8/10	8/13	
	start time	14:30	16:45	15:00	16:30	15:52	11:10	12:30	17:30	17:45	13:45	19:57	11:00	11:30	10:00	10:07	15:17	11:09	14:25	12:25	17:05	14:48	9:51	9:50	10:00	
	end time	15:40	17:45	16:10	17:05	12:15	13:30	18:05	18:15	14:15	20:14	11:30	11:45	10:10	10:25	15:30	11:17	14:30	12:28	17:10	14:51	9:54	9:51	10:10		
1	E2	E2	E2	IP	E2	E2	E2	C+	C	C	C	C	C	C	C	C	C	C	C	F	B	N	N	N	N	
2	E2	E2	E2	E2	E2	E2	E+	C+	C	C	B	B	N	N	N	N	N	N	N	N	N	N	N	N	N	
3	E	IP	IP	E2	E2	IP	E2	C+	C	C	C	C	C	C	C	C	C	C	C	C	F	N	N	N	N	
4	E	E2	IP	IP	E2	E2	E2	IP	CE	C	C	C	CE	CE	E	B	B	B	B	B	B	B	B	B	C*	
5	E2	IP	E2	E2	E2	IP	E2	C+	C	C	C	C	C	B	B	B	B	B	B	B	B	B	B	B	B	
6	E	E2	IP	IP	E2	E2	E2	E+	C2	C	C	C	B	N	N	B	B	B	B	B	B	B	B	B	B	
7	E	E2	E2	E2	E2	E2	C+	C2	C	C	C	C	N	B	B	B	B	B	B	B	B	B	B	B	B	
8	E	E2	E2	IP	E2	E2	E2	C+	C	C	C	N	B	B	B	B	B	B	B	B	B	B	B	B	B	
9	E	IP	IP	E2	E2	E2	E2	C2	C	C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
10		E2	E2	IP	N	N	N	B	N	N	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
11		E	E	IP	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12		E	E+	E2	IP	E2	E2	E2	C	C	C	C	N	N	B	B	B	B	B	B	B	B	B	B	B	
13		E	E+	E2	E2	E2	E2	C2	C	C	C	C	N	N	B	B	B	B	B	B	B	B	B	B	B	
14		E+	E2	E2	E2	E2	E+	CE	C	C	C	C	N	B	B	B	B	B	B	B	B	B	B	B	B	
15		E	E2	E+	E2	E+	IP	E+	IP	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
16		E2	E+	B	B	B	B	B	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
17		E2	IP	IP	E2	E2	E2	IP	C	C	C	C	N	B	B	B	B	B	B	B	B	B	B	B	B	
18		E	E	E	B	N	N	B	B	N	B	B	N	B	B	B	B	B	B	B	B	B	B	B	B	
19		E2	E2	IP	N	N	N	IP	C	C	C	C	C	C	B	B	B	B	B	B	B	B	B	B	B	
20		E2	E2	E2	IP	IP	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	F	B	B	C*	
21		E+	E+	E2	E+	E2	CE	C+	C	C	C	C	C	C	C	C	C	C	C	C	C	F	B	B	B	
22		E+	IP	IP	E2	E2	E2	C+	C	C	C	C	C	C	C	C	B	B	B	B	B	B	B	B	B	
23		E	IP	IP	IP	IP	C+	C+	C	C	C	C	C	C	B	B	B	B	B	B	B	B	B	B	B	
24		E	IP	IP	IP	IP	E2	C+	C	C	C	C	C	BP	BP	C	C	C	C	C	C	C	C	C	F	
25		E	E	IP	IP	IP	E2	C+	C	C	C	N	N	N	B	B	B	B	B	B	B	B	B	B	B	

2015 BLKI Productivity Plot 3 - Observation Point	Date																									
	Nest#	5/30	6/2	6/6	6/12	6/17	6/20	6/21	6/23	6/26	6/29	7/2	7/5	7/8	7/11	7/14	7/17	7/20	7/23	7/26	7/29	8/1	8/4	8/7	8/10	8/13
	start time	15:45	17:49	15:00	16:30	15:52	12:40	11:10	11:25	18:10	18:15	13:15	20:20	11:30	11:45	10:10	10:26	15:31	11:17	14:30	12:18	17:12	14:52	9:40	9:50	10:00
	end time	16:15	18:30	16:10	17:05	17:00	13:40	12:10	12:30	19:10	18:45	13:45	20:50	11:55	12:10	10:30	10:38	15:39	11:24	14:35	12:22	17:19	14:54	9:45	9:51	10:10
1	E	IP	IP	IP	E2	IP	E2	E2	C+	C2	C	C	C	C	C	B	N	B	B	B	B	B	B	B	B	B
2	E2	IP	E+	IP	E2	IP	E+	E2	C+	C	C	C	C	C	C	C	C	C	C	C	C	C	F	N	N	N
3	E	IP	E+	E+	E	IP	E	E	IP	C	C	C	C	C	N	B	B	N	B	B	B	B	B	B	B	B
4	E	E2	E2	E+	E2	IP	E2	E2	E2	C	E	C	C	C	C	C	C	C	B?	B?	N	N	N	N	N	N
5	E2	E2	E+	IP	E2	IP	E2	E2	C2	C	C	C	C	C	C	C	B?	B	B	B	B	B	B	B	B	B
6	E2	E2	IP	E+	E+	E+	E+	IP	C+	C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
7	E	E2	E2	E2	E2	E2	E2	E2	IP	C	C	C	N	N	B	B	B	B	B	B	B	B	B	B	B	B
8	E	E2	E2	IP	E2	IP	E2	E2	E2	C	B	B	N	B	B	N	N	N	N	N	N	N	N	N	N	N
9	E	E2	E2	IP	E2	IP	E2	IP	C+	C	C	C	B	N	N	N	N	N	N	N	N	N	N	N	N	N
10	E+	E2	E2	E2	E+	IP	IP	E+	E+	C	C	C	C	C	N	B	B	B	B	B	B	B	B	B	B	B
11	E	E	E2	IP	E+	E+	IP	E2	E2	C	C	IP	C	N	B	B	B	B	B	B	B	B	B	B	B	B
12	E2	E2	IP	E2	IP	E+	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
13	E2	E2	IP	IP	E+	E2	IP	E2	C2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	F
14		E	E	IP	E	IP	E	E	IP	C+	C	IP	C	C	C	C	C	B?	B	B	B	B	B	B	B	B
15		E	E2	IP	E2	E+	E2	E2	IP	E2	E	E	E	B	B	B	B	B	B	B	B	B	B	B	B	B
16		E2	E2	E2	E2	IP	E2	C+	C+	C	C	C	C	C	C	C	C	C	C	C	C	C	N	N	N	N
17		E2	E+	IP	IP	IP	IP	IP	C+	C	C	IP	C	C	C	C	C	C	C	C	C	B	B	B	B	B
18		E	E	E	E	IP	E	E	E	C	C	C	B	N	B	B	B	B	B	B	B	B	B	B	B	B
19		E+	E+	E2	E+	E2	C+	C2	C2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	F
20		E2	E2	IP	E+	IP	IP	E2	E	IP	E	B	B	B	B	N	B	B	B	B	B	B	B	B	B	B
21		E	E2	IP	E+	IP	IP	IP	IP	C	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
22		E	E	IP	E	E	IP	E	C	C	C	C	C	N	N	N	N	N	B	B	B	B	B	B	B	B
23		E	E2	IP	E2	E2	E2	E2	E+	E2	C	IP	CE	IP	Cdead	Cdead	B	B	B	B	B	B	B	B	B	B
24		E2	E+	IP	E2	E+	IP	E+	C2	C	C	C	C	C	C	C	C	C	C	C	B	B	B	B	B	B
25		E	E2	IP	E+	IP	E+	E2	C2	C2	C	C	C	C	N	N	B	B	B	B	B	B	B	B	B	B

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 Edead (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. Common murre productivity data, Observation Point index plots, Round Island, Alaska, 2015.

2015 COMU Productivity Plot 1 - Observatic	Date																		
	Nest#	6/21	6/22	6/25	6/28	7/1	7/6	7/10	7/13	7/17	7/19	7/23	7/25	7/29	7/31	8/3	8/6	8/9	8/12
	start time	19:00	12:15	11:45	21:25	18:40	20:40	19:00		11:04	10:49	11:28	15:25	13:20	13:25	13:39	19:15	9:45	14:55
end time	19:15	12:45	12:45	21:30	18:50	20:50	19:15		11:16	11:10	11:40	15:55	14:00	13:45	13:49	19:45	10:00	15:15	
1	E	E	E	E	E	IP	E	E	E	E	IP/BP	IP	IP	C	C	C	C	C	
2	E	E	E	N	N	B	B	B	B	B	B	B	B	B	N	N	N	N	
3	E	E	E	E	N	N	B	B	B	E	E	E	IP	E	IP	IP	B	C	
4	E	E	E	IP	B	B	B	B	B	B	B	B	B	B	N	N	N	N	
5	E	IP	N	N	N	N	B	E	E	E	IP	E	E	E	E	E	IP	E	
6			E	N	N	IP	IP	E	IP	IP	IP	IP	E	E	B	B	B	B	
7			E	IP	E	IP	N	B	B	B	B	B	B	B	B	B	B	B	
8				E	B	B	B	B	N	N	N	N	N	N	N	N	N	N	
9					E	B	N	B	B	B	B	B	B	B	B	B	B	B	
10						E	IP	IP	IP	E	E	IP	IP	IP/BP	block	C	C	C	

2015 COMU Productivity Plot 2 - Observation Point	Date																			
	Nest#	6/19	6/22	6/25	6/28	7/1	7/4	7/7	7/10	7/13	7/17	7/19	7/23	7/25	7/29	7/31	8/3	8/6	8/9	8/12
	start time	15:00	12:45	18:50	18:23	21:05	13:10	11:45	19:15	11:35	10:39	10:11	10:55	14:40	12:35	13:45	13:51	19:45	10:00	14:40
end time	16:00	13:45	20:08	19:15	22:10	13:45	12:50	20:15	12:30	11:02	10:47	11:08	15:25	13:20	14:26	14:16	20:15	10:15	14:52	
1	E	IP	E	E	E	E	IP	E	E	C1	C	C	C	C	C	C	F	B	B	
2	E	IP	E	IP	E	E	IP	E	E	E	IP	E	IP	IP	C	BP	BP	B	B	
3	E	E	E	E	E	IP	IP	E	E	IP	BP	C	C	C	BP	C	C	C	C	
4	E	E	E	E	E	IP	IP	E	E	BP	C	C	C	C	C	C	F	B	B	
5	E	E	E	IP	E	E	E	E	E	E	C	BP	C	C	C	C	C	C	F	
6	E	E	E	E	E	E	E	E	E	C1	C	C	C	C	C	C	F	B	B	
7	E	E	E	E	E	E	E	E	E	E	E	B	B	B	B	B	B	B	B	
8	E	IP	B	N	N	B	B	N	B	B	B	B	B	B	B	B	B	B	B	
9	E	E	IP	E	IP	E	IP	B	B	B	B	B	B	B	B	B	B	B	B	
10	E	IP	E	E	E	IP	IP	E	E	IP	E	IP	C	C	B	B	B	B	B	
11	E	E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
12		E	E	IP	IP	IP	B	B	B	B	B	B	B	B	B	B	B	B	B	
13		E	B	B	B	B	N	B	B	B	B	B	B	B	B	B	B	B	B	
14			E	E	E	IP	IP	B	B	B	B	B	B	B	B	B	B	B	B	
15			E	E	E	IP	E	E	B	B	B	B	B	B	B	B	B	B	B	
16			E	E	E	IP	E	E	E	B	B	B	B	B	B	B	B	B	B	
17			E	E	E	IP	E	E	B	B	B	B	B	B	B	B	B	B	B	
18			E	E	E	IP	E	B	B	B	B	B	B	B	B	B	B	B	B	
19				E	B	N	B	N	B	B	B	B	B	B	B	B	B	B	B	
20					E	IP	E	E	E	IP	E	IP	C	B	B	B	B	B	B	
21					E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
22					E	IP	IP	E	C	BP	BP	C	C	E(?)	E	C	C	C	F	

2015 COMU Productivity Plot 4 - Observation Point	Date																	
	Nest#	6/21	6/24	6/27	6/30	7/3	7/6	7/9	7/12	7/17	7/20	7/24	7/27	7/30	8/2	8/5	8/8	8/11
	start time	11:00	18:45	18:55	20:55	18:35	19:10	18:45	16:05	9:00	16:10	14:30	12:45	16:00	16:15	9:50	9:40	17:50
end time	12:30	20:00	20:10	21:30	21:00	20:35	19:45	17:15	9:59	16:42	15:30	13:45	17:00	17:00	10:15	10:25	18:15	
1	E	E	E	E	E	E	E	E	E	B	B	B	B	B	B	B	B	
2	E	IP	IP	E	B	B	B	N	B	B	B	B	B	B	B	B	B	
3	E	E	E	E	E	E	IP	B	B	B	B	B	B	B	B	B	B	
4	E	E	IP	E	E	IP	IP	IP	IP	B?	B	B	B	B	B	B	B	
5	E	E	E	E	E	E	E	E	E	C	C	B	B	B	B	N	N	B
6	E	E	E	E	E	E	E	E	E	E	B?	B	B	B	B	B	B	
7	E	E	IP	E	E	E	E	E	E	IP	E	B	B	B	B	B	B	
8	E	E	E	E	E	E	E	E	C	BP	B	B	B	B	B	B	B	
9	E	IP	E	E	E	E	E	E	E	C	BP	B	B	B	B	B	B	
10	E	E	IP	IP	E	E	E	E	E	C	BP	B	B	B	B	B	B	
11	E	E	E	E	E	E	E	E	BP	B	B	B	B	B	B	B	B	
12	E	E	E	IP	E	E	E	E	C	C	C	C	C	C	C	F	B	
13	E	E	B	N	B	B	N	N	N	N	N	N	N	N	N	N	N	
14	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	
15	E	E	N	N	N	B	B	B	B	B	B	B	B	B	B	B	N	
16	E	E	E	E	E	E	E	E	IP	IP	IP	IP	C	B	B	B	B	
17	E	E	E	IP	E	IP	IP	B	B	B	B	B	B	B	B	B	B	
18	E	E	E	E	E	E	E	IP	IP	B?	B	B	B	B	B	B	B	
19	E	IP	E	E	E	E	E	E	IP	E	C	BP	BP	B	B	B	B	
20	E	E	E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
21	E	E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
22	E	IP	E	IP	IP	E	E	IP	BP?	C	C	BP	C	C	C	C	F	
23	E	E	N	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
24	E	E	E	E	E	E	E	E	IP	IP	C	B	B	B	B	B	B	
25	E	E	IP	IP	E	E	IP	E	BP	C	BP	B?	C	BP	BP	BP	B	

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. Seabird population counts, Observation Point index plots, Round Island, Alaska, 2015.**

Date	Count #	Start time	Finish time	# BLKI <sup>a</sup>	# BLKI nests	# COMU <sup>b</sup>	# PECO <sup>c</sup>	#PECO nests	# HOPU <sup>d</sup>	# TUPU <sup>e</sup>	Count type
<i>2015 Population Count - Plot 1 - Observation Point</i>											
5/7	1	18:06	18:08	0	0	0			0	0	photo
5/24	1	18:04	18:05	15	9	97	5	4			photo
6/3	1	16:52	16:52	28	20	66	14	10			photo
6/14	1	9:50	9:50	24	19	88	13	11			photo
6/20	1	11:15	11:24	17	13	109	12	11			photo
6/28	1	15:42	15:52	16	14	80	13	12			photo
7/5	1	14:44	14:55	10	10	73	10	10			photo
7/11	1	15:10	15:22	7	6	87	13	10			photo
7/23	1	17:48	18:01	18	10	71	9	7			photo
7/28	1	14:49	15:02	11	1	80	7	4			photo
8/6	1	16:44	16:57	8	2	95	7	3			photo
<i>2015 Population Count - Plot 2 - Observation Point</i>											
5/7	1	18:06	18:08	0	0	0			0	0	photo
5/24	1	18:06	18:06	130	77	109	9	6			photo
6/3	1	16:53	16:53	103	70	89	10	7			photo
6/14	1	9:50	9:50	72	59	116	12	7			photo
6/20	1	11:15	11:24	87	63	125	11	7			photo
6/28	1	15:42	15:52	71	55	105	17	8			photo
7/5	1	14:44	14:55	52	49	105	13	7			photo
7/11	1	15:10	15:22	61	48	140	13	8			photo
7/23	1	17:48	18:01	116	59	98	14	5			photo
7/28	1	14:49	15:02	59	37	98	10	4			photo
8/6	1	16:44	16:57	37	10	102	8	2			photo
<i>2015 Population Count - Plot 3 - Observation Point</i>											
5/7	1	18:10	18:11	13	9	0	12	8	0	0	photo
5/24	1	18:06	18:06	97	59	5	16	12			photo
6/3	1	16:53	16:53	86	64	9	11	9			photo
6/14	1	9:51	9:51	75	54	26	11	10			photo
6/20	1	11:15	11:24	67	59	23	10	10			photo
6/28	1	15:42	15:52	59	49	20	12	9			photo
7/5	1	14:44	14:55	50	52	1	10	7			photo
7/11	1	15:10	15:22	39	37	21	15	11			photo
7/23	1	17:48	18:01	71	30	16	18	9			photo
7/28	1	14:49	15:02	51	27	11	12	3			photo
8/6	1	16:44	16:57	18	9	9	5	5			photo
<i>2015 Population Count - Plot 4 - Observation Point</i>											
5/7	1	18:15	18:16	15	12	0	0	0	0	0	photo
5/24	1	18:08	18:09	184	92	430	3	2			photo
6/3	1	16:50	16:51	136	102	556	6	3			photo
6/14	1	9:57	9:58	129	104	583	16	3			photo
6/20	1	11:15	11:24	104	97	524	6	4			photo
6/28	1	15:42	15:52	102	95	453	8	2			photo
7/5	1	14:44	14:55	67	61	373	3	2			photo
7/11	1	15:10	15:22	65	61	556	3	6	1		photo
7/23	1	17:48	18:01	145	84	472	5	2			photo
7/28	1	14:49	15:02	86	63	457	5	1			photo
8/6	1	16:44	16:57	52	38	499	9	1	1		photo

Date	Count #	Start time	Finish time	# BLKI <sup>a</sup>	# BLKI nests	# COMU <sup>b</sup>	# PECO <sup>c</sup>	#PECO nests	# HOPU <sup>d</sup>	# TUPU <sup>e</sup>	Count type
<i>2015 Population Count - Plot 5 - Observation Point</i>											
5/7	1	18:12	18:13	2	3	0	0	0	0	0	photo
5/24	1	18:07	18:07	53	32	147	0	0			photo
6/3	1	16:49	16:49	42	38	126	0	0			photo
6/14	1	9:53	9:54	38	33	194	1	0			photo
6/20	1	11:15	11:24	33	29	173	2	0			photo
6/28	1	15:42	15:52	26	24	156	0	0			photo
7/5	1	14:44	14:55	45	35	179	0	0			photo
7/11	1	15:10	15:22	24	23	187	0	0			photo
7/23	1	17:48	18:01	34	26	143	1	0			photo
7/28	1	14:49	15:02	31	20	110	0	0			photo
8/6	1	16:44	16:57	5	4	84	0	0			photo

<sup>a</sup> BLKI = black-legged kittiwake.

<sup>b</sup> COMU = common murre.

<sup>c</sup> PECO = pelagic cormorants.

<sup>d</sup> HOPU = horned puffin.

<sup>e</sup> TUPU = tufted puffin.

**Appendix I. Daily wildlife observations, Round Island, Alaska, August 2014–August 2015.**

Date	Species	Number	Location <sup>a</sup>	Comments <sup>b</sup>
8/1/2014	Steller sea lions		TB	STSL in view in background using East Cape V3 area throughout 8/1–10/31/14.
8/2/2014	Pacific walrus, black-legged kittiwake, common murre, pelagic cormorant		MB	Pacific walrus on most of spit tip & small group mid MB.
8/2/2014	Common raven		TB	Common raven @ 1600.
8/16/2014	Red fox		TB	Red fox with UNDD in mouth @ 1900.
8/21/2014	Bald eagle, black-legged kittiwake		CAMP	Bald eagle, edge of frame @ 1200–2000.
9/7/2014	Pacific walrus		MB	Most black-legged kittiwake, pelagic cormorant, common murre, gone. Stormy, Pacific walrus on beach early but leave. Pacific walrus gone for the year.
9/7/2014	Black-legged kittiwake, pelagic cormorant		WM	Most Black-legged kittiwake, & pelagic cormorant, leave.
9/8/2014	Red fox		FB	REFO @ 0900.
9/8/2014	Black-legged kittiwake, pelagic cormorant		WM	Few Black-legged kittiwake, & pelagic cormorant, left.
9/15/2014	Common raven		WM	Seabirds gone.
9/16/2014	Common raven		WM	
9/19/2014	Unidentified gull		WM	
9/20/2014	Red fox		FB	
10/10/2014	Common raven		MB	Common raven @ 1500.
10/10/2014	Common raven		WM	
10/11/2014	Common raven		WM	
10/15/2014	Common raven		MB	Common raven @ 1330.
10/18/2014	Common raven	0	MB	CORA AT 1300.
10/18/2014	Common raven		MB	Common raven @ 1300.
10/18/2014	Red fox		TB	Red fox @ 1000.
10/28/2014	Unidentified diving duck		WM	20 UNDD or UNAL @ 1600.
10/30/2014	Unidentified gull		WM	UNGU on beach @1030.
11/2/2014	Red fox		WM	2 UNGU offshore 1430–1500. REFO on beach @ 1330.
11/4/2014	Steller sea lion, Common raven		EC	Partly sunny, seas calm. Few STSL use V1 thru day, bunch at TB especially in evening. Common raven at 1530.
11/5/2014	Unidentified diving duck		WM	Raft of ~60 UNDD or UNAL offshore 1030–1200.
11/8/2014	Common raven		MB	Common raven @ 1200.
11/9/2014	Unidentified diving duck		WM	Couple hundred UNDD or UNAL offshore 1800–1900.
11/10/2014	Unidentified diving duck		WM	Couple hundred UNDD or UNAL offshore most of day.
11/11/2014	Unidentified diving duck		WM	Couple hundred UNDD or UNAL offshore.
11/13/2014	Unidentified diving duck		WM	Couple hundred UNDD or UNAL offshore 1500–1800.
11/14/2014	Unidentified diving duck		WM	About a hundred UNDD or UNAL offshore most of day.
11/15/2014	Unidentified diving duck		WM	UNDD or UNAL offshore.

Date	Species	Number	Location <sup>a</sup>	Comments <sup>b</sup>
11/17/2014	Unidentified diving duck		WM	Hundreds of UNDD or UNAL offshore most of day.
11/18/2014	Unidentified diving duck		WM	Hundreds of UNDD or UNAL offshore most of day.
11/19/2014	Unidentified diving duck		WM	Hundreds of UNDD or UNAL offshore most of day.
11/20/2014	Unidentified diving duck		WM	Windy, Hundreds of UNDD or UNAL offshore in afternoon.
11/21/2014	Unidentified diving duck		WM	Hundreds of UNDD or UNAL offshore in afternoon.
11/28/2014	Steller sea lion, Black-billed magpie		EC	Seas calm, partly sunny, STSL at TB, none at V1 rocks in A.M. but few move to V1 thru day as tide rises. Black-billed magpie @ 1400.
12/3/2014	Unidentified gull		WM	UNGU @ 1300.
12/7/2014	Unidentified diving duck		WM	UNDD or UNAL offshore. Windy.
12/18/2014	Bald eagle		MB	Bald eagle, @ 1500–1600.
12/20/2014	Steller sea lion, Unidentified eagle		EC	3 Unidentified eagle, (probably imm. Bald eagle) @ 1100.
12/21/2014	Bald eagle		MB	Bald eagle, @ 1700.
12/23/2014	Pacific walrus	1	MB	Snow overnight. One PAWA visible leaving beach at 1200.
12/23/2014	Pacific walrus		MB	Snow night prior. One Pacific walrus track in fresh snow @ 1200.
12/25/2014	Bald eagle		MB	Bald eagle, @ 1500–1530.
12/27/2014	Bald eagle		MB	Bald eagle, @ 1330.
1/4/2015	Unidentified gull		WM	UNGU @ 1600–1630.
1/5/2015	Steller sea lion, Bald eagle		EC	Adult Bald eagle, @ 1100. imm. Bald eagle, @ 1630.
1/6/2015	Steller sea lion, Bald eagle, Common raven		EC	Snow night prior and during day. Bald eagle, @ 1430. Common raven @ 1130.
1/9/2015	Steller sea lion, Black-billed magpie		EC	Black-billed magpie on rock @ 1100.
1/14/2015	Pacific walrus?		MB	Possible few Pacific walrus at base of rockfall chute 1300–1600.
1/19/2015	Steller sea lion, Bald eagle		EC	Adult Bald eagle, @ 1630 & 1730.
1/20/2015	Steller sea lion, Unidentified eagle		EC	Unidentified eagle, (probably imm. Bald eagle) @ 1100–1230.
1/21/2015	Steller sea lion, Unidentified eagle		EC	Unidentified eagle, (probably imm. Bald eagle) @ 1100 & 1400.
1/24/2015	Steller sea lion, Bald eagle		EC	Snow night prior and during day. Adult Bald eagle, @ 1230 & 1900.
1/25/2015	Steller sea lion, Bald eagle, Unidentified eagle		EC	Snow night prior and during day. Adult Bald eagle, @ 1330, Unidentified eagle, (probably imm. Bald eagle, ) @ 1100–1230.
1/30/2015	Steller sea lion, Bald eagle		EC	IMM. Bald eagle @ 1130, 1330–1430.
1/31/2015	Steller sea lion, Bald eagle		EC	IMM. Bald eagle @ 1100.
2/1/2015	Steller sea lion, Unidentified eagle		EC	Unidentified eagle, (probably imm. Bald eagle) @ 1900.
2/14/2015	Red fox		EC	Red fox @ 1500.
2/22/2015	Steller sea lion, Bald eagle		EC	Adult Bald eagle @ 1530.
2/23/2015	Pacific walrus	~10	MB	Snowed overnight. Small group of PAWA on mid

Date	Species	Number	Location <sup>a</sup>	Comments <sup>b</sup>
				MB throughout day. May be females, not much ivory showing.
2/24/2015	Pacific walrus	~9	MB	Small group of PAWA on mid MB throughout day.
2/24/2015	Steller sea lion, Bald eagle		EC	Adult bald eagle @ 1400.
2/24/2015	Pacific walrus		MB	2 small groups of Pacific walrus about 5 in each. One at Rock slide, one at rock outcrop.
2/25/2015	Pacific walrus	~5	MB	Small group of PAWA on mid MB leaves throughout afternoon, only two remain at end of day.
2/25/2015	Pacific walrus		MB	2 small groups of Pacific walrus about 5 in each. Most leave throughout day.
2/26/2015	Steller sea lion, Common raven		EC	Common raven @ 1630.
2/27/2015	Pacific walrus		MB	1 Pacific walrus visible in at south end of MB.
2/28/2015	Pacific walrus	~4	MB	One PAWA at water's edge mid MB, another at water's edge lower MB, and likely a couple in water just offshore lower MB.
2/28/2015	Pacific walrus		WM	1 Pacific walrus @ North end of WM 1300–2000.
3/1/2015	Pacific walrus	1	MB	One PAWA on mid MB at 1330.
3/1/2015	Steller sea lion, Bald eagle		EC	Bald eagle adult @ 1300.
3/3/2015	Pacific walrus		MB	Snowy day. Few Pacific walrus show up @ mid-MB.
3/4/2015	Pacific walrus	~4	MB	Camera obscured by snow and fog prior to 1300. Sm. Group of PAWA on mid MB through day.
3/5/2015	Pacific walrus	~15	MB	Snowed overnight. Sm. Group of PAWA on mid MB builds through day.
3/6/2015	Common Raven	~16	MB	Slightly larger Group of PAWA on MB early day. CORA at 1200. snow after noon. PAWA herd decreases in size.
3/6/2015	Steller sea lion, Bald eagle, Common raven		EC	Adult Bald eagle, 1000–1100; arguing with 2 common ravens @ 1030.
3/6/2015	Pacific walrus, Common raven		MB	Snowing. Common raven @ 1200.
3/7/2015	Pacific walrus		MB	Most Pacific walrus leave.
3/13/2015	Steller sea lion, Common raven		EC	1–4 common ravens 1300–1600. Some STSL using TB.
3/20/2015	Common Raven	2	FB	On pinnacle @ north end of FB. And elsewhere during the week.
3/21/2015	Long tailed Duck	10	NBC	Offshore of NBC, BC and cabin.
3/21/2015	Red fox	2	Cabin	Pair by cabin, One larger with full coat, other smaller.
3/21/2015	Common raven		MB	Common raven @ 1400.
3/22/2015	Long tailed Duck	10	NBC	Offshore of NBC, BC and cabin.
3/22/2015	Surf scoter	1	CG	Offshore of cabin.
3/23/2015	Bald Eagle	1	Cabin	Flew over cabin headed north towards spit.
3/23/2015	Long tailed Duck	36	BC	Offshore of BC.
3/23/2015	Red fox	1	Cabin	Smaller one of the two previously seen.
3/24/2015	Steller sea lion, Bald eagle		EC	Adult bald eagle @ 0800, 1300, 1530; two @ 0900–1130.
3/26/2015	Pacific walrus		WM	2 Pacific walrus offshore @ 1230, 1400, 1930; 3

Date	Species	Number	Location <sup>a</sup>	Comments <sup>b</sup>
				@ 2000.
3/27/2015	Pacific walrus	42+	WM	First hauling out of PAWA for season at WM.
3/27/2015	Pacific walrus		WM	Pacific walrus coming ashore @ 1st light; 9 offshore 8 on beach @ 0830. Herd grows thru day.
3/28/2015	Steller sea lion, Bald eagle		EC	Adult Bald eagle, @ 1000.
3/28/2015	Pacific walrus		WM	Lg herd coming and going.
3/29/2015	Pacific walrus	450	MB	First significant hauling out of PAWA for season at MB. Smaller #'s of PAWA (1–16) at MB 2/27–3/5/15.
3/29/2015	Pacific walrus		MB	Pacific walrus begin hauling out along MB.
3/29/2015	Pacific walrus		WM	Herd builds.
3/30/2015	Steller sea lion		EC	Some STSL start using TB. Most on V1.
3/30/2015	Pacific walrus		MB	large herds of Pacific walrus along MB. Clear off in p.m.
3/30/2015	Pacific walrus		WM	Large herd decreases with high tide and waves
3/31/2015	Steller sea lion, Bald eagle		EC	Some STSL start using TB. Most on V1. Imm. Bald eagle @ 1500.
4/3/2015	Pacific walrus		MB	Pacific walrus herd builds through day.
4/3/2015	Pacific walrus		WM	Few rehaul out on southern part of WM.
4/5/2015	Steller sea lion		EC	STSL using V1 & TB.
4/7/2015	Pacific walrus, Bald eagle		MB	2 Bald eagle, @ 0900–0930. Fewer Pacific walrus present.
4/9/2015	Steller sea lion, Unidentified eagle		EC	Unidentified eagle, (probably imm. Bald eagle) @ 1030.
4/10/2015	Black Legged Kittiwake		WM	First Black-legged kittiwakes at WM.
4/11/2015	Steller sea lion, Bald eagle		EC	imm bald eagle 0800–0830. Adult bald eagle 2030. STSL using V1 & TB in larger numbers.
4/12/2015	Steller sea lion		EC	STSL using V1 & TB in larger numbers.
4/13/2015	Steller sea lion, Bald eagle		EC	STSL using V1 & TB in larger numbers. Imm. Bald eagle @ 1500.
4/17/2015	Pacific walrus, Black-legged kittiwake		WM	Pacific walrus herd building.
4/18/2015	Steller sea lion		EC	STSL using V1 & TB in larger numbers.
4/19/2015	Pelagic cormorant		WM	First pelagic cormorants at WM.
4/19/2015	Pacific walrus, Black-legged kittiwake, Common raven		WM	Large Pacific walrus herd diminishes with snow and high waves in afternoon.
4/20/2015	Bald eagle	1	Cabin	Bald eagle.
4/20/2015	Black-legged kittiwake	1	Cabin	Black-legged kittiwake, w/nesting material.
4/20/2015	Common raven	1	Cabin	Common raven.
4/20/2015	Gray Crowned Rosy Finch	1	SB	Gray Crowned Rosy Finch.
4/20/2015	Glaucous Wing Gull	2	SP	Glaucous Wing Gull.
4/20/2015	Harlequin duck	7	BC	Harlequin Duck, both male and female present.
4/20/2015	Pacific walrus	~360	MB	Pacific walrus, Not disturbed by JetRanger III.
4/20/2015	Pelagic cormorant	1	Cabin	Pelagic cormorant.
4/20/2015	Red fox	1	Cabin	Red fox.
4/20/2015	Steller sea lion	~380	EC	Steller sea lion, Hello, old friends!
4/20/2015	Unknown sparrow	1	Cabin	Unknown sparrow.
4/20/2015	Pacific walrus, Black-		MB	Black-legged kittiwake, show up en masse.



Date	Species	Number	Location <sup>a</sup>	Comments <sup>b</sup>
	legged kittiwake			ADF&G staff arrive at Round Is.
4/21/2015	Bald Eagle	1	SB	Bald Eagle, juvenile.
4/21/2015	common murre	rafts	MB	common murre, rafted up offshore.
4/21/2015	Gray Whale	1		Gray Whale, offshore by cabin.
4/21/2015	Harlequin Duck	4	SB	Harlequin Duck, males.
4/21/2015	Pigeon Guillemot	2	FR	Pigeon Guillemot.
4/21/2015	Wooly Lousewort	1	EC	Wooly Lousewort, blooming.
4/22/2015	Steller sea lion, Black-legged kittiwake		EC	STSL using V1 & TB in larger numbers. Black legged kittiwakes evident in numbers this day forward.
4/22/2015	Pacific walrus, Black-legged kittiwake		WM	Pacific walrus herd building.
4/24/2015	raptor?			Raptor?
4/25/2015	Gray Whale	4+		Gray Whale, nearshore + offshore by cabin.
4/25/2015	Parakeet Auklet			Parakeet Auklet, offshore near cabin.
4/26/2015	Lapland Longspur	1		Lapland Longspur, at EC pass.
4/27/2015	Pacific walrus	1	FR	Pacific walrus, Bleeding from anal area. Does not appear to be in distress. Photos.
4/28/2015	Canada Goose		Cabin	Canada Goose, in V flying overhead.
4/28/2015	Long-tailed Duck	3	NBC	Long-tailed Duck, seen from boat. Photos.
4/29/2015	Gray Whale	1		Gray Whale, really close to shore by cabin.
4/29/2015	Savannah Sparrow			Savannah Sparrow.
5/1/2015	American Pipit		EC	American Pipit.
5/1/2015	King Eider	1	FR	King Eider, male.
5/1/2015	Steller sea lion		EC	Steller sea lions present at East Cape entire winter period, September 2014–April 2015.
5/2/2015	Tufted puffin	3	MB	Tufted Puffin, seen from boat.
5/3/2015	northern coltsfoot			Northern coltsfoot, blooming.
5/5/2015	common murre	many	OP	Common murre, , COMUS in summer positions on OP Plot 1
5/5/2015	Pelagic cormorant	many	OP	Pelagic cormorant, PECOS nesting in former BLKI nests, OP Plots 2 and 3
5/5/2015	Savannah Sparrow	1	EC	Savannah Sparrow.
5/5/2015	Steller sea lion, Black-legged kittiwake, Unidentified puffin		EC	Puffins show up at rocks and visible this day forward.
5/6/2015	American Pipit	1	EC	American Pipit.
5/6/2015	Gray Whale	3+	EC	Gray whale.
5/7/2015	Dark eyed Junco	1	EC	Dark eyed Junco.
5/8/2015	American Tree Sparrow	1	Cabin	American Tree Sparrow.
5/11/2015	Golden Crowned Sparrow	1		Golden Crowned Sparrow, along EC trail.
5/11/2015	Horned puffin	2	FB	Horned Puffin, first photo.
5/11/2015	Tufted puffin		CG	Tufted Puffin.
5/12/2015	Gray whale	2	EC	Gray whale, photos.
5/13/2015	Glaucous Wing Gull	1		Glaucous Wing Gull.
5/13/2015	King Eider	2	BC	King Eider, tentative species ID. See photos. Females.
5/13/2015	Pelagic cormorant	1	OP	Pelagic cormorant, PECO incubating 2 eggs @ OP Plot 3. photos.

Date	Species	Number	Location <sup>a</sup>	Comments <sup>b</sup>
5/14/2015	Pelagic cormorant	0	FB	Pelagic cormorant, no nesting PECO's at FB or FPP plots.
5/14/2015	Pelagic cormorant	0	FP	Pelagic cormorant, no nesting PECO's at FB or FPP plots.
5/14/2015	rock cress			Rock cress, blooming.
5/14/2015	rose root		EC	Rose root, blooming.
5/15/2015	Horned Grebe	1	SB	Horned Grebe, brief sighting – photos.
5/17/2015	few flowered corydalis		EC	Few flowered corydalis, blooming.
5/17/2015	narcissus flowered anemone		EC	Narcissus flowered anemone, blooming.
5/18/2015	Short Eared Owl	1	EC	Short-eared owl, beautiful.
5/18/2015	black oxytrope			black oxytrope, blooming.
5/19/2015	White Crowned Sparrow	1	Cabin	White Crowned Sparrow.
5/21/2015	Black Legged Kittiwake	many	OP	Black Legged Kittiwake, gathering grass, building nests.
5/21/2015	Northern Harrier	1	EC	Northern Harrier.
5/21/2015	snow draba			Snow draba, blooming.
5/21/2015	yellow violet			Yellow violet, blooming.
5/22/2015	yellow anemone			Yellow anemone, blooming.
5/24/2015	Orange Crowned Warbler	1		Orange Crowned Warbler, at EC pass.
5/25/2015	American Robin			American Robin, first sighting at EC pass.
5/25/2015	Lincoln's Sparrow			Lincoln's Sparrow, at EC pass.
5/25/2015	Tree Swallow	2	Cabin	Tree Swallow, male and female.
5/25/2015	Wilson's Warbler	1		Wilson's Warbler, at EC pass.
5/25/2015	forget me not		EC	Forget me not, blooming.
5/26/2015	alaska poppy		EC	Alaska poppy, blooming.
5/26/2015	alaska violet		EC	Alaska violet, blooming.
5/27/2015	forget me not	1	EC	Forget me not, V3 viewpoint
5/28/2015	purple cress			Purple cress, blooming.
5/28/2015	rock jasmine		TT	Rock jasmine, blooming.
5/29/2015	Hermit Thrush	1		Hermit Thrush.
5/30/2015	wedge leaved primrose		TT	Wedge leaved primrose, blooming.
6/1/2015	Common Redpoll	1	EC	Common Redpoll.
6/1/2015	Crested Auklet	2	NBC	Crested Auklet.
6/1/2015	cloud berry			Cloud berry, blooming.
6/1/2015	langsdorff's lousewort			Langsdorff's lousewort, blooming.
6/1/2015	pink plumes			Pink plumes, blooming.
6/1/2015	star flower			Star flower, blooming.
6/2/2015	Fox Sparrow	1		Fox Sparrow, at FB willows.
6/2/2015	Gray Whale	2	CG	Gray Whale, offshore of campground.
6/3/2015	Bank Swallow	3-4	SB	Bank Swallow, flying in evening.
6/3/2015	bitter cress			Bitter cress, blooming in campground.
6/3/2015	chocolate lily			Chocolate lily, blooming.
6/3/2015	garden sorrel			Garden sorrel, blooming.
6/3/2015	jacob's ladder			Jacob's ladder, blooming.
6/4/2015	spring beauty			Spring beauty, blooming along Summit Trail.
6/4/2015	villious cinquefoil			Villious cinquefoil, blooming near Summit.
6/4/2015	winter cress			Winter cress, blooming along Summit Trail.

Date	Species	Number	Location <sup>a</sup>	Comments <sup>b</sup>
6/6/2015	Common Raven	1	OP	Common Raven, stealing BLKI egg – photos.
6/6/2015	mouse ear chickweed		NBC	Mouse ear chickweed, blooming.
6/7/2015	common murre	1		Common murre, first photo of murre egg at pedestal rock by cabin.
6/8/2015	mountain avens			Mountain avens, blooming at cabin spring.
6/9/2015	common murre		OP	Common murre, , no comu on plots 2 or 3 at 1900. 4 eggs on plot 1.
6/15/2015	alaska poppy		NBC	Alaska poppy, blooming.
6/16/2015	Black Capped Chickadee		Cabin	Black Capped Chickadee, first sighting.
6/16/2015	arctic sandwort			Arctic sandwort, blooming near Summit.
6/17/2015	arctic daisy			Arctic daisy, blooming.
6/18/2015	dwarf arctic bitterweed			Dwarf arctic bitterweed, blooming.
6/18/2015	iris		FB	Iris, blooming.
6/18/2015	valerian			Valerian, blooming.
6/20/2015	alaska spiraea			Alaska spiraea, blooming, at EC pass.
6/20/2015	yarrow			Yarrow, blooming.
6/22/2015	mountain hare bell			Mountain hare bell, blooming, at EC pass.
6/23/2015	lessing's arnica		FR	Lessing's arnica, blooming.
6/26/2015	grove sandwort			Grove sandwort, blooming in campground.
6/28/2015	Whimbrel	2		Whimbrel, brief sighting - photos, at EC pass.
6/28/2015	monk's hood		TT	Monk's hood, blooming.
6/28/2015	mountain sorrel		TT	Mountain sorrel, blooming.
6/28/2015	sea beach sandwort		MB	Sea beach sandwort, blooming.
6/29/2015	Pine Grosbeak	2		Pine Grosbeak, Pine Grosbeak - no photo, at EC pass.
6/29/2015	unk			Unk, 2 bird fetuses on trail.
6/30/2015	montane shrew	1		Montane shrew, on trail.
6/30/2015	dwarf fireweed/river beauty			Dwarf fireweed/river beauty, blooming along Summit Trail.
6/30/2015	spotted saxifrage			Spotted saxifrage, blooming along Summit Trail.
6/30/2015	yellow marsh saxifrage			Yellow marsh saxifrage, blooming along Summit Trail.
7/1/2015	unk	1		Unk, songbird embryo on trail.
7/2/2015	Common Raven	1	OP	Common Raven, fledgling raven.
7/2/2015	Humpback whale			Humpback whale.
7/7/2015	White winged crossbill	2	Cabin	White winged crossbill.
7/7/2015	fireweed		EC	Fireweed, fully blooming.
7/7/2015	northern bedstraw		SB	Northern bedstraw, blooming.
7/7/2015	wild pea		EC	Wild pea, blooming - first observation? Not mentioned in plant report.
7/9/2015	White winged crossbill	3		White winged crossbill.
7/11/2015	wandering tattler		FB	Wandering tattler.
7/12/2015	White winged crossbill	1		White winged crossbill.
7/23/2015	Red Fox	1		Red Fox, fox with lame left rear leg near Summit.
8/6/2015	white-fronted goose		Cabin	White-fronted goose, white-fronted goose, orange beak. No photos.
8/7/2015	fulmar	1	MB	Fulmar, no photo.
8/7/2015	White winged crossbill	1	Cabin	White winged crossbill.
8/10/2015	northern harrier	1	FB	Northern harrier, aerial attack on sparrows.

Date	Species	Number	Location <sup>a</sup>	Comments <sup>b</sup>
8/11/2015	red-neck phalarope	5	BC	Red-neck phalarope.
8/13/2015	Pacific walrus, horned puffin		FB	
8/13/2015	Pacific walrus, black-legged kittiwake		MB	
8/13/2015	Black-legged kittiwake, Pelagic cormorant		WM	
8/14/2015	Kingfisher	1	BC	Kingfisher, Kingfisher, no photo.
8/14/2015	Pacific walrus, Pigeon guillimot, Horned puffin		FB	
8/14/2015	Pacific walrus, Black-legged kittiwake		MB	
8/14/2015	Black-legged kittiwake, Pelagic cormorant		WM	
8/15/2015	Black-legged kittiwake		MB	PAWA, BLKI. Reconyx TLC data.
8/15/2015	Black-legged kittiwake		WM	BLKI, PECO. Reconyx TLC data.
8/15/2015	Pacific walrus	1	FB	One PAWA hauls out after 1800. Reconyx TLC data.
8/15/2015	Pacific walrus		MB	PAWA, BLKI. Reconyx TLC Data.
8/15/2015	Pelagic cormorant		WM	BLKI, PECO. Reconyx TLC Data.
8/15/2015	Steller Sea lion		EC	STSL, TUPU, HOPU, CORA, present. Reconyx TLC Data.
8/15/2015	Steller sea lion, tufted puffin, Horned puffin, common raven		EC	
8/15/2015	Pacific walrus		FB	One PAWA hauls out after 1800.
8/15/2015	Pacific walrus, black-legged kittiwake		MB	Large PAWA herd moves off overnight leaving smaller bunch that grows throughout day.
8/15/2015	Black-legged kittiwake, Pelagic cormorant		WM	
8/15/2015	Pacific walrus, black-legged kittiwake		MB	Large Pacific walrus herd moves off overnight leaving smaller bunch that grows throughout day.

<sup>a</sup> BC = Boat Cove; CG = Campground; EC = East Cape; FB = First Beach; FP = First Prime; FR = Flat Rock; MB = Main Beach; NBC = North Boat Cove; OP = Observation Point; SB = Second Beach; SLP = Sea Lion Point; SP = Second Prime; TB = Third Beach; TT = Traverse Trail; WM = West Main.

<sup>b</sup> BLKI = black-legged kittiwake; COMU = common murre; CORA = common raven; HOPU = horned puffin; PAWA = Pacific walrus; PECO = pelagic cormorant; STSL = Steller sea lion; TLC = time lapse camera; TUPU = tufted puffin; UNAL = unidentified alcid; UNDD = unidentified diving duck; UNGU = unknown gull.

**Appendix J. Daily weather observations, Round Island, Alaska, October 2014–August 2015.**

Date	Time	Tide <sup>a</sup>	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover <sup>b</sup>	Precip <sup>c</sup>
10/14/2014	14:00						31	26	S	N
10/15/2014	14:00						32	27	O	N
10/16/2014	14:00						29	27	O	N
10/17/2014	14:00						33	29	O	R
10/18/2014	9:00						36	29	B	N
10/19/2014	9:00						29	24	C	N
10/20/2014	14:00						27	23	S	N
10/21/2014	9:00						29	25	O	N
10/22/2014	14:00						34	26	C	N
10/23/2014	9:00						37	26	O	R
10/24/2014	17:00						30	25	C	N
10/25/2014	14:00						36	28	O	N
10/26/2014	14:00						37	25	O	N
10/27/2014	9:00						37	35	O	R
10/28/2014	17:00						33	31	O	N
10/29/2014	9:00						31	28	F	N
10/30/2014	14:00						29	20	S	N
10/31/2014	17:00						28	15	O	S
11/1/2014	14:00						34	31	B	N
11/2/2014	14:00						29	24	B	N
11/3/2014	14:00						28	24	F	N
11/4/2014	14:00						26	22	C	N
11/5/2014	14:00						28	18	C	N
11/6/2014	14:00						32	28	S	N
11/7/2014	14:00						33	30	O	N
11/8/2014	14:00						36	27	B	N
11/9/2014	14:00						38	34	B	N
11/10/2014	14:00						39	36	B	N
11/11/2014	14:00						35	33	O	F
11/12/2014	14:00						37	34	O	RF
11/13/2014	14:00						39	36	B	N
11/14/2014	14:00						36	34	B	N
11/15/2014	14:00						36	34	O	N
11/16/2014	14:00						38	34	O	R
11/17/2014	14:00						35	34	O	N
11/18/2014	14:00						36	33	O	R
11/19/2014	14:00						36	33	B	N
11/20/2014	14:00						38	33	B	N
11/21/2014	14:00						36	34	S	N
11/22/2014	14:00						33	30	S	N
11/23/2014	14:00						31	29	S	N
11/24/2014	14:00						32	27	O	N
11/25/2014	14:00						35	28	B	N
11/26/2014	14:00						28	25	O	R
11/27/2014	14:00						34	28	O	R
11/28/2014	14:00						30	28	O	N
11/29/2014	14:00						32	27	B	N
11/30/2014	14:00						32	28	O	S
12/1/2014	14:00						36	33	O	RF
12/2/2014	14:00						32	27	B	N
12/3/2014	14:00						31	27	S	F
12/4/2014	14:00						31	28	B	N
12/5/2014	14:00						32	30	O	R
12/6/2014	14:00						30	28	O	R

Date	Time	Tide <sup>a</sup>	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover <sup>b</sup>	Precip <sup>c</sup>
12/7/2014	14:00						38	31	B	N
12/8/2014	14:00						37	34	O	N
12/9/2014	14:00						34	29	O	N
12/10/2014	14:00						32	29	O	N
12/11/2014	14:00						27	18	B	N
12/12/2014	14:00						18	12	O	N
12/13/2014	14:00						18	10	B	N
12/14/2014	14:00						29	24	O	R
12/15/2014	14:00						31	28	B	F
12/16/2014	14:00						29	27	S	N
12/17/2014	14:00						28	24	B	N
12/18/2014	14:00						30	28	B	N
12/19/2014	14:00						32	27	O	N
12/20/2014	14:00						32	23	F	N
12/21/2014	14:00						22	18	O	F
12/22/2014	14:00						18	16	O	N
12/23/2014	14:00						19	15	O	SF
12/24/2014	14:00						32	28	O	N
12/25/2014	14:00						31	28	B	N
12/26/2014	14:00						31	26	O	N
12/27/2014	14:00						33	27	O	F
12/28/2014	14:00						31	28	O	S
12/29/2014	14:00						32	30	O	R
12/30/2014	14:00						35	30	O	R
12/31/2014	14:00						32	28	B	N
1/1/2015	14:00						24	21	C	N
1/2/2015	14:00						24	18	S	N
1/3/2015	14:00						19	14	F	F
1/4/2015	14:00						22	18	C	N
1/5/2015	14:00						23	17	C	N
1/6/2015	14:00						23	7	O	SF
1/7/2015	14:00						26	22	O	N
1/8/2015	14:00						30	27	O	N
1/9/2015	14:00						29	23	B	N
1/10/2015	14:00						28	24	B	F
1/11/2015	14:00						30	28	F	F
1/12/2015	14:00						36	30	O	R
1/13/2015	14:00						34	31	O	R
1/14/2015	14:00						37	29	B	N
1/15/2015	14:00						34	30	B	N
1/16/2015	14:00						32	28	O	R
1/17/2015	14:00						28	13	O	R
1/18/2015	14:00						18	13	C	F
1/19/2015	14:00						19	12	O	S
1/20/2015	14:00						27	23	O	F
1/21/2015	14:00						20	16	F	N
1/22/2015	14:00						16	14	C	N
1/23/2015	14:00						10	7	C	N
1/24/2015	14:00						9	2	O	S
1/25/2015	14:00						5	-2	O	S
1/26/2015	14:00						16	1	O	SF
1/27/2015	14:00						22	19	B	N
1/28/2015	14:00						26	23	F	N
1/29/2015	14:00						18	13	C	N
1/30/2015	14:00						17	5	C	N

Date	Time	Tide <sup>a</sup>	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover <sup>b</sup>	Precip <sup>c</sup>
1/31/2015	14:00						29	23	C	N
2/1/2015	14:00						32	26	S	N
2/2/2015	14:00						26	15	C	N
2/3/2015	14:00						20	15	C	N
2/4/2015	14:00						22	17	C	N
2/5/2015	14:00						20	13	C	N
2/6/2015	14:00						21	13	C	N
2/7/2015	14:00						3	-2	C	N
2/8/2015	14:00						1	-3	C	N
2/9/2015	14:00						21	5	F	N
2/10/2015	14:00						30	24	O	N
2/11/2015	14:00						24	22	O	S
2/12/2015	14:00						29	23	B	N
2/13/2015	14:00						34	25	O	N
2/14/2015	14:00						24	19	S	N
2/15/2015	14:00						31	22	O	S
2/16/2015	14:00						31	27	O	S
2/17/2015	14:00						33	28	O	N
2/18/2015	14:00						36	27	S	N
2/19/2015	14:00						28	25	O	S
2/20/2015	14:00						33	29	O	N
2/21/2015	14:00						36	30	B	N
2/22/2015	14:00						35	30	O	N
2/23/2015	14:00						29	19	C	N
2/24/2015	14:00						28	22	C	N
2/25/2015	14:00						27	22	C	N
2/26/2015	14:00						32	20	O	N
2/27/2015	14:00						27	23	O	F
2/28/2015	14:00						33	27	O	RF
3/1/2015	14:00						29	23	O	N
3/2/2015	14:00						30	27	O	R
3/3/2015	14:00						32	27	O	R
3/4/2015	14:00						28	23	O	S
3/5/2015	14:00						27	23	C	N
3/6/2015	14:00						31	24	O	S
3/7/2015	14:00						28	22	O	N
3/8/2015	14:00						28	7	B	N
3/9/2015	14:00						7	0	C	N
3/10/2015	14:00						16	2	B	N
3/11/2015	14:00						11	1	C	N
3/12/2015	14:00						5	-3	F	N
3/13/2015	14:00						9	-2	C	N
3/14/2015	14:00						10	0	O	N
3/15/2015	14:00						22	12	O	N
3/16/2015	14:00						31	23	S	F
3/17/2015	14:00						34	28	O	N
3/18/2015	14:00						35	27	O	N
3/19/2015	14:00						34	28	C	F
3/20/2015	14:00						37	29	O	N
3/21/2015	14:00		8	E		1008.6	38.2	33.4	S	N
3/22/2015	14:00		6.4	S	1012.3	1012.4	40.6	36.6	S	N
3/23/2015	14:00		12.9	S	1011.2	1007.1	41.7	33.5	F	N
3/24/2015	14:00		17.7	SE	1003.8	1000.3	40.3	34.2	O	N
3/25/2015	9:00		19.3	NE	994.3	988.8	40.9	35.7	O	N
3/26/2015	9:00		1.6	NNE	987.6	988.4	45	40.2	B	N

Date	Time	Tide <sup>a</sup>	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover <sup>b</sup>	Precip <sup>c</sup>
3/27/2015	14:00		32.2	E	988.9	991.3	37.7	34.4	O	N
3/28/2015	14:00		11.3	SSW	992.0	991.3	42.7	37.1	B	N
3/29/2015	14:00		14.5	W	991.7	993.3	46.7	39.9	B	N
3/30/2015	17:00		40.2	SW	997.0	1000.7	35.1	28.2	B	N
3/31/2015	14:00		9.7	WNW	1002.8	1003.8	29	25.6	F	N
4/1/2015	17:00		27.4	W	1007.0	1014.2	38.6	30.7	C	N
4/2/2015	17:00		30.6	W	1020.9	1025.4	34.3	27.7	C	N
4/3/2015	17:00		3.2	S	1028.7	1022.8	36.6	30.5	C	N
4/4/2015	14:00		30.6	WNW	1013.0	1015.7	35.8	33	B	N
4/5/2015	9:00				1007.4	996.3	37.5	35.6	O	R
4/6/2015	17:00		4.8	NNE	990.3	984.7	35.3	32.8	O	S
4/7/2015	17:00		12.9	S	984.0	988.4	31.2	30.5	O	N
4/8/2015	17:00		33.8	E	992.5	979.4	33.7	30	O	S
4/9/2015	9:00		25.7	W	980.0	984.2	34	31.4	B	N
4/10/2015	14:00		54.7	W	990.5	996.3	27.1	24.8	O	S
4/11/2015	14:00		16.1	W	997.5	996.3	27	23.6	B	N
4/12/2015	17:00		16.1	W	997.5	1001.2	30.7	23.1	S	N
4/13/2015	14:00		14.5	S	1004.4	998.9	32.2	28.7	S	N
4/14/2015	9:00		30.6	NNE	993.5	993.8	38.3	31.8	S	N
4/15/2015	9:00		30.6	W	997.7	1001.5	33.8	29.3	F	N
4/16/2015	9:00		25.7	WNW	1005.6	1005.3	33.3	23.1	C	N
4/17/2015	14:00		20.9	NE	1002.9	992.5	37.7	30.2	B	N
4/18/2015	17:00		30.6	E	984.4	983.2	37.4	34.7	O	N
4/19/2015	9:00		12.9	SW	983.0	999.5	35.5	24.2	O	S
4/20/2015	14:00	R	20.9	ESE	1002.5	1004.5	34.7	31.6	S	N
4/21/2015	9:00	F	4.8	S	1005.2	1006.1	37.7	31.4	S	N
4/22/2015	14:00	H	3.2	E	1011.1	1011.5	38.2	32.1	C	N
4/23/2015	9:00	H	27.4	E	1006.1	1001.1	37	33.4	O	N
4/24/2015	14:00	F	17.7	ESE	997.9	999.6	40.6	34.6	S	N
4/25/2015	9:00	H	9.7	ENE	1003.7	1007.8	44.1	34.6	O	N
4/26/2015	17:00	L	29.0	W	1009.2	1004.6	50.9	39.3	C	N
4/27/2015	14:00	R	1.6	NE	1004.0	1004.3	50.3	37.1	C	N
4/28/2015	9:00	R	0.0	S	1003.6	997.1	42.8	28.2	O	F
4/29/2015	14:00	H	19.3	SW	997.9	1000.8	46.2	38.4	S	N
4/30/2015	17:00	F	43.5	SSW	1005.6	1010.8	42.7	33.9	C	F
5/1/2015	14:00	H	6.4	NE	1015.2	1017.0	41.8	34.6	C	N
5/2/2015	17:00	F	12.9	W	1017.9	1019.9	43.7	34.7	O	R
5/3/2015	14:00	H	8.0	E	1020.5	1019.7	42.8	37	O	N
5/4/2015	9:00	F	16.1	ENE	1017.5	1013.4	44.4	30.7	S	N
5/5/2015	17:00	H	19.3	ESE	1012.3	1014.1	44.9	37.8	B	N
5/6/2015	9:00	F	11.3	SSW	1012.2	1007.7	46.3	40	B	N
5/7/2015	14:00	L	1.6	ENE	1005.4	1004.4	43.2	37.8	O	RF
5/8/2015	9:00	H	38.9	WSW	1006.5	1009.1	48.2	38.2	O	N
5/9/2015	14:00	L	1.6	NNW	1010.5	1010.4	51.5	37.9	C	N
5/10/2015	14:00	F	48.2	ESE	1010.8	1006.5	49	40.2	C	N
5/11/2015	14:00	F	12.9	E	1012.5	1017.7	46	36	B	N
5/12/2015	14:00	F	16.1	E	1019.7	1014.1	44	34	C	N
5/13/2015	14:00	F	16.7	E	1002.6	1003.9	45.9	39.5	O	N
5/14/2015	14:00	F	7.4	S	998.6	998.8	44.6	39.8	O	N
5/15/2015	9:00	R	11.1	E	1000.0	1001.5	44.6	39.3	O	R
5/16/2015	14:00	H	38.6	E	1008.8	1007.9	42.5	38.8	O	RF
5/17/2015	17:00	F	22.2	E	1011.2	1011.6	43.8	40.4	O	RF
5/18/2015	17:00	F	0.0		1015.8	1016.2	49.6	40.9	B	N
5/19/2015	17:00	H	42.6	E	1015.7	1010.8	45.2	40.9	O	N
5/20/2015	17:00	H	18.5	E	1005.6	1010.8	45.2	41.2	O	N



Date	Time	Tide <sup>a</sup>	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover <sup>b</sup>	Precip <sup>c</sup>
5/21/2015	9:00	F	12.9	S	1016.3	1019.8	46.9	41.3	S	N
5/22/2015	9:00	H	24.1	E	1016.6	1006.7	46	41.9	O	R
5/23/2015	9:00	H	44.4	E	1006.5	1006.6	45	41.2	B	N
5/24/2015	17:00	L	12.9	ESE	1012.7	1013.9	46.5	40.9	S	N
5/25/2015	9:00	H	1.9	SW	1016.7	1019.5	49.6	41.2	O	R
5/26/2015	17:00	L	24.1	E	1019.6	1019.3	45.6	40.8	S	N
5/27/2015	9:00	R	19.3	ESE	1022.3	1024.9	46.1	42.1	O	RF
5/28/2015	17:00	F	16.1	ESE	1027.8	1026.2	49.1	42.5	S	N
5/29/2015	14:00	H	19.3	ESE	1023.8	1021.9	52.2	44.1	B	N
5/30/2015	17:00	F	14.5	E	1020.8	1019.2	55.1	44.6	F	N
5/31/2015	14:00	H	3.2	NNE	1016.8	1012.8	58.2	47.1	C	N
6/1/2015	9:00	L	3.7	NW	1011.0	1006.5	57.7	46.8	C	N
6/2/2015	17:00	F	0.0		1004.9	1003.7	51.9	44.9	O	N
6/3/2015	17:00	F	3.2	ESE	1000.3	995.5	50.5	42.2	B	N
6/4/2015	14:00	R	11.1	E	991.7	994.6	52.7	45	S	N
6/5/2015	9:00	F	29.6	W	998.1	1002.5	56.8	46.2	C	N
6/6/2015	14:00	L	16.1	ESE	1006.4	1009.7	51	44.7	O	N
6/7/2015	17:00	R	14.5	SE	1011.4	1012.5	47.1	42.8	F	N
6/8/2015	14:00	L	40.7	E	1008.2	1000.1	48.9	44.8	O	N
6/9/2015	17:00	L	5.6	E	993.5	997.8	50.8	45.6	B	N
6/10/2015	17:00	L	33.8	W	1003.6	1010.2	51	43.5	B	N
6/11/2015	14:00	F	11.3	NW	1014.6	1021.9	50	41.5	C	N
6/12/2015	17:00	F	11.3	WNW	1030.3	1034.8	48.4	42.5	B	N
6/13/2015	9:00	R	8.0	WNW	1036.6	1035.6	51.5	43	F	N
6/14/2015	9:00	L	18.5	W	1033.3	1028.9	74.7	49.2	C	N
6/15/2015	9:00	L	19.3	W	1026.6	1021.7	83.6	61	C	N
6/16/2015	17:00	F	22.2	SW	1021.3	1016.5	79.3	64	C	N
6/17/2015	14:00	R	13.0	W	1017.4	1015.6	78.1	62.8	C	N
6/18/2015	9:00	F	18.5	W	1014.4	1010.8	76.4	62.4	C	N
6/19/2015	14:00	L	5.6	E	1011.4	1013.5	70.9	58.5	C	N
6/20/2015	17:00	R	12.9	SE	1017.6	1017.1	63.3	52.4	C	N
6/21/2015	9:00	H	11.1	E	1018.5	1016.7	61.8	50.3	S	N
6/22/2015	17:00	R	3.7	E	1015.7	1016.2	57	50.7	F	N
6/23/2015	17:00	L	0.0		1014.9	1012.6	66.9	53.7	C	N
6/24/2015	14:00	F	1.9	E	1012.2	1009.3	65.8	56.7	C	N
6/25/2015	14:00	F	5.6	W	1008.9	1007.1	70.2	59.4	C	N
6/26/2015	9:00	R	16.7	W	1007.4	1008.3	64.3	51.7	S	N
6/27/2015	9:00	R	18.5	W	1006.5	1007.3	55.2	49.7	B	N
6/28/2015	14:00	F	9.7	W	1009.8	1009.8	62	48.8	F	N
6/29/2015	17:00	F	14.5	W	1011.9	1013.0	65.7	54.3	S	N
6/30/2015	9:00	L	7.4	S	1017.2	1019.6	61	53.1	O	R
7/1/2015	9:00	L	11.1	W	1020.6	1020.5	61.4	54.8	O	N
7/2/2015	9:00	L	5.6	W	1019.9	1019.9	63.3	53.8	F	N
7/3/2015	14:00	R	19.3	SE	1018.9	1013.4	64.3	55.6	C	N
7/4/2015	17:00	H	25.9	E	1009.9	1009.7	60.7	51.5	O	RF
7/5/2015	14:00	L	40.7	E	1012.9	1006.3	60.2	52.9	O	RF
7/6/2015	17:00	R	12.9	SE	1007.0	1007.8	55.7	51.4	O	N
7/7/2015	14:00	L	9.7	S	1011.6	1013.5	56.6	50.6	F	N
7/8/2015	9:00	H	14.8	E	1012.2	1009.8	56	50.5	O	N
7/9/2015	17:00	L	3.2	NW	1010.3	1008.9	56.1	49.5	O	N
7/10/2015	17:00	L	1.6	NNE	1006.9	1005.5	61.5	49.8	C	N
7/11/2015	14:00	F	12.9	SE	1004.3	1001.1	60.4	53.2	B	N
7/12/2015	17:00	F	16.1	ESE	998.7	1000.0	54.7	52.1	O	N
7/13/2015	17:00	F	5.6	E	1002.0	1002.9	58.7	52.3	B	N
7/14/2015	17:00	F	11.1	SE	1006.2	1007.7	58.3	53.5	S	N

Date	Time	Tide <sup>a</sup>	Wind speed	Wind dir	Barom AM	Barom PM	Max temp	Min temp	Cloud cover <sup>b</sup>	Precip <sup>c</sup>
7/15/2015	9:00	L	18.5	NE	1005.8	1002.3	58.5	51.4	B	R
7/16/2015	14:00	R	33.3	NE	996.3	992.0	55.5	50.7	O	R
7/17/2015	9:00	F	31.5	E	1004.2	1015.4	53	50.8	O	R
7/18/2015	9:00	F	9.3	NW	1023.1	1025.5	53.3	49.5	O	R
7/19/2015	9:00	F	14.8	W	1027.9	1027.8	56.3	52.1	B	N
7/20/2015	14:00	L	9.3	SE	1025.0	1013.1	61.4	50.7	O	N
7/21/2015	17:00	R	13.0	NW	1011.5	1011.3	55.4	51.9	O	R
7/22/2015	9:00	H	33.3	W	1005.1	1005.1	53.1	49.9	O	R
7/23/2015	17:00	L	27.8	W	1011.3	1013.3	54.3	50.9	S	N
7/24/2015	14:00	F	0.0	NW	1012.7	1013.4	57.9	51.1	B	N
7/25/2015	9:00	H	13.0	E	1012.1	1007.7	53.5	51	O	RF
7/26/2015	9:00	R	22.5	W	1007.5	1007.7	58.7	51.2	B	R
7/27/2015	14:00	F	24.1	W	1009.5	1009.2	61.7	53.8	C	N
7/28/2015	14:00	F	20.9	W	1011.1	1011.8	62.3	53.9	F	N
7/29/2015	14:00	H	14.5	SSW	1012.8	1014.9	57.5	52.4	F	N
7/30/2015	17:00	F	4.8	NNW	1018.3	1019.8	59.9	51.9	F	N
7/31/2015	14:00	H	20.9	W	1021.1	1020.5	68.9	55	F	N
8/1/2015	17:00	H	20.9	W	1022.6	1021.8	66.3	58	C	N
8/2/2015	17:00	H	0.0		1022.3	1020.5	68.8	54.9	C	N
8/3/2015	14:00	R	3.2	ENE	1019.1	1014.4	71.3	60.7	C	N
8/4/2015	14:00	L	3.2	SE	1012.4	1011.0	73.3	62	F	N
8/5/2015	9:00	H	3.7	NW	1011.3	1012.8	67.9	59.6	C	N
8/6/2015	17:00	R	20.9	SW	1014.8	1013.7	65.4	58.4	C	N
8/7/2015	9:00	H	19.3	W	1013.0	1011.0	61.8	54.9	C	N
8/8/2015	9:00	H	14.8	S	1008.7	1003.8	58.3	54.4	O	R
8/9/2015	9:00	R	18.5	E	999.5	1007.5	57.7	52.7	O	RF
8/10/2015	9:00	R	33.8	WNW	1011.2	1011.4	55.5	47.7	C	N
8/11/2015	17:00	F	25.7	W	1011.8	1013.6	56.7	49.9	F	N
8/12/2015	14:00	H	8.0	NW	1018.0	1018.8	57.7	51.9	O	N
8/13/2015	9:00	L	0.0	NW	1019.8	1020.4	56.7	53.1	O	N
8/14/2015	9:00	L	0.0						O	N

<sup>a</sup> F = falling; H = high; L = low; R = rising.

<sup>b</sup> B = broken; C = clear; F = fog; O = overcast; S = scattered.

<sup>c</sup> F = fog; N = none; R = rain; S = snow.



