

Kachemak Bay Shorebird Monitoring Project: 2014 Report



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With much support from Kachemak Bay Birders
<http://kachemakbaybirders.org>

October, 2014

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Cover photo: Least Sandpiper taken by Landon Bunting.

I. Executive Summary

In May 2014, Kachemak Bay Birders (based in Homer, Alaska) completed its sixth consecutive shorebird monitoring project. The main purpose of this citizen science project is to attain a better understanding of the status of shorebird populations in the Kachemak Bay area, particularly during spring migration. We continued our efforts to include monitoring at the nearby Anchor Point/River and the Kasilof River. By comparing our current Homer Spit data to monitoring data collected by former Homer resident George West, who conducted counts of Homer Spit shorebirds during the 1980s and 1990s, we will have a better understanding of population trends. Secondary purposes for this project are: 1) to contribute information that might be useful to others assessing shorebird populations across the entire Pacific Flyway; and 2) to use the monitoring data to help protect Kachemak Bay/Homer Spit shorebird habitat.

Between April 17, 2014 and May 27, 2014 a record number of 45 volunteers participated in one or more of the this year's shorebird monitoring sessions: 35 in the Homer Spit area, 5 at Anchor Point (including one who volunteered at both Anchor Point and Beluga Slough), and 6 at the Kasilof River. At the Homer Spit we simultaneously monitored for two hours once every five days when the outgoing tide reached 15.0 feet (or at high tide if less). These tidal conditions optimize shorebird viewing opportunity for this area. In nine monitoring sessions we observed 25 species of shorebirds and counted a total of approximately 13,319 individual shorebirds. Top ten taxa seen include Western Sandpiper (4,000), Red-necked Phalarope (3,006 of which 3,000 were seen by boat), Surfbird (2,644), Dunlin (1,530), LESA/WESA/SESA which is a lumping of *Calidris* species (987), Semipalmated Plover (251), Least Sandpiper (195), Black-bellied Plover (114), Pectoral Sandpiper (98), and Black Turnstone (56). We noted some minor disturbances of shorebird flocks by loose dogs and low-flying aircraft, particularly helicopters.

The number of shorebird species we counted this year (25) is the same as the average for all six years of monitoring. One new species seen this year were four Red Phalarope mixed in with a large flock of Red-necked Phalarope at the mouth of the Bay. We also saw a Red Knot, which is only the second time we have observed this late migrant during monitoring. The number of Surfbirds this year was about twice our average. A flock of about 1,500 was seen separate from our monitoring. The total number of individual shorebirds counted this year (13,139) was about average for our six years of effort (14,832). Unlike previous years, when a couple of pulses of migrating shorebirds would arrive at Kachemak Bay, this year there was just one continuous pulse. It appears that the weather, which was benign throughout the migration, may have been a primary factor. Since there was no need for shorebirds to wait out a storm, their stopover seemed to be for no more than a tide or two.

Protocol shorebird monitoring data (once every five days) was compared to daily observations during the peak of shorebird migration (May 1-14). These other sources of data were; 1) daily spot checks on the Homer Spit and 2) daily eBird submissions. Although one of our scheduled monitoring dates was only two days off the peak, based on this data, it appears that scheduled monitoring accounts for about one-quarter of the shorebirds that stopped over at the Homer Spit this year.

As in previous years, we compared our data to George West's seven years of shorebird monitoring data (1986, 1989-1994). West saw a total of 23 shorebird species. Over the past six years of monitoring we have seen 31 species. Perhaps our more intense coverage explains our higher number of species. West's average annual count was 90,326 shorebirds. But comparison of this data with ours requires some adjustment. West monitored daily and our protocol calls for monitoring once every five days. Consequently, for the comparison we included only every fifth day of West's data. Also, since West's observations were only on the Homer Spit, we need to exclude data from the Beluga Slough and Islands and Islets sites. Based on these adjustments, West's average shorebird count was 18,436. Our adjusted count for this year was 9,402 shorebirds. Our average for six years was 11,115 shorebirds; or 60% of West's

In addition to the Homer Spit area we also continued shorebird monitoring at the mouths of the Anchor and Kasilof Rivers. The Anchor River is located at the northern edge of Kachemak Bay about 15 miles north of Homer. The volunteers that monitored here followed the same protocol used at Homer Spit. They reported seeing a total of 19 species of shorebirds. The count this year for the Anchor River amounted 5,476. However, this includes a flock of about 5,000 Red-necked Phalarope that were seen offshore on May 12th.

The Kasilof River empties into Cook Inlet about 40 miles north of the Anchor River. The protocol for this site was to monitor the incoming tide starting when it was about half-way between low and high tide. Monitors at the Kasilof River saw 15 species of shorebirds. On May 16, which was a supplemental day, they saw a Baird's Sandpiper. The total count for the nine scheduled monitoring days was 958 shorebirds. This is considerably less than last year, due primarily to not seeing as many sandpipers. It is speculated that because of the mild weather, many shorebirds did not bother to stopover at the Kasilof River this year. Observations for the Kasilof River were not that much different than the Anchor River if you deduct out the large flock of Red-necked Phalarope seen off-shore of the Anchor River.

Plans are to continue this effort next year. Since all monitoring is based on volunteer effort, the possibility of agency budget cuts is not a threat to us.

I. Introduction

A. Overview of Kachemak Bay

Kachemak Bay is a unique and biologically rich portion of Alaska’s Cook Inlet. The recent Management Plan for the Kachemak Bay National Estuarine Research Reserve (KBNERR) provides a good overview of this bountiful environment (KBNERR 2012). Excerpts below, with minor edits, emphasize portions that pertain to shorebirds. Note that KBNERR is a conservation designation that does not include actual ownership of land or water or regulatory authority.

The Bay is 63 km (39 mi.) long and 39 km (24 mi.) wide at its entrance between Anchor Point and Point Pogibshi, with more than 515 km (320 mi.) of shoreline. The Homer Spit projects 7.2 km (4.5 mi.) out into the Bay, dividing it into an ‘inner’ and ‘outer’ Bay. The inner Bay is east of Homer Spit to the head of Kachemak Bay, and the outer Bay is west of Homer Spit to the mouth of Kachemak Bay. The Bay is bordered on the north by the rolling hills and bluffs of the Kenai lowlands, and on the south by the Kenai Mountains, with the watershed encompassing more than 2,658 km² (1,026 mi.²).

Kachemak Bay has two State Critical Habitat Areas: Kachemak Bay CHA (926 km² or 226,400 ac.) and Fox River Flats CHA (27 km² or 7,200 ac.). The bay also has parts of two state parks; Kachemak Bay State Park and Kachemak Bay State Wilderness Park.

The climate in the Kachemak Bay watershed is maritime and characterized by a relatively moderate seasonal range of temperatures, high humidity, and ample rain and snow. The Bay and the Pacific Ocean minimize large extremes in the air temperature, resulting in mild winters and cool summers. Annually, the mean Homer temperatures vary from the high of 15°C (60°F) in summer to the low of 5°C (30°F) in winter. Surface

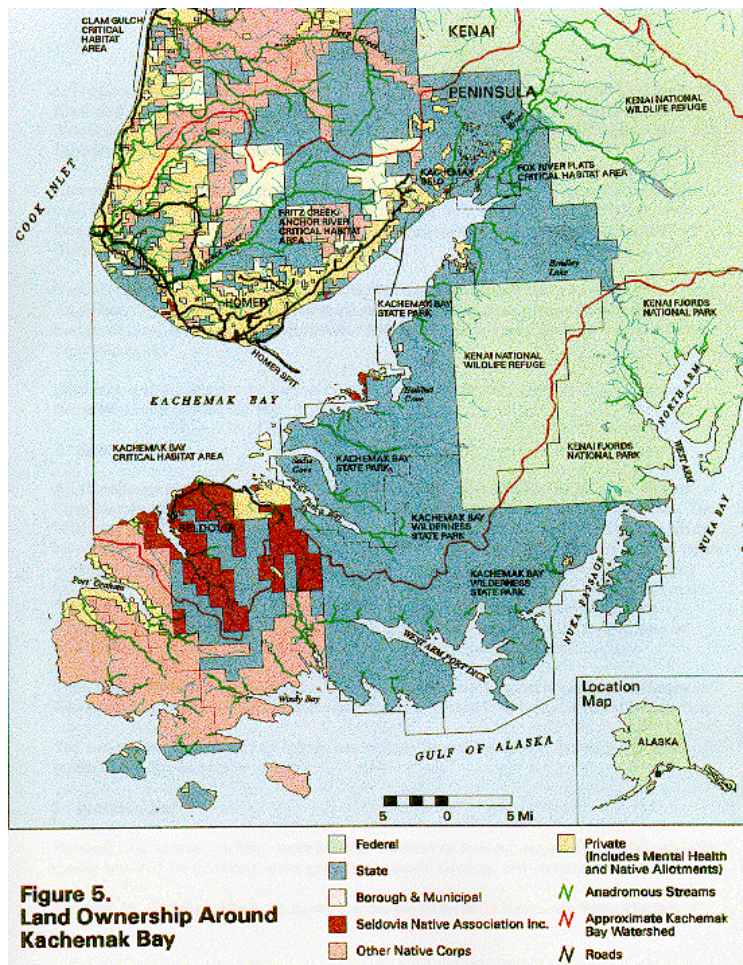


Figure 2. Kachemak Bay Land Ownership

water temperatures in the Bay range between a high of 12.8°C (55°F) in the summer, and a low of -2°C (28°F) in the winter. Most of the 0.7 m (25 in.) of annual precipitation occurs in late summer and fall. The majority of snow falls from November to March.

The head of Kachemak Bay is characterized by extensive tidal flats, braided drainages, and marshlands. The northern shore consists of cliffs composed mostly of sand and clay leading down to shallow mud flats. The southern shoreline consists of hard rock cliffs and deep embayments. Many islands are also found along the southern shore. Several major glacial streams discharge into inner Kachemak Bay: Fox, Martin, Wosnesenski, and Bradley rivers; and Sheep, Battle, Halibut, Portlock and Grewingk Creeks. In addition, several minor nonglacial streams discharge into Kachemak Bay along the southern shore. The northern coast is drier, and only eight small nonglacial streams of limited drainage enter the inner Bay from that side.

Kachemak Bay and the adjacent Cook Inlet are known for their amazing tidal ranges. Kachemak Bay has an 8.7 m (28.5 ft.) tidal range that results from the complex geomorphology of the Gulf of Alaska and adjacent Cook Inlet. Tides in Kachemak Bay and Lower Cook Inlet are semi-diurnal with a significant inequality between successive low waters. This means there are two high tides within a lunar (24 hour 50 minute) day, one of which will generally exceed the other by several feet. The mean diurnal range in Kachemak Bay is 4.7 m (15.4 ft.) at Seldovia. Highest tides exceed 6.9 m (22.5 ft.) and the lowest tides are about -1.8 m (-6.0 ft.).

The Homer Spit is a striking geologic feature of Kachemak Bay, and it also has a dramatic impact on the Bay's circulation. The Spit bisects the Bay into inner and outer zones. These zones differ in freshwater influence and in wave action. The outer Bay is a mixing basin for the cold, saline, nutrient-rich Alaska Coastal Current (ACC) which enters from the southeast via Cook Inlet, and the fresh glacial water that drains from the Bay's tributaries.

It is an environment typified by high wave energy that receives the full force of swells from across the Inlet. The inner Bay has a lower salinity because the influence of freshwater tributaries is stronger in the semi-contained water found behind the Homer Spit. The inner Bay also remains calmer because the Homer Spit blocks the swells from the Inlet. Water masses from the inner and outer zones of the Bay meet at the end of the Spit during the daily tidal cycle.

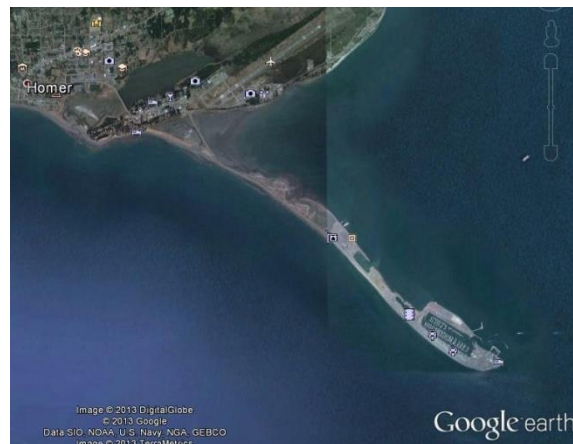


Figure 2. Aerial view of Homer Spit

From 1500-m (5,000 ft.) high alpine peaks to 176-m (576 ft.) deep sea trenches, Kachemak Bay is home to a diversity of flora and fauna. In Kachemak Bay and its watershed, the following species have been documented: 11 species of marine mammals, 36 species of terrestrial mammals, 244 species of birds, 1 species of amphibian, 120 species of fish, 404 species of marine invertebrates, 125 species of marine algae, and 663 species of vascular plants. There are undoubtedly additional species that have yet to be documented, especially fish, invertebrates, marine algae and plants. Kachemak Bay's varied coastline, numerous freshwater sources, and diverse geomorphology create a microcosm of Southcentral Alaskan habitat types.

Rocky habitats support the most diverse aquatic communities. Invertebrates are most abundant and diverse where currents are high, and least abundant and diverse in slow currents. Jakolof Bay supports the most robust subtidal macroinvertebrate communities known in Southcentral Alaska. Most of the macroinvertebrates are sedentary filter feeders, such as clams. Grazers, such as chitons and sea urchins, are abundant. Abundant predatory macroinvertebrates are primarily sea stars, snails, and hermit crabs.

Invertebrate abundance in sand and mud substrates is strongly influenced by seasonal conditions, and dominance patterns are influenced by tidal exposure. Most invertebrates in sand and mud substrates are deposit or suspension feeders. Many species are more abundant at lower tidal levels; however, species composition does not appear to be affected by tide stage. Mud flats have greater species richness, biomass, and diversity of perennial species than sand beaches and, consequently, attract the highest numbers of shorebirds and ducks.

Kachemak Bay has several populations of clams, including Pacific littlenecks, butter clams, surf clams, various cockles, razor clams, and several *Macoma* (Baltic, stained, chalky, oblique, and bent-nosed). Hard-shelled clams can be found in the lower intertidal region on protected gravel-sand-mud beaches. Soft-shelled clams are usually found in areas of mixed sand and mud, or mud and gravel.

Two hundred forty-four species of birds have been identified on and around Kachemak Bay. Kachemak Bay is the most important marine bird habitat in Lower Cook Inlet, with no comparable areas in Upper Cook Inlet. During winter months over 90% of the marine birds in Lower Cook Inlet are found in Kachemak Bay. Kachemak Bay is also important for avian feeding, nesting, rearing, and migratory staging throughout the year.

In 1996, Kachemak Bay was dedicated as an international site of the Western Hemisphere Shorebird Reserve Network. An international site designation indicates that the site hosts greater than 100,000 shorebirds or 10% of a flyway population.

B. Overview of Anchor River

The Anchor River flows into Cook Inlet about a mile north of Anchor Point, the most northern extent of Kachemak Bay. This area is popular for sport fishing and beach walks. Beach walks provide excellent opportunity to observe a diversity of waterbirds, especially shorebirds. The

State of Alaska-owned Anchor River State Recreation Area (SRA) includes 213 acres of forested riparian habitat, estuary, and campgrounds. In addition, the Kachemak Heritage Land Trust owns about 146 acres of river front property on the lower Anchor River

Between the mouth of the river and Anchor Point is an uninhabited but road accessible barrier beach. This public beach is considered a hotspot by local birders. The intertidal area and estuary behind the barrier beach attract a diversity of migrating shorebirds as well as a few breeding shorebirds.

Shorebird monitoring began at the SRA parking lot where the road ends (lower left hand corner of Figure 2). Monitors walked north on the ocean side to the mouth of the river watching for shorebirds in the intertidal area and then returned on the inland side which is mostly wetlands.

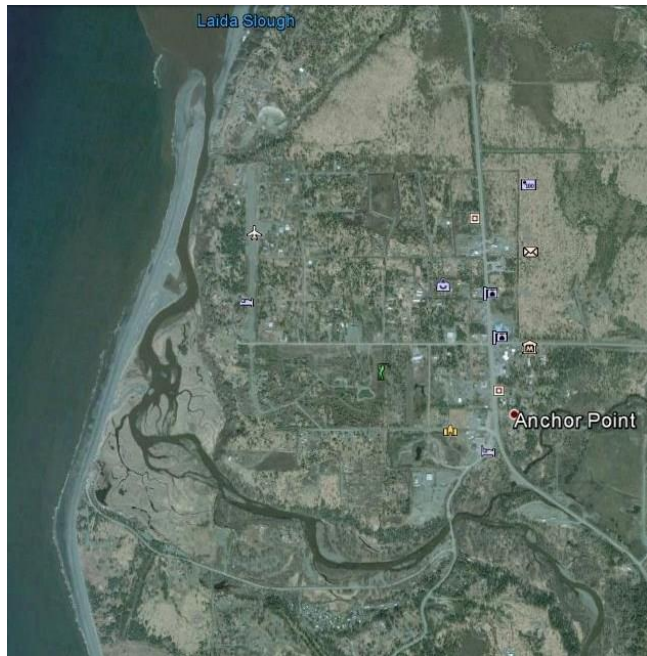


Figure 3. Aerial view of Anchor Point/ River

C. Overview of Kasilof River

The Kasilof River is 62 miles north of Homer. It begins at Tustumena Lake, the largest lake on the Kenai Peninsula, and drains into Cook Inlet. The mouth of the river is owned by the Alaska Department of Natural resources and classified as a Special Use Area

The shorebird survey area is a very rich estuarine delta where the Kasilof River meets Cook Inlet. The inland section of this area is riddled with small ponds and sloughs. These areas provide important stopover feeding areas for migrant waterfowl and shorebirds. They also support a healthy breeding area for waterfowl in the summer months.

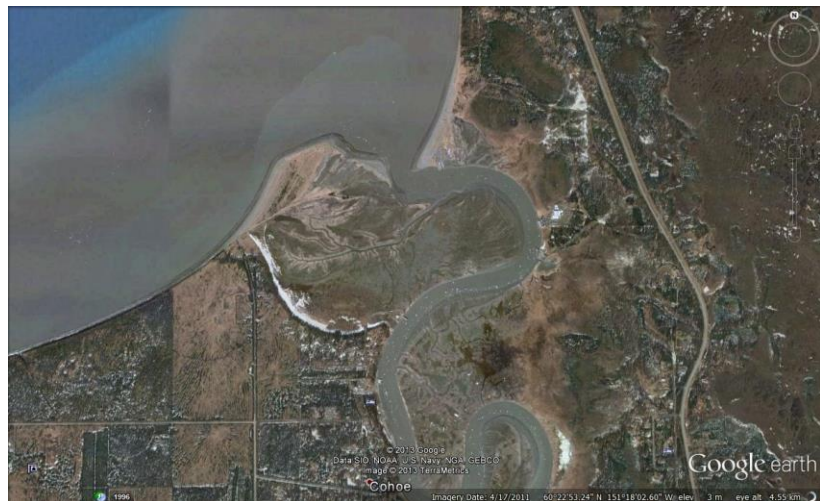


Figure 4. Aerial view of the mouth of Kasilof River

The saltwater mud flats on the north bank of the river are a critical feeding area for wintering Rock Sandpipers and for migrating shorebirds in the spring and fall. At low water the waterline often retreats over one mile out into the Cook Inlet exposing silty, muck laden with small clams and polychaete worms.

The survey area consisted of these mud flats on the north bank of the river. Survey protocol was to be on site at mid-flooding tide and count feeding shorebirds, until the north bank mud flats were covered by water. At this point, the survey was terminated as shorebirds would be forced to move far inland and not available for counting.

D. History of Kachemak Bay Shorebird Monitoring Project

For the past six years Kachemak Bay Birders (a network of birders who live in the Homer, Alaska area) have been monitoring the spring migration of shorebirds that stopover at Kachemak Bay every year from late April to mid-May. This effort has focused on the Homer Spit portion of Kachemak Bay because of its easy accessibility and excellent variety of habitat for shorebirds. The purpose of this citizen science monitoring project is to provide a better understanding of the status of shorebird populations in the area. By comparing our current data to monitoring data collected by former Homer resident George West, who conducted counts of Homer Spit shorebird species and numbers during the 1980s and 1990s, we are able to obtain a better understanding of current population trends. These trends will be of local interest and also contribute to Pacific Flyway monitoring efforts that seek a broader understanding of shorebird populations.

The first year of this project began during the 2008-2009 winter, soon after Kachemak Bay Birders was formed. A committee was set up to draft a strategic plan and seek advice on the selection of proper protocol. We were advised to use the International Shorebird Survey (ISS) protocol but found that some modification was needed, primarily because it called for monitoring once every 10 days. While this may be suitable in areas where shorebirds overwinter, it wasn't suitable for monitoring the Kachemak Bay spring shorebird migration where some species stay no more than a couple of days at most.

2009 - The project got underway in the spring of 2009. A team of 16 volunteers were assigned sites on or near the Homer Spit. The teams recorded shorebird observations once every five days, starting April 16 and ending May 28. Monitoring times were based on having consistent tide levels. It was decided that the best time for monitoring was when the outgoing tide was approaching 15.0 feet. Also, since this was a team effort rather than individual effort, monitoring was done simultaneously at all but one site which monitored nearby waters by boat. A caucus after each session reviewed observations. A total of 24 species of shorebirds and approximately 7,406 individual birds were observed. Data was entered into eBird-ISS. A report entitled *Kachemak Bay Shorebird Monitoring Project: Report for 2009 Spring Survey* (Matz 2009) gives further explanation on the protocol as well as a presentation and analysis of the data. The report also compared 2009 data to that obtained by George West about two decades earlier. The report included a Kachemak Bay species list, the forms used by observers, data by session for each site, and maps as well as aerial photos of each monitoring site. This report (and all others) is only available in electronic form and can be downloaded from <http://kachemakbaybirders.org/>.

2010 – The second year of monitoring followed a similar protocol. We experienced a slow start with spring migration, perhaps because of abnormally cold weather for the whole region. However, disappointing results were saved by a late surge of Western Sandpipers and Dunlin between May 10 and 15, creating a bimodal distribution in counts for these species. This surge resulted in more birds being observed in 2010 than in 2009. In 2010 we recorded 9,845 shorebirds during the monitoring effort but one less species (23). Nevertheless, the total number of birds observed for 2009 and 2010 was significantly less than surveys done in the late 1980s and early 1990s.

A concern we had was whether migrating shorebirds were passing through the Homer Spit area between scheduled monitoring dates, thus not being included in our data. To test this possibility we did daily spot checks at Mud Bay for two weeks during the expected peak of the migration. Considering that scheduled monitoring for Mud Bay on May 5 reported 500 Western Sandpipers and spot checking the day before and after reported 1,100 and 700 Western Sandpipers respectively, it did appear that some flocks of shorebirds may be arriving and leaving between scheduled monitoring dates.

In addition to the spot checking, we sought out other shorebird observations at the time, such as list-serve birding reports. The supplemental data resulted in a total of 20 shorebird species being observed on the Homer Spit and approximately 8,600 individual shorebirds. While these supplemental data cannot be directly compared to the scheduled monitoring data, it did give us a more complete picture of the Homer Spit shorebird migration. Our scheduled monitoring dates missed some flocks of migrating shorebirds, but not by an order of magnitude or more.

We were also concerned about the disparity between our 2009 data set and West's data set. Questions that we felt needed to be answered were whether: 1) the ground-based survey results collected in 2009 represent a new "norm" or were they simply a low year, and 2) have shorebirds moved to other areas of the Bay.

To gain insight into question #2, we obtained funding from a U.S. Forest Service Copper River International Migratory Bird Initiative (CRIMBI) grant for an aerial shorebird survey of Kachemak Bay. Concurrent with our ground-based monitoring, four volunteers flew the 320 mile long shoreline of the Bay five times at low elevation, once every three days starting May 1. Identification was by shorebird size, not species. While we couldn't identify species of shorebird, we could clearly distinguish between flocks of shorebirds, gulls and ducks.

Our first flight on the afternoon of May 1 observed only a couple of small flocks (tens) of shorebirds at Homer Spit and other parts of Kachemak Bay. The next morning an email alert reported about a thousand newly arrived sandpipers near the Homer Spit. If these birds had first visited the upper part of the Bay, we would have seen them the previous afternoon. While just one observation, it did indicate that most shorebirds seen at the Homer Spit are not likely the same shorebirds seen in other parts of the Bay.

Our main purpose for doing the aerial surveys was to determine the spatial and temporal number of shorebirds using Kachemak Bay during spring migration. Because of the late migration, our

first four aerial surveys resulted in few observations. But the pulse of shorebirds that finally arrived for the last aerial survey indicated that migratory shorebird concentrations were dispersed throughout Kachemak Bay where there were suitable beaches. While the Homer Spit is certainly an attractive area for shorebirds, it is not the only place in the Kachemak Bay area where migrating shorebirds concentrate. However, with the exception of Seldovia Bay where we saw nearly two thousand shorebirds, the flocks were not very large.

One of our objectives in 2010 was to attempt a rough estimate of the number of shorebirds that visit Kachemak Bay and Homer Spit during the spring shorebird migration. Observers estimated that during the aerial surveys there were more shorebirds in other parts of the Bay (3,440) than at the Homer Spit (1,403), but not significantly larger concentrations. Based on our limited information, it appears that about 10,000 shorebirds visited Homer Spit in the spring of 2010 and at least that many visited other parts of Kachemak Bay. Though just a rough estimate at best, this is substantially less than that mentioned in reports from a decades ago which said that 100,000 to 1,000,000 shorebirds stopover in Kachemak Bay during spring migration.

Our online report for 2010, *Kachemak Bay Shorebird Monitoring Project:2010 Ground and Aerial Survey Report* (Matz 2010), provides an overview of the environmental features of Kachemak Bay, designated conservation areas within the Bay, a brief review of the earlier shorebird studies that were conducted in Kachemak Bay, protocols for both ground-based and aerial monitoring, observation details, trends with comparison to West's data, and public presentations of the data.

2011 - The 2011 project followed the ground-based monitoring protocol used the previous two years. Due to lack of funding, no aerial surveys of the Kachemak Bay shoreline were done this year.

In 2011, between April 14 and May 24, a total of 18 volunteers participated in monitoring four sites on Homer Spit, plus nearby Beluga Slough, and by boat the Islands and Islets on the south side of the Bay. The number of shorebird species observed in 2011 (25) was higher than 2009 (24) or 2010 (23). The total number of individual shorebirds counted in 2011 (16,007) was also higher than 2009 (7,406) or 2010 (9,845). The biggest increase was Western Sandpipers and Dunlin, as well as Red-necked Phalarope, Surfbirds, and Rock Sandpipers (which overwinter at Kachemak Bay). Despite the increase, the 2011 count was still substantially less than that observed by West. Adjusting West's daily counts to match our five day counts, he saw an average of 18,436 individual shorebirds per year during his seven years of survey. Including only the Homer Spit sites and matching dates, we counted 8,858 individual shorebirds in 2011. The adjusted count for 2009 was 4,994 individual birds and in 2010 it was 7,314.

Supplemental monitoring continued in 2011. From daily spot checks on the Homer Spit during the two week peak of migration we were able to establish that we did miss some flocks of sandpipers, but were able to get some estimate as to the amount of leakage. Looking at all the data, the amount of leakage is probably no more than 2-3 times our monitoring count. The report for this year (Matz 2011) provides detailed spreadsheets of the count for each site. A review of our three years of monitoring appeared in a peer reviewed journal, the *Wader Study Group Bulletin* (Matz et al 2012).

2012 - The 2012 project followed the monitoring protocol used in previous years for the Homer Spit area. Weather conditions this spring were ideal despite a severe winter; mild temperatures with no strong storms.

Between April 14 and May 24 a total of 28 volunteers monitored four sites on the Homer Spit, one site at nearby Beluga Slough, and by boat the Islands and Islets on the south side of Kachemak Bay. We observed 27 species of shorebirds and counted a total of approximately 23,972 individual shorebirds. The top 10 species included Western Sandpiper (16,375), Surfbird (2,919), Red-necked Phalarope (1,501 all but one seen by boat), Dunlin (1,205), a lumping of unidentified *Calidris* (844), Black-bellied Plover (354), Dowitcher (153 of which almost all were Short-billed), Semipalmated Plover (142), Least Sandpiper (103), and Pacific Golden Plover (95). There were no significant disturbances from humans, dogs or predators (e.g. raptors).

The number of shorebird species we counted this year was higher than in 2009 (24), 2010 (23), or 2011 (25). Also, the total number of individual shorebirds counted was significantly higher than in 2009 (7,406), 2010 (9,845), or 2011 (16,007). A review of our daily spot check data taken at prime sites during the peak of migration revealed a significant reason; in 2012 the peak of three large pulses of migrating shorebirds occurred on the same day as our monitoring date. In previous years, the relatively short pulse never peaked on a scheduled monitoring date thereby not including in the count a significant percentage of shorebirds that stopped at the Homer Spit.

2013 - The 2013 project followed the monitoring protocol used in previous years for the Homer Spit area. This year we extended our efforts to include monitoring at the nearby Anchor Point/River and the Kasilof River.

Between April 13, 2013 and May 23, 2013 a total of 33 volunteers (including 9 teenagers) monitored four sites on the Homer Spit, one site at nearby Beluga Slough, and by boat the Islands and Islets on the south side of the Bay. We observed 23 species of shorebirds and counted a total of approximately 18,623 individual shorebirds. Top ten taxa seen include Western Sandpiper (7,964), LESA/WESA/SESA which is a lumping of *Calidris* species (5,305), Dunlin (2,548), Surfbird (748), Red-necked Phalarope (703 with all but three seen by boat), Dowitcher *sp.* (344 of which most were probably Short-billed), Black-bellied Plover (221), Pectoral Sandpiper (146), Least Sandpiper (128), and Pacific Golden Plover (96). We noted some minor disturbances of shorebird flocks from loose dogs and low-flying aircraft.

The number of shorebird species we counted this year (23) was less than most previous years; 24 in 2009, 23 in 2010, 25 in 2011, and 27 in 2012. However, this year for the first time we saw Bristle-thighed Curlew, which is considered accidental for Kachemak Bay, on two successive monitoring sessions. The total number of individual shorebirds counted this year (18,623) was above average (15,171) for our five years of effort: 7,406 in 2009, 9,845 in 2010, 16,007 in 2011, and 23,972 in 2012. But it seemed like there were about as many shorebirds this year as last year. A review of our daily spot check data taken at prime sites during the peak of migration revealed that unlike 2012, when three of our scheduled monitoring dates happened to coincide with the peak of a pulse of shorebird arrivals, this year only the shoulder, not the peak, of the largest pulse was during a scheduled monitoring date.

In comparing our five years of shorebird monitoring data to George West's seven years (1986, 1989-1994), we have seen a total of 30 shorebird species and West reported a total of 23 shorebird species. Perhaps our more intense coverage explains our higher number of species. West's average annual count was 90,326 shorebirds. But comparison of this data with ours requires adjustment. West monitored daily and our protocol calls for monitoring once every five days. Consequently, for the comparison we included only every fifth day of West's data. Also, since West's observations were only on the Homer Spit, we needed to exclude data from the Beluga Slough and Islands and Islets sites. Based on these adjustments, West's average shorebird count was 18,436. Our average for five years was 11,458 shorebirds; or % of West's

The four volunteers who monitored the Anchor River followed the same protocol that was used at the Homer Spit thereby avoiding any double-counting. They reported seeing a total of 21 species of shorebirds and counted 1,065 individual birds. The top ten taxa were: Western Sandpiper (606), Whimbrel (75), Dunlin (67), yellowlegs sp. (45), Greater Yellowlegs (44), Black-bellied Plover (40), LESA/WESA/SESA (29), Lesser Yellowlegs (20), Dowitcher sp. (19), and Long-billed Dowitcher (18). Although several Bristle-thighed Curlews were frequently seen at the Anchor River this spring, none were observed during monitoring.

The five volunteers who monitored the Kasilof River used a different protocol. They started when the incoming tide was half way to reaching high tide and not always on the same days as Homer Spit monitors. Nevertheless, with nine monitoring sessions, they had a similar level of effort. They saw a total of 18 species of shorebirds and counted approximately 21,363 individuals. The count for the Kasilof River is high enough to be considered a Western Hemisphere Shorebird Reserve Network Site (WHSRN) of regional importance. The top ten taxa seen were Western Sandpiper (16,950), Dunlin (3,338), Short-billed Dowitcher (620), Least Sandpiper (209), Black-bellied Plover (59), Whimbrel (43), Long-billed Dowitcher (42), Greater Yellowlegs (34), Hudsonian Godwit (25), and Lesser Yellowlegs (8).

III. 2014 Monitoring Protocol

A. ISS Modified Protocol

As in previous years, our shorebird monitoring protocol for 2014 used a modified version of the ISS protocol (www.shorebirdworld.org/). Differences were:

1. Rather than collect data individually from one site, our protocol used a team effort to simultaneously cover five sites on or near Homer Spit. Four sites are actually on Homer Spit and one site (Beluga Slough) was nearby. In addition we obtained observations the same day from a charter boat captain (Karl Stoltzfus) who volunteered to monitor the other side (south) of the Bay during scheduled trips. This site is called Islands and Islets.
2. Based on ISS protocol, monitoring frequency should be once every 10 days. However, migrating shorebirds tend to spend less time at Alaska stopover sites than in the Lower-48. Studies of radio-tagged migrating shorebirds that stage in the Cooper River Delta found these birds stayed only 2 to 4 days (Warnock et al 2005). Other studies of radio-tagged shorebirds migrating through the Yakutat Forelands found that the stopover duration was just one day for 14 out 15 (93.3%) radio-tagged Western Sandpipers and two days for one (6.7%) bird (Andres et al 1998). Considering both the need to monitor more frequently than once every 10 days and to avoid double-counting by monitoring too often, we settled on monitoring once every five days. This also agreed with the level of effort that volunteers were willing to commit; always an important factor with citizen science projects.
3. Monitoring at the mouth of the Anchor River continued for the second year using the same protocol as used on Homer Spit. Monitoring at the same time avoids double-counting.
4. Volunteers who monitored the mouth of the Kasilof River decided that the optimal viewing time to begin monitoring there was at mid-tide on a rising tide. Their monitoring dates this year were the same as used on Homer Spit.
5. The project coordinator, in addition to writing a combined report for each session, gathered the individual site reports and entered each in the ISS portal for eBird.

B. Kachemak Bay Monitoring Sites

Monitoring sites and how the count was conducted (stationary, walking, or by boat) are listed below with a brief description of the primary type of habitat. Our 2009 report on Kachemak Bay Birders web site has aerial photos of each monitoring site.

- Homer Spit
 - ✓ Mud Bay – stationary. Shallow, intertidal area with extensive mudflats protected by the Spit from storm surges.
 - ✓ Mariner’s Park Lagoon – stationary. An upper intertidal area that floods only at higher than average tides.
 - ✓ Mid-spit area including Green Timbers and Louie’s Lagoon – walking. Mostly a grassy upper intertidal area that floods only at high tides.

- ✓ Boat harbor and Lands' End – walking. The rock armor protecting the harbor creates an environment favored by birds such as Surfbirds.
- Beluga Slough – walking. An estuary with a stream that originates from artificially created Beluga Lake.
- Islands and Islets on south side of Kachemak Bay – boat. All these areas are essentially rock outcroppings with little or no beach.
 - ✓ Gull Island
 - ✓ Sixty-foot Rock
 - ✓ Cohen Island
 - ✓ Lancashire Rocks near Neptune Bay

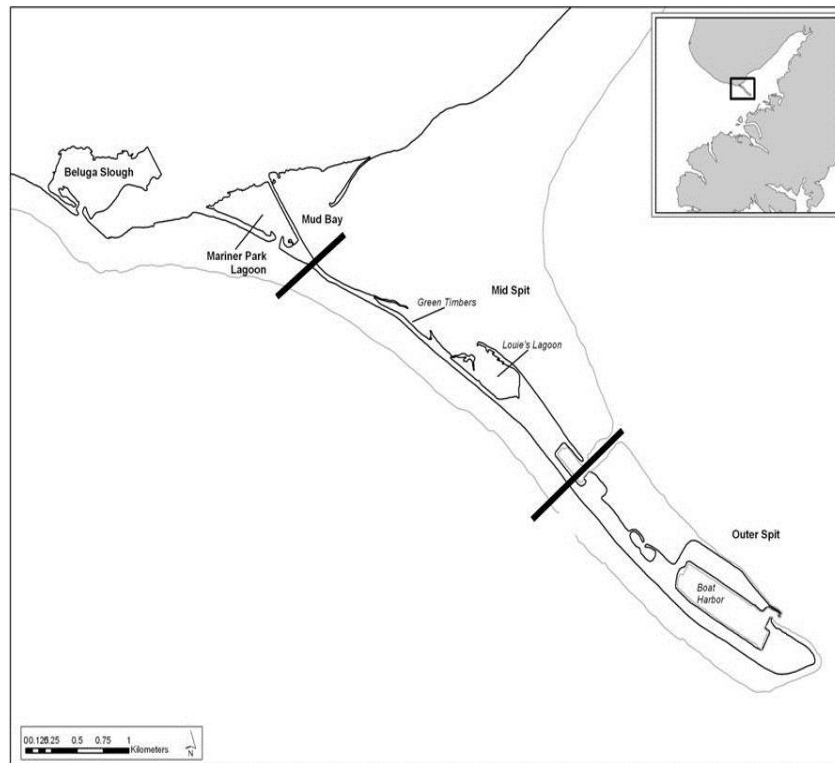


Figure 5. Illustration of Homer Spit shorebird monitoring sites for 2013.

The Anchor River and Kasilof River monitoring sites were described in the Introduction.

C. Monitoring Dates and Times

The most important factor in establishing survey times is the tide. Monitoring is not conducted during higher than average high tides since shorebirds often leave the intertidal area at this time. Conversely, low tides put shorebirds way out of viewing range (more than a mile). Based on our previous experience, the best time to begin monitoring in Kachemak Bay is when the outgoing tide approaches 15.0 feet, or at high tide in cases when high tide doesn't reach this level. Not only do these conditions provide good viewing opportunity but also coincide with shorebird foraging activity. The times used to begin monitoring are based on the quarter hour.

Tide data is taken from the Seldovia District tide tables. The correction factor for Homer is that high tide occurs five minutes later than Seldovia, which is inconsequential for monitoring purposes. The correction time for Anchor Point is plus 29 minutes.

Table 1. 2014 Homer Spit and Anchor River monitoring times and tides

Date	Starting Time		High Tide	
	Time	Tide (ft.)	Time	Tide (ft.)
Thursday, April 17	6:45 PM	15.3	5:02 PM	18.5
Tuesday, April 22	9:00 AM	15.1	8:25 AM	15.4
Sunday, April 27	3:45 PM	15.7	2:15 PM	18.3
Friday, May 2	7:00 PM	15.6	5:45 PM	17.2
Wednesday, May 7	8:45 AM	12.5	8:57 AM	12.5
Monday, May 12	3:00 PM	15.5	2:02 PM	16.4
Saturday, May 17	7:15 PM	15.4	5:38 PM	18.4
Thursday, May 22	9:15 AM	14.5	9:37 AM	14.6
Tuesday, May 27	4:15 PM	15.3	2:50 PM	17.4

Starting times are from http://www.tidesandcurrents.noaa.gov/data_menu.shtml?stn=9455500 Seldovia, AK&type=Tide+Data.

As shown by Table 2, the Kasilof River monitors had different starting times.

Table 2. 2014 Kasilof River monitoring times and tides

Date	Monitoring Times		High Tide	
	Start	Finish	Time	Tide (ft.)
Thursday, April 17	3:00 PM	4:30 PM	6:56 PM	20.4
Tuesday, April 22	7:30 PM	9:00 PM	11:51 PM	16.9
Sunday, April 27	12:20 PM	1:20 PM	4:09 PM	20.2
Friday, May 2	3:40 PM	5:10 PM	7:39 PM	19.1
Wednesday, May 7	7:50 PM	9:20 PM	*12:11 AM	15.3
Monday, May 12	12:00 AM	1:30 PM	3:56 PM	18.3
Saturday, May 17	1:30 PM	4:30 PM	7:32 PM	20.3
Thursday, May 22	7:40 AM	9:10 AM	11:31 AM	16.5
Tuesday, May 27	12:40 PM	2:10 PM	4:44 PM	19.3
* High tide after midnight on May 8				

Optimal shorebird viewing conditions for the Kasilof River was different than for the Homer Spit. The best time to view shorebirds on the mudflats at the mouth of the river was when the flooding tide was about half way between low tide and high tide. Monitoring sessions on the Kasilof River lasted an hour and a half rather than two hours because shorebirds would often leave the area after the mud flats were flooded. Also, since high tide on the Kasilof River is a few hours later than Kachemak Bay starting times were also later.

As usual, the highest and lowest tides during this year's project (but not the year) were on the same morning. On April 27 the high tide in Kachemak Bay was 21.5 feet at 3:51 am and the low tide was -5.08 feet at 10:30 am; a difference of 26.6 feet.

D. Volunteer Schedule

Table 3 lists the individuals who monitored this year by date and site.

Table 3. 2014 shorebird monitoring project volunteers.

2014 Kachemak Bay Shorebird Monitoring Project										
Volunteer Schedule		X=actual attendance								
Monitoring Site	Volunteers	Monitoring Dates								
		17-Apr	22-Apr	27-Apr	2-May	7-May	12-May	17-May	22-May	27-May
Mud Bay	Betty Siegel	X	X	X	X	X	X	X	X	X
	Jason Sodergren	X	X	X	X	X	X	X	X	X
	Stacey Buckelew			X	X	X				X
	Aaron Lang			X						
Mariner Park Lagoon	George Matz	X	X	X	X	X	X	X	X	X
	Bette Seaman									X
	Glen Seaman	X								
	Jeannie Woodring	X		X	X		X		X	X
	Paula Robertson		X				X			
Mid-Spit	Lani Raymond	X	X	X	X	X	X	X	X	X
	Gary Lyon	X	X	X	X	X	X	X	X	X
	Carol Harding	X	X	X	X	X	X			
	Joel Vos									X
	Osi Kaspi	X	X	X	X	X	X			
	Susan McLane						X	X		X
	Hal Smith							X		
	Stuart Fety								X	
	Stan White									X
Boat Harbor area	Sharon Baur	X					X			X
	Stan White	X	X	X	X	X	X	X		
	Joanne Thordarson	X	X	X	X	X	X	X	X	X
	BJ Hitchcock	X	X	X	X	X	X	X		
	John Hitchcock						X			
	Carla Stanley		X	X	X		X	X		X
Beluga Slough	Nancy Lord	X	X	X	X	X	X	X	X	X
	Nolan Bunting	X		X				X	X	X
	Susan Bunting	X			X			X		
	Landon Bunting	X		X	X		X	X	X	
	Devry Garity		X		X	X				
	Griffin Downey		X		X	X				
	Dale Chorman	X	X	X	X	X	X			
	Diane Chorman	X			X					
	Ken Castner			X		X	X			
	Owen Meyer			X	X					X
	Jay Mason Davis							X	X	
	Hoxie Parks							X		
	Islands & Islets	Karl Stoltzfus	X	X		X	X	X	X	X
Anchor Point	Michael Craig	X	X	X	X	X	X			
	Lori Paulsrud	X	X	X	X	X	X	X		X
	Erick Paulsrud	X	X	X	X	X	X	X		X
	Ty Gates	X	X		X	X				
	Dale Chorman									X
Kasilof River	Connie Tarbox						X			
	Ken Tarbox		X	X			X	X		
	Laura Burke				X	X				
	Toby Burke	X			X	X			X	X
	George Kirtch						X			
	Beverly Kirtch						X			

On most monitoring dates at least two observers, usually having local birding experience, were assigned to each team. This year, a record total of 45 individual volunteers participated in one or more of the monitoring sessions: 35 in the Homer Spit area, 5 at Anchor Point (including one who volunteered at both Anchor Point and Beluga Slough), and 6 at the Kasilof River. Six of the Beluga Slough volunteers were teenagers and one volunteer at the Anchor River was a teenager. The Kachemak Bay Shorebird Monitoring Project encourages participation by teenagers.



Figure 6. Joanne Thordarson, Stan White, and BJ Hitchcock checking an identification at the boat harbor while shorebird monitoring.



Figure 7. Teenage birders Landon Bunting, Nolan Bunting, Griffin Downey, Owen Meyer, and Coordinator George Matz.

This year's project included a total of 209 sessions of volunteer effort. The Homer Spit sites accumulated 168 volunteer sessions, Anchor Point had 27 volunteer sessions, and the Kasilof River had 15 volunteer sessions. Considering that each volunteer session amounted to about two hours of field effort, this year's effort amounted to 418 hours of monitoring effort. This doesn't include travel time or time spent in caucusing after each session to compare notes, which would usually last a half hour to an hour. Nor does it include the time spent by the project coordinator in collecting data sheets, entering them into eBird, and writing reports.

E. Recording Observations

Appendix A provides a Kachemak Bay shorebird checklist extracted from *Checklist of Birds of Kachemak Bay, Alaska 2011* (CACS 2011). There are 39 species on the list of which 31 species are either common or uncommon at some season of the year (mostly spring and/or fall) and eight are either rare or accidental.

Monitors used a one page form listing common and uncommon shorebirds (Appendix B) to record observations. On this form, they noted the species observed and abundance as well as when they first observed individual birds or flocks and when these birds left the monitoring site. The latter was used to match times with other sites in order to eliminate duplicate counts. Monitors also noted on the form any disturbance to shorebirds by people, dogs, or predators (e.g. raptors).

The coordinator obtained the current weather data for each monitoring period (including temperature, wind speed and direction, cloud cover, and precipitation) from the NOAA Homer Airport web site (<http://weather.noaa.gov/weather/current/PAHO.html>). Weather records are also available for the Homer Harbor but have a shorter history.

Volunteers caucused after each monitoring session to compare notes. If we determined that a flock of shorebirds had been counted at more than one site, a corresponding adjustment was made to the total count record. While the cumulative site counts for each monitoring deducted any double counting, the record for the site did not.

Monitoring data was entered in the ISS eBird database by site. A report for each monitoring session was also posted on Kachemak Bay Birders (birding@kachemakbaybirders.org) and AKBirding (AKBirding@yahoogroups.com) list servers. These reports are included in this report under Appendix D.

IV. 2014 Monitoring Results

A. Homer Spit Area

The 2014 Kachemak Bay Shorebird Monitoring Project observed 25 species of shorebirds and counted a total of approximately 13,139 individual bird's at all six sites in Homer Spit area. Table 4 presents a breakdown of this count by species for the four monitoring sites on Homer Spit, Beluga Slough, and Islands and Islets as well as the total for all six sites. This breakdown allows a more direct comparison with West's data (discussed later).

Table 4. Number of shorebirds seen by species for all 2014 survey dates, Sorted by abundance for All Sites.

SPECIES	Homer Spit Sites	Beluga Slough	Islands & Islets	All Sites
Western Sandpiper	3,836	164		4,000
Red-necked Phalarope	5	1	3,000	3,006
Surfbird	2,414		230	2,644
Dunlin	1,490	40		1,530
LESA/WESA/SESA	987			987
Semipalmated Plover	246	5		251
Least Sandpiper	112	83		195
Black-bellied Plover	111	3		114
Pectoral Sandpiper	90	8		98
Black Turnstone	49			56
Dowitcher sp.	43	6		49
Wandering Tattler	38		1	39
Long-billed Dowitcher		36		36
Whimbrel	19	7		26
Greater Yellowlegs	7	17		24
Pacific Golden Plover	15	2		17
Short-billed Dowitcher	5	10		15
Semipalmated Sandpiper	12	1		13
Black Oystercatcher			8	8
Marbled Godwit	4	4		8
Rock Sandpiper	6			6
Red Phalarope	1		4	5
Lesser Yellowlegs	4			4
Hudsonian Godwit		3		3
Ruddy Turnstone	2		7	2
Sanderling	2			2
Red Knot	1			1
Total	9,499	390	3,250	13,139

Note: LESA/WESA/SESA lumps Least Sandpipers, Western Sandpipers, and Semipalmated Sandpipers when the observer couldn't identify by species. It likely includes Dunlin as well.

Table 5 provides a breakdown by species and date for all Homer Spit area sites monitored. Cells with red tabs have further Information (e.g. weather, tides, and observers) when viewed in Excel. An Excel file of this data is available through the Kachemak Bay Birders web site. Other birds observed were noted in the report that was sent after each session to the Kachemak Bay Birders and AK Birding list serves and included in the eBird report. Copies of all nine reports are in Appendix E of this report.

Table 5. Shorebirds counted by species and date for all six sites during 2014 monitoring.

SPECIES	April			May						Total
	17	22	27	2	7	12	17	22	27	
Semipalmated Plover	-	-	3	10	45	64	52	34	43	251
Killdeer	-	-	-	-	-	-	-	-	-	-
American Golden-Plover	-	-	-	-	-	-	-	-	-	-
Pacific Golden Plover	-	-	13	4	-	-	-	-	-	17
Black-bellied Plover	-	4	39	22	38	9	2	-	-	114
Black Oystercatcher	-	1	-	-	2	-	2	1	2	8
Greater Yellowlegs	-	3	2	6	-	4	-	7	2	24
Lesser Yellowlegs	-	-	-	-	-	-	4	-	-	4
Yellowlegs sp.	-	-	-	-	-	-	-	-	-	-
Spotted Sandpiper	-	-	-	-	-	-	-	-	-	-
Whimbrel	-	-	-	2	12	1	1	10	-	26
Bristle-thighed Curlew	-	-	-	-	-	-	-	-	-	-
Bar-tailed Godwit	-	-	-	-	-	-	-	-	-	-
Hudsonian Godwit	-	-	-	3	-	-	-	-	-	3
Marbled Godwit	-	-	-	4	4	-	-	-	-	8
Wandering Tattler	-	-	-	-	-	15	20	1	3	39
Surfbird	-	4	6	160	878	798	276	482	40	2,644
Ruddy Turnstone	-	-	-	-	1	1	-	-	-	2
Black Turnstone	-	-	1	4	15	34	1	-	1	56
Western Sandpiper	-	-	61	281	2,109	1,174	353	20	2	4,000
Least Sandpiper	-	-	-	20	79	12	23	61	-	195
Semipalmated Sandpiper	-	-	-	1	-	-	11	1	-	13
LESA/WESA/SESA	-	-	8	103	765	61	50	-	-	987
Sanderling	-	-	-	-	-	-	-	2	-	2
Pectoral Sandpiper	-	-	-	-	-	-	1	97	-	98
Dunlin	3	1	46	300	946	111	108	9	6	1,530
Rock Sandpiper	-	-	-	1	-	1	3	1	-	6
Baird's Sandpiper	-	-	-	-	-	-	-	-	-	-
Red Knot	-	-	-	-	-	-	1	-	-	1
Short-billed Dowitcher	-	-	1	9	-	1	2	-	2	15
Long-billed Dowitcher	-	-	-	-	2	20	14	-	-	36
Dowitcher sp.	-	-	-	36	7	6	-	-	-	49
Wilson's Snipe	-	-	-	-	-	-	-	-	-	-
Red Phalarope	-	-	-	4	-	-	-	-	1	5
Red-necked Phalarope	-	-	-	-	3,001	-	-	1	4	3,006
Total	3	13	180	970	7,904	2,312	924	727	106	13,139

Note: Combined total is less than total for all six sites (13,669) because double counting between sites was eliminated

A new species this year for our project was a small flock of Red Phalarope mixed in with the thousands of Red-necked Phalarope that stage on the water at the mouth of the Bay. Also, we saw a Red Knot this year. This is only the second year we have seen this late migrant during our monitoring. No Wilson's Snipe were seen this year during monitoring, but this shorebird is common in freshwater wetlands in the area. The number of Surfbirds seen this year was about twice our average. A flock of 1,500 was observed on the Spit, but not during one of our

monitoring sessions. During our monitoring sessions we counted hundreds during five different sessions.

As mentioned in the Introduction, Kachemak Bay has a variety of habitats ranging from rocky islets to mud flats, which in turn attracts a variety of shorebird species. Each of the six sites attracts different species and numbers. Figure 8 and Table 6 provide an overview as to the number of shorebirds counted at each site for each monitoring session. Appendix C provides spreadsheets for each site that lists for each monitoring session the shorebird species seen and count as well as who the monitors were and if they saw any disturbances. This information, plus birds seen other than shorebirds, has been entered in eBird.

Figure 8. Number of shorebirds counted during 2014 by date and site.

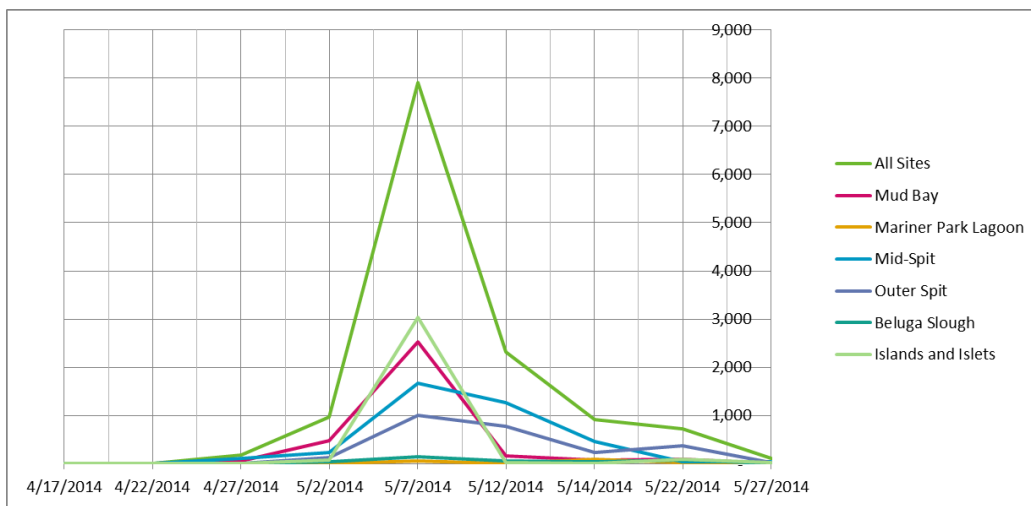


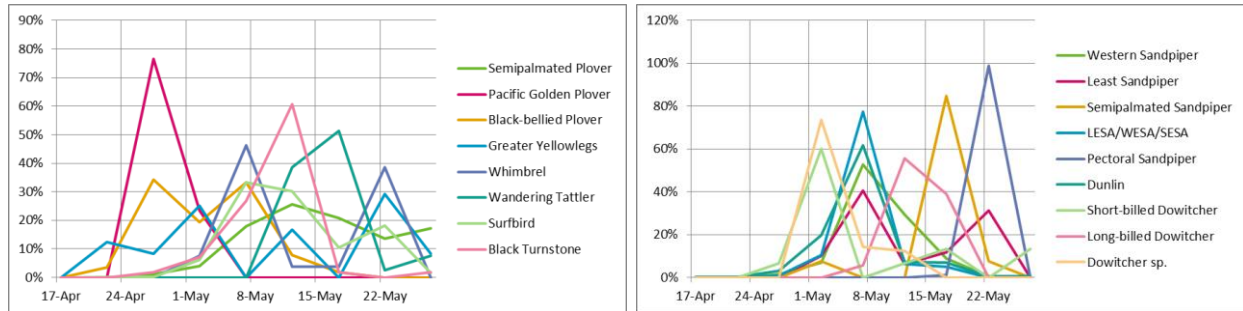
Table 6. Number of shorebirds counted during 2014 by date and site

2014 Shorebird Monitoring Project										
	4/17/2014	4/22/2014	4/27/2014	5/2/2014	5/7/2014	5/12/2014	5/14/2014	5/22/2014	5/27/2014	Total
All Sites	3	13	180	970	7,904	2,312	924	727	106	13,139
Mud Bay	-	3	64	478	2,524	169	85	91	10	3,424
Mariner Park Lagoon	-	-	1	6	57	11	102	23	3	203
Mid-Spits	-	2	103	236	1,678	1,275	469	50	45	3,858
Outer Spits	3	-	6	126	998	773	226	381	31	2,544
Beluga Slough	-	3	6	50	143	66	40	81	1	390
Islands and Islets	-	5	-	78	3,030	18	2	101	16	3,250

As expected, each species tends to arrive at a different time. Typically, yellowlegs and plovers are the first wave followed by sandpipers, and then tattlers, etc. However, the first shorebird usually present in Kachemak Bay is the Rock Sandpiper which overwinter here and leave about the time that yellowlegs first arrive. But the last two winters, which have been mild, the presence of Rock Sandpipers has been sporadic and not as abundant as in previous winters.

Figures 9 and 10 illustrate arrival and departure dates for taxa that had a count greater than 10. This data is based on the number of birds seen by species for a monitoring date divided by the total number of birds of that species counted this year. Using this percentage rather than the actual number of birds allows comparisons on a scale that fits the chart.

Figure 9 & 10. Percentage of shorebird arrivals and departures by species for 2014.



B. Homer Spit Supplemental Monitoring

In our first year of monitoring (2009) it appeared as if large flocks of shorebirds (particularly Western Sandpipers and Dunlin) arrived at the Homer Spit after a scheduled monitoring date but left before the next monitoring date, thus not being included in the count. To get a better handle on turn-over rates, in 2010 we monitored Mud Bay daily for shorebirds during the two weeks of peak migration. From this effort we verified that there were substantial day-to-day variances in shorebird presence.

Since then, every year one or two volunteers have monitored the Spit nearly every day during the peak of migration. These are essentially spot checks which attempt to get a snapshot of the overall count of shorebirds in the Mud Bay and mid-Spit area (which accounts for most of the Western Sandpipers, Dunlin, and other sandpipers). But since this data doesn't follow our protocol it can't be added to our monitoring data. Nevertheless, it does assist us in making reasonable estimates as to what we missed. This was demonstrated in 2012 when we had three distinct pulses of shorebirds pass through the area and all three, based on reviewing the supplemental data, were on scheduled monitoring dates. The result was record high counts. But knowing that the peak of these pulses coincided with scheduled monitoring dates, and that this didn't happen in previous years, we were able to deduce that the increase in count from previous years was not as significant as it might appear (Matz, 2012).

This year's report includes not only the spot checks, but eBird reports from May 1-14 for Homer Spit hotspots (there are several for the Homer Spit). During this time, especially during the Kachemak Bay Shorebird Festival weekend, a number of lists are submitted daily. The count used in this eBird data set includes only the highest count that day for each species.

Table 7 below illustrates the spot check count done by George Matz on dates not scheduled for monitoring.

Table 7. Daily shorebird count for Homer Spit

George														
Location(s): Homer Spit - Mud Bay														
Species Name	1-May	2-May	3-May	4-May	5-May	6-May	7-May	8-May	9-May	10-May	11-May	12-May	13-May	14-May
Black-bellied Plover	--	--	6	--	2	12	--	--	5	--	--	--	--	--
Semipalmated Plover	--	--	--	2	4	1	--	--	--	--	--	--	--	--
Whimbrel	--	--	--	40	--	--	--	--	--	--	--	--	--	--
Marbled Godwit	--	--	--	--	--	1	--	--	--	--	--	--	--	--
Black Turnstone	--	--	--	--	--	1	--	--	--	--	--	--	--	--
Dunlin	--	--	440	100	200	1,700	--	400	3	200	210	--	--	--
Least Sandpiper	--	--	--	15	--	7	--	--	--	--	--	--	--	--
Western Sandpiper	--	--	40	1,000	400	900	--	7,500	80	3,600	210	--	--	--
peep sp.	--	--	--	900	--	--	--	--	--	--	--	--	--	--
Short-billed Dowitcher	--	--	--	--	--	9	--	--	--	--	--	--	--	--
Long-billed Dowitcher	--	--	14	--	--	--	--	--	--	--	--	--	--	--
Short-billed/Long-billed Dowit	--	--	--	4	5	--	--	--	--	4	--	--	--	--
Total Count	-	-	500	2,061	611	2,631	-	7,900	88	3,804	420	-	-	-
Location(s): Homer Spit--Mid-Spit (Green Timbers & Louie's Lagoon)														
Species Name	1-May	2-May	3-May	4-May	5-May	6-May	7-May	8-May	9-May	10-May	11-May	12-May	13-May	14-May
Semipalmated Plover	--	--	2	--	--	--	--	--	1	--	3	--	--	--
Whimbrel	--	--	--	--	--	--	--	1	--	--	--	--	--	--
Dunlin	--	--	--	--	--	--	--	1	70	--	3	--	--	--
Least Sandpiper	--	--	--	--	--	--	--	--	--	--	3	--	--	--
Western Sandpiper	--	--	--	--	--	--	--	100	800	--	100	--	--	--
peep sp.	--	--	2	--	--	--	--	--	--	--	--	--	--	--
Total Count	-	-	4	-	-	-	-	102	871	-	109	-	-	-
Both Locations Count	-	-	504	2,061	611	2,631	-	8,002	959	3,804	529	-	-	-

Table 8 gives the highest daily count by shorebird species as reported via eBird. These counts are only for entries made under “hotspots.” Due to some technical difficulty, this data does not include that in Table 7, even though it was entered on eBird, or data submitted via the ISS portal.

Table 8. Shorebird count from eBird lists.

Location(s): Homer Spit; Boat Harbor; Boat Harbor entrance; Fishing Hole; Freight Dock Rd; Lands End; Mariner Park Campground; Mariner Park Lagoon; Mid-Spit; Mud Bay														
Species Name	1-May	2-May	3-May	4-May	5-May	6-May	7-May	8-May	9-May	10-May	11-May	12-May	13-May	14-May
Black-bellied Plover	--	--	--	--	5	X	--	15	9	4	--	4	3	2
Pacific Golden-Plover	--	--	--	--	--	X	--	3	2	1	--	--	--	--
Semipalmated Plover	--	--	2	--	--	--	--	6	3	2	3	8	--	--
Solitary Sandpiper	--	--	--	--	--	--	--	--	--	--	1	--	--	--
Wandering Tattler	--	--	--	--	--	--	--	--	--	1	--	2	--	--
Greater Yellowlegs	--	--	--	--	--	--	--	--	2	1	--	--	--	--
Whimbrel	--	--	--	--	--	--	--	2	--	3	2	2	1	--
Marbled Godwit	--	--	--	--	--	--	--	1	--	--	--	--	--	--
Hudsonian Godwit	--	--	--	--	--	1	--	--	--	--	--	--	--	--
godwit sp.	--	--	--	--	--	--	--	--	--	1	--	--	--	--
Ruddy Turnstone	--	--	--	--	--	--	--	--	--	1	1	--	--	--
Black Turnstone	--	--	--	--	--	--	--	1	12	42	22	20	3	--
Surfbird	--	--	--	--	--	--	--	1,500	1,300	700	600	480	375	--
Dunlin	--	--	--	--	75	60	--	250	100	100	392	47	150	10
Rock Sandpiper	--	--	--	--	--	--	--	1	6	6	3	5	--	--
Least Sandpiper	--	--	--	--	--	--	--	15	300	200	3	11	--	100
Pectoral Sandpiper	--	--	--	--	--	--	--	--	1	--	1	--	--	--
Semipalmated Sandpiper	--	--	--	--	--	1	--	--	--	1	--	--	--	--
Western Sandpiper	--	--	--	--	150	1,000	--	500	8,000	2,500	275	76	--	2,000
peep sp.	--	--	2	--	--	--	--	--	20	--	--	--	300	--
Short-billed Dowitcher	--	--	--	--	29	X	--	4	1	57	14	8	--	--
Long-billed Dowitcher	--	--	--	--	--	X	--	X	4	--	--	10	--	--
Short/Long-billed Dowitcher	--	--	--	--	--	--	--	--	--	--	--	--	--	X
Wilson's Snipe	--	--	--	--	--	--	--	--	2	1	2	--	--	--
Red-necked Phalarope	--	--	--	--	--	--	--	--	1,000	615	5	2,000	200	--
Total Count	-	-	4	-	259	1,062	-	2,298	10,762	4,236	1,324	2,673	1,032	2,112

Table 9 compares the spot checks done by George Matz with eBird data as well as protocol shorebird monitoring data. The last row of this table lists the highest daily count for each of these three monitoring sources. This represents a ball park estimate of the total number of shorebirds that may have stopped over at the Homer Spit during the peak of this springs migration. Given that not many shorebirds seemed to stay for more than a tide or two, the

amount of double-counting is probably negligible. While only a ball park estimate, it is probably about as good of an overall population count as we can expect given all the variables. This table illustrates that the peak of this year’s pulse occurred on May 9th which is in-between scheduled shorebird monitoring dates. While monitoring on May 7th was on the shoulder of the peak, it is obvious that shorebirds were missed.

Table 9. Comparing three sources of count data during peak migration.

Combined Total Counts															
	1-May	2-May	3-May	4-May	5-May	6-May	7-May	8-May	9-May	10-May	11-May	12-May	13-May	14-May	Totals
George's Count	-	-	504	2,061	611	2,631	-	8,002	959	3,804	529	-	-	-	19,101
eBird Hotspot Counts	-	-	4	-	259	1,062	-	2,298	10,762	4,236	1,324	2,673	1,032	2,112	25,762
Shorebird Monitoring Program		970					7,904					2,312			11,186
Highest Daily Count	-	970	504	2,061	611	2,631	7,904	8,002	10,762	4,236	1,324	2,673	1,032	2,112	44,822

Comparing totals, it appears as if the shorebird monitoring count may have missed about one-quarter of the shorebirds that stopped-over at the Homer Spit this year. Knowing this correction factor allows better year-to-year comparisons.

Effort was made to obtain similar data for the Anchor River and Kasilof River, but there were too few eBird submissions to come up with anything useful.

C. Anchor River

This is our second year of monitoring the Anchor River. The Anchor River tends to have a high energy beach with limited mud flats that doesn’t attract large flocks of sandpipers like those that stopover at Mud Bay on Homer Spit. But it does have a lot of diversity and provides a more complete picture of the Kenai Peninsula spring shorebird migration. A total of 19 shorebird species were observed this year.

The count this year for the Anchor River amounted 5,476. However, this includes a flock of 5,000 Red-necked Phalarope that were seen offshore on May 12th. Although this large flock of Red-necked Phalarope are seen every year on the south side of Kachemak Bay, this was the first time they have been observed at the Anchor River. Apparently the flock was previously at the mouth of Kachemak Bay and beginning to move north. Subtracting out Red-necked Phalaropes, the Anchor River count was 476.

Table 10. Anchor River shorebird diversity and abundance during 2014.

2014 Shorebird Monitoring Project										
SITE : Anchor River										
Travelling Count										
SPECIES	April			May					Total	
	17	22	27	2	7	12	17	22		27
Semipalmated Plover				1		5	3		4	13
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover				1						1
Black-bellied Plover		1	12	20	2	13				48
Black Oystercatcher										-
Greater Yellowlegs	8	5	4	3	3	1	9	1	5	39
Lesser Yellowlegs			2	4	4	4	5		1	20
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel					12	11	6			29
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler									1	1
Surfbird										-
Ruddy Turnstone										-
Black Turnstone				3		17				20
Western Sandpiper			5	6	108	7			9	135
Least Sandpiper			2	14	9	3				28
Semipalmated Sandpiper				1	5					6
LESA/WESA/SESA					32					32
Sanderling										-
Pectoral Sandpiper					1	1	7			9
Dunlin			5	14	4		2		2	27
Rock Sandpiper	12				10					22
Baird's Sandpiper										-
Red Knot			2		1					3
Short-billed Dowitcher				10	3	6	5		3	27
Long-billed Dowitcher					1	2	2	1	1	7
Dowitcher sp.				2		2			4	8
Wilson's Snipe						1				1
Red Phalarope										-
Red-necked Phalarope						5,000				5,000
Other; Plover sp.										-
Total	20	6	32	79	195	5,073	39	2	30	5,476

D. Kasilof River

This was also the second year for including the Kasilof River. As with the Anchor River, this effort gives us a more complete picture of the Kenai Peninsula spring shorebird migration. It also offers some perspective on species less common in the Kachemak Bay area, such as the Hudsonian Godwit which breed close by. Having monitoring data from these two sites allows us to compare year to year changes with Homer Spit data.

The Kasilof River data includes two extra days of monitoring; May 14 and 16. The purpose of this added effort was to obtain supplemental data as to how long the pulse of Western Sandpipers would last. The peak count of 400 on May 12th dropped to 220 by May 14, 80 by May 16, and then 25 by May 17. The short duration of the pulse was close, by not exactly the same as that experienced on the Homer Spit.

In terms of scheduled monitoring dates, monitors at the Kasilof River saw 15 species of shorebirds. On May 16, which was a supplemental day, they saw a Baird's Sandpiper. The total count for the nine scheduled monitoring days was 958 shorebirds. The observations for the Kasilof River were not that much different than the Anchor River if you deduct out the large flock of Red-necked Phalarope seen off-shore of the Anchor River.

Table 11. Kasilof River shorebird diversity and abundance during 2014.

2014 Shorebird Monitoring Project												
SITE : Kasilof River												
Species	April			May						Totals		
	17	22	27	2	7	12	14	16	17		22	27
Semipalmated Plover					1	1		3		1		6
Pacific Golden Plover						1					1	2
Black-bellied Plover			4	3	9	2					1	19
Greater Yellowlegs				1	2	4	1	1	2	5	2	18
Lesser Yellowlegs					3	3	4	4		2	8	24
Whimbrel					55	3	3	38				99
Hudsonian Godwit				2	1	3	4	4		2		16
Marbled Godwit											2	2
Western Sandpiper					160	400	220	80	25	3		888
Least Sandpiper					5							5
Pectoral Sandpiper							5			2		7
Dunlin			5	2	20	30	11	24	1	2		95
Baird's Sandpiper								1				1
Short-billed Dowitcher			2	17	65	30	32	7	2	52	6	213
Wilson's Snipe					1	1		1		1		4
Red-necked Phalarope											2	2
Total	-	-	11	25	322	478	280	163	30	70	22	1,401

E. Weather Effects

As illustrated by climate data from the Homer Airport, this spring weather was not an issue for migrating shorebirds. April was mild, as was the past winter. In fact, this was the first year of our project when there hasn't been at least some snow or ice on the Spit during the first session. The weather was consistently warmer than normal throughout the migration and without significant storms or winds (using precipitation as a proxy). Although precipitation for the entire month of May was above average, there wasn't but a trace of rain until the last week of May.

Table 12. Comparison on spring 2014 Homer weather with average weather.

Homer	April 2014	April Normal	May 2014	May Normal
Average high temperature	47.9°F	44°F	59.7°F	52°F
Average low temperature	32.0°F	30°F	40.2°F	37°F
Average temperature	39.95°F	37°F	49.95°F	44°F
Total Precipitation	0.27 inch	1.06 inch	1.07 inch	0.83 inch
Source: www.usclimatedata.com				

Figure 8 above illustrates that the arrival and departure of migrating shorebirds this year, unlike most years, was essentially one pulse. Favorable weather with no reason for shorebirds to wait out stormy conditions probably contributes to a fairly smooth curve for arrivals and departures.

F. Disturbance

Our observations include noting any disturbances to shorebirds from raptors, people with dogs, aircraft, etc. Aircraft is a particular issue since the Homer Airport was built in a wetland near the base of the Spit. But not that many planes (no large jets) actually use the airport, so there doesn't seem to be that much disturbance to birds from planes. Also, planes have a predictable flight pattern. But this year there was more helicopter traffic leaving from the airport and going down the Spit. During one session I noted a helicopter flying over Mariner Park Lagoon at a low elevation which flushed several crows. A few minutes later a DE Havilland two engine plane came over and there didn't seem to any reaction from the crows. On another occasion, a small plane flew over the lagoon while landing at the airport and didn't seem to disturb a pair of Sandhill Cranes foraging in the grass. But a helicopter that soon followed put them on alert. Based on this and other observations, it appears that the whoop-whoop noise of a helicopter and less predictable flight pattern has a more disturbing effect on birds than planes.

Another disturbance that often occurs in the Homer area is flushing of birds by dogs that are not on a leash. Kachemak Bay Birders makes an effort every spring to inform the public that unlike the gulls resting on the beach, shorebirds may have just completed a several hundred mile flight and need rest. In addition, the Alaska Maritime NWR posts signs on its property at Beluga Slough stating that during migration, dogs need to be on a leash. For the most part, the public seems cooperative.

Raptors also disturb shorebirds. Bald Eagles often cruise up and down the beach, but shorebirds seem to realize their inability to do anything other than fly in a straight line and are not much of a threat. Merlin's are another matter. When large flocks of sandpipers are present, there is often a Merlin or two in the area which definitely gets the attention of shorebirds, often causing them to flush. After being flushed, the flocks generally return to feeding in the intertidal area.

V. Trends

A. Comparing 2014 to Previous Years

As demonstrated by Table __, the total number of shorerbirds seen at Homer Spit sites in 2014 was about average compared to the previous five years of monitoring, both in terms of individual birds and species.

Table 13. Annual shorebird count by species sorted by average abundance.

Species	2009	2010	2011	2012	2013	2014	Average
Western Sandpiper	3,229	4,996	4,100	16,375	7,964	4,000	6,777
Red-necked Phalarope	1,630	1,500	5,152	1,501	703	3,006	2,249
LESA/WESA/SESA	104	803	3,336	844	5,305	987	1,897
Dunlin	1,097	561	1,283	1,205	2,548	1,530	1,371
Surfbird	292	110	574	2,919	748	2,644	1,215
Black-bellied Plover	179	315	282	354	221	114	244
Semipalmated Plover	194	203	197	142	92	251	180
Rock Sandpiper	141	405	482	6	4	6	174
Least Sandpiper	136	245	219	103	128	195	171
Black Turnstone	81	373	121	71	21	56	121
Dowitcher sp.	99	82	57	76	344	49	118
Greater Yellowlegs	24	36	59	68	90	24	50
Short-billed Dowitcher	125	-	33	76	18	15	45
Pacific Golden Plover	5	42	5	95	96	17	43
Pectoral Sandpiper	-	7	-	1	146	98	42
Wandering Tattler	13	56	30	18	62	39	36
Whimbrel	10	22	27	28	65	26	30
Long-billed Dowitcher	-	-	15	1	22	36	12
Lesser Yellowlegs	-	26	3	15	9	4	10
Semipalmated Sandpiper	1	5	3	34	-	13	9
Black Oystercatcher	11	11	13	8	2	8	9
Marbled Godwit	3	12	1	7	-	8	5
Hudsonian Godwit	18	-	2	-	3	3	4
Ruddy Turnstone	1	10	1	2	9	2	4
Yellowlegs sp.	2	18	-	2	2	-	4
Sanderling	-	1	8	8	-	2	3
American Golden-Plover	3	1	1	1	10	-	3
Bar-tailed Godwit	3	-	-	4	6	-	2
Wilson's Snipe	1	5	1	1	-	-	1
Baird's Sandpiper	1	-	-	6	-	-	1
Bristle-thighed Curlew	-	-	-	-	5	-	1
Red Phalarope	-	-	-	-	-	5	1
Spotted Sandpiper	3	-	-	1	-	-	1
Red Knot	-	-	2	-	-	1	1
Total Individuals	7,406	9,845	16,007	23,972	18,623	13,139	14,832
Total Species	24	23	25	27	23	25	25

The number of Surfbirds seen this year, however was more than twice the average. Surfbirds seem to stay in the Kachemak Bay area for two or more monitoring periods, thus the count

probably includes some double-counting. But there was one supplemental report of approximately 1,500 Surf-birds on the Homer Spit which indicates not that much double-counting. The number of Rock Sandpipers was much less than average. One new species for this year was the Red Phalarope which was seen by boat on the south side of Kachemak Bay.

Although this report does not provide an analysis of year-to-year variations by species, the data we have could be used for this purpose.

B. Comparing Anchor and Kasilof Rivers Data

Now that we have two years of data from the Anchor and Kasilof Rivers, we can start looking at what trends may be apparent at these sites.

Table 14. Species and counts for the Anchor River 2013-2014.

SITE : Anchor River				
Sorted by average abundance				
#	SPECIES	2013	2014	Average
1	Red-necked Phalarope	-	5,000	2,500
2	Western Sandpiper	606	135	371
3	Whimbrel	75	29	52
4	Dunlin	67	27	47
5	Black-bellied Plover	40	48	44
6	Greater Yellowlegs	44	39	42
	LESA/WESA/SESA	29	32	31
	Yellowlegs sp.	45	-	23
7	Short-billed Dowitcher	15	27	21
8	Lesser Yellowlegs	20	20	20
9	Least Sandpiper	10	28	19
10	Rock Sandpiper	16	22	19
11	Semipalmated Plover	14	13	14
	Dowitcher sp.	19	8	14
12	Long-billed Dowitcher	18	7	13
13	Black Turnstone	3	20	12
	Plover sp.	15		8
14	Semipalmated Sandpiper	8	6	7
15	Pectoral Sandpiper	3	9	6
16	Pacific Golden Plover	10	1	6
17	Wilson's Snipe	3	1	2
18	Red Knot	-	3	2
19	Wandering Tattler	1	1	1
20	Black Oystercatcher	1	-	1
21	Hudsonian Godwit	1	-	1
22	Marbled Godwit	1	-	1
23	Ruddy Turnstone	1	-	1
	Total	1,065	5,476	3,271

Table 14 illustrates that if you subtract out the 5,000 Red-necked Phalarope observed in 2014, the number of shorebirds seen this year was less than half of last year. Most of this difference seems to be accounted for by the difference in Western Sandpipers and Dunlin. The count for

these species on the Homer Spit in 2014 was also less than 2013 was also considerable less. Generally speaking, the results from the Anchor River seem track those from the Homer Spit.

Table 15. Species and counts for the Kasilof River 2013-2014.

SITE : Kasilof River				
#	SPECIES	2013	2014	Average
1	Western Sandpiper	16,950	588	8,769
3	Dunlin	3,338	60	1,699
3	Short-billed Dowitcher	620	174	397
4	Least Sandpiper	209	5	107
5	Whimbrel	43	58	51
6	Black-bellied Plover	59	19	39
7	Greater Yellowlegs	34	16	25
8	Long-billed Dowitcher	42	-	21
9	Hudsonian Godwit	25	8	17
10	Lesser Yellowlegs	8	16	12
11	Semipalmated Plover	6	3	5
12	Pectoral Sandpiper	7	2	5
13	Semipalmated Sandpiper	8	-	4
14	Wilson's Snipe	3	3	3
15	American Golden-Plover	5	-	3
16	Pacific Golden Plover	1	2	2
	Dowitcher sp.	3	-	2
17	Marbled Godwit	-	2	1
18	Red-necked Phalarope	-	2	1
19	Bar-tailed Godwit	1	-	1
20	Baird's Sandpiper	1	-	1
	Totals	21,363	958	11,161

The Kasilof River observations for 2013 and 2014 had about the same species diversity. The biggest difference was that the Kasilof River experienced a more substantial drop in Western Sandpipers and Dunlin in 2014 compared to 2013. On the other hand, maybe the Kasilof River experienced an unusual fallout of sandpipers in 2013? Kasilof River observers felt that because of the generally favorable weather and flying conditions, shorebirds may have bypassed stopping over at the Kasilof River and continued on to their breeding grounds in the Yukon-Kuskokwim Delta. The answer should be more be apparent with more years of data.

C. Volunteer Participation

Table _ presents an overview of volunteer monitoring by individual for all six years of effort.

Table 16. Monitoring Session Participation 2009-2014.

Volunteer	2009	2010	2011	2012	2013	2014	Total
1 Aaron Lang			4	3		1	8
2 Angie Doroff		1					1
3 Bette Seaman				5	3	1	9
4 Betty Siegel	9	9	8	8	9	9	52
5 Beverly Kirtch						1	1
6 BJ Hitchcock				9	7	7	23
7 Bruce Bezon				2			2
8 Bruce Machpail	1						1
9 Carla Stanley	5		7	7		6	25
10 Carol Harding	7			6	6	6	25
11 Connie Tarbox					4	1	5
12 Dale Chorman				3	6	7	16
13 Devry Garity					6	3	9
14 Diane Chorman					1		1
15 Diane Chorman						2	2
16 Duane Howe	9	6					15
17 Erick Paulsrud				1	5	8	14
18 Ethan Benedetti					1		1
19 Gary Lyon	4	6	8	8	8	9	43
20 George Kirtch					1	1	2
21 George Matz	9	9	9	9	9	9	54
22 Glenn Seaman					6	1	7
23 Griffin Downey					5	3	8
24 Hal Smith						1	1
25 Hoxie Parks						1	1
26 Ingrid Harrauld	6						6
27 Iris Downey					1		1
28 Jack Wiles				6	7		13
29 Jason Sodergren	7	8	8	6	7	9	45
30 Jay Mason Davis						2	2
31 Jeannie Woodring					5	6	11
32 Jessica Ryan		1					1
33 Joanne Thordarson				4	8	9	21
34 Joel Vos						1	1
35 John Hitchcock						1	1
36 Karl Stoltzfus	8	7	8	7	3	8	41
37 Kathy Eagle			2				2
38 Ken Castner						3	3
39 Ken Tarbox					5	4	9
40 Kim Cooney/Donohue	7	7	2	5			21
41 Kyra Wagner	1	1		2			4
42 Landon Bunting					5	6	11
43 Lani Raymond	9	8	7	8	9	9	50
44 Laura Burke					3	2	5
45 Lee Post		5	1	1			7
46 Linda Gorman				1			1
47 Lori Paulsrud				1	6	8	15
48 Michael Craig		8	8	9	9	6	40
49 Michelle Michaud	7	9	6	6	7		35
50 Nancy Lord				7	6	8	21
51 Nancy Wrockledge		1		1			2
52 Neal Wagner	9	8		6			23
53 Nina Daley		8	2				10
54 Nolan Bunting					7	6	13
55 Osi Kaspi					6	6	12
56 Owen Meyer			1		1	3	5
57 Paula Robertson					1	2	3
58 Phil Cowan		3	5				8
59 Rachel Lord	3						3
60 Rebecca Siegel					1		1
61 Sharon Baur	1	2	5	3	2	3	16
62 Stacey Buckelew					1	5	6
63 Stan White					9	8	17
64 Stuart Fety						1	1
65 Susan Bunting					5	3	8
66 Susan McLane						4	4
67 Toby Burke					4	5	9
68 Ty Gates						4	4
69 Victoria Wilson Winne		8	3		2		13
70 Wayne Stanley	1			7			8
71 Zach Nelson					1		1
	103	115	94	141	198	209	860

As the data illustrates, participation by local birders (Kachemak Bay Birders) in the Kachemak Bay Shorebird Monitoring Project continues to be strong. Over six years of monitoring, a total

of 71 volunteers have participated in one or more sessions. Each session last two hours and nearly all volunteers have stayed through the entire session. In addition, most volunteers attend the caucus afterwards, which can last from one-half to one hour.

The total volunteer effort amounts to 860 sessions. Multiplying this by two (the length of time in hours for each session which), the volunteer monitoring hours devoted to the Kachemak Bay Shorebird Project over the past six years amounts to 1,720 hours. This doesn't include travel time or attending caucuses nor effort by the coordinator. The value of this monitoring time is significant which can be an in-kind asset for agencies that support to this project.

Another benefit of our monitoring effort is that many volunteers are now able to better identify shorebirds and have become more familiar with their habitat needs. These volunteers are now more prone to speak up for shorebird conservation when there may be local threats. There have been a couple of issues over the past years when this support was needed.

D. Comparing Recent Data to West's Data

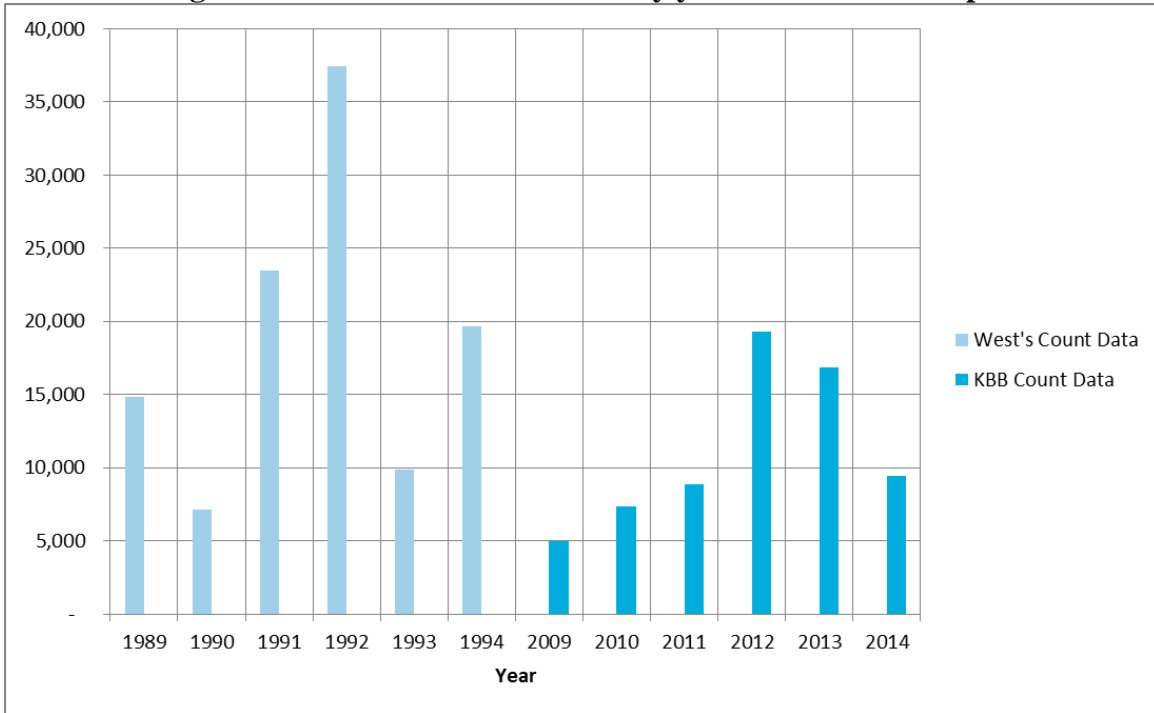
As in previous years, this year's report compares the Kachemak Bay Shorebird Monitoring Project data to George West's shorebird monitoring data from two decades ago. Not all of West's years of monitoring are useful for comparison purposes. Observations in 1987 and 1988 were not consistent. Also, after 1994 West's data included observations by a variety of local birders which didn't follow any protocol. Consequently, only the years 1986 and 1989-1994 are being used for comparison. This is consistent with West's presentation of his shorebird data (West 1996). Table - includes a summary of the West data being used.

With the exception of frequency, the protocol used by West is reasonably similar to the Kachemak Bay Birders protocol. West says "Estimates, or actual counts when possible, of all shorebirds encountered in Mud Bay, Mariner Park Lagoon, and along the north side of the Homer Spit were made daily at or just after high tide from 22 April to 18 May (West 1996). " However, West's shorebird counts were done daily and the protocol being followed by Kachemak Bay Birders is to monitor once every five days. Therefore, adjustments to the data are needed before making any comparisons. To provide a more direct match, the only West data being used in the comparison below is for the six dates that match our 2009 monitoring dates. As mentioned earlier, our monitoring dates advance by one day every year to avoid conflict with the shorebird festival so the dates from 2010 - 2013 don't exactly match the West dates.

Table 17. Comparison of six days of West shorebird monitoring data to six comparable days of Kachemak Bay Birders data for similar survey sites.

SPECIES	1986	1989	1990	1991	1992	1993	1994	Homer	Homer	Homer	Homer	Homer	Homer
								Spit Sites	Spit Sites	Spit Sites	Spit Sites	Spit Sites	Spit Sites
Semipalmated Plover	6	8	1	9	27	22	28	159	158	142	118	86	203
American Golden-Plover			5	26	9		1	3			1	2	-
Pacific Golden Plover							7	4	39	2	90	89	15
Black-bellied Plover	275	1	86	52	244	51	79	170	307	241	351	204	107
Black Oystercatcher									1				-
Greater Yellowlegs					17	4		7	13	19	44	18	6
Lesser Yellowlegs									20	3	3	3	4
Yellowlegs spp.									3		2	2	-
Whimbrel				1	9	1		2	6	14	11	59	19
Bar-tailed Godwit				1	2			3			4	3	-
Hudsonian Godwit							1	18		2			-
Marbled Godwit		4		1	1		2	3	10	1	7		4
Wandering Tattler				5	2	1	2	3	37	20	7	61	36
Surfbird	1,000	75	3,015	602	10,010	1,200	830	69	39	238	541	280	2,386
Ruddy Turnstone	1		3		7	1	8		6		1	8	2
Black Turnstone	600	451	1,812	766	1,730	500	262	46	294	89	27	8	49
Western Sandpiper	14,000	12,025	2,010	20,510	20,725	7,200	17,469	3,071	4,935	3,908	16,040	7,732	3,834
Least Sandpiper	50			2	21	2	20	121	195	168	100	74	112
Semipalmated Sandpiper								1	4	3	33		12
LESA/WESA/SESA								103	640	2,987	617	5,272	987
Sanderling									1	8	8		2
Pectoral Sandpiper	2			1	1						1	139	90
Dunlin	130	1,760	133	1,219	3,271	562	642	1,091	535	938	1,157	2,431	1,480
Rock Sandpiper					7	2					1		6
Baird's Sandpiper								1			6		-
Red Knot						1	2						1
Short-billed Dowitcher	600	525	58	183	1,354	325	175	22		32	63	16	3
Long-billed Dowitcher											1	19	-
Dowitcher spp.								97	71	42	75	304	43
Wilson's Snipe													-
Red-necked Phalarope				100			100			1			1
Other; Bristle-thighed Curlew												5	-
Total	16,664	14,849	7,123	23,478	37,437	9,872	19,628	4,994	7,314	8,858	19,309	16,815	9,402
West Average	18,436												
KBB Average	11,115												

Figure 11. Total shorebird counts by year for the Homer Spit



As can be seen from the table and figure above, there appears to be fewer shorebirds visiting the Homer Spit now during spring migration than two decades ago. West's adjusted data for seven years had an average shorebird count of 18,436. Our average count for the past six years is 11,115, or about 40% less.

The reasons for this decline are uncertain. We don't think that local changes are a factor. While the boat harbor area of the Homer Spit has seen more development over the years, much of the intertidal area used by shorebirds has not changed much and is protected via some sort of conservation status. Although the upland forest areas on the Kenai Peninsula have been seriously impacted by a spruce bark beetle epidemic in the 90s, this should have effect on shorebird habitat.

Our first report in 2009 (Matz 2009) gave a description of the level protection which is worth repeating.

Kachemak Bay shorebird habitat is not only productive but, for the most part, well protected and studied. Nearly all the tidal and submerged land of Kachemak Bay has been designated both a State of Alaska Critical Habitat Area and a National Estuarine Research Reserve which, at approximately 365,000 acres, makes it the largest Reserve in the System. Also, Sixty-foot Rock, a small islet at the mouth of the Bay is part of the extensive Alaska Maritime National Wildlife Refuge, which is headquartered in Homer. On the Spit, those portions of Mariner Park Lagoon and Mud Bay that are owned by the City of Homer (approximately 160 acres) are not only zoned for either Conservation or Outdoor Space and Recreation (see Appendix B), but also included in the Western Hemisphere Shorebird Reserve Network as a site of international significance. Much of the southern shore and uplands and parts of the northern shore of the Bay are protected by the 400,000 acre Kachemak Bay State Park and State Wilderness Park. In addition, 7,100 acres of tidal flats and wetlands in the upper part of the Bay are protected by the Fox River Flats Critical Habitat Area, which is managed by the Alaska Department of Fish and Game. This CHA has also been named as a Western Hemisphere Shorebird Reserve Network site of international significance. Some of the adjoining mountainous areas are in the Kenai National Wildlife Refuge. Kachemak Bay is also considered an Important Bird Area, though this has no legal mandate. All of the agencies mentioned above are involved to some degree in scientific studies of Kachemak Bay.

It appears that the shorebird decline in Kachemak Bay is not due to some local change but related to overall population changes. While we can't do much to change that, we can continue to monitor shorebird populations during their spring migration and share this with others in order to gain a more complete picture of Pacific Flyway population dynamics.

VI. Other Activities

A. Outreach

The information obtained as a result of the 2013 Kachemak Bay Shorebird Monitoring Project was reported to local birders via the Kachemak Bay Birders (birding@kachemakbaybirders.org) list-serve and the AKBirding (AKBirding@yahoogroups.com) list-serve. The data was also entered in eBird under the ISS portal, listing observations for each site and date. Copies of the reports appear in

B. Presentations

The results from the Kachemak Bay Shorebird Project were presented at the following.

- KBRR's sponsored "Igniting Knowledge of Coastal and Marine Research in Kachemak Bay" on April 10, 2014 which consisted on a series of short presentations on local science projects. George Matz gave a presentation entitled "Kachemak Bay Shorebird Monitoring".
- The May 7, 2014 issue of the Homer News had an article entitled "Kachemak Bay Shorebird Festival: small piece of big puzzle" that discussed the origin of Kachemak Bay shorebird monitoring.

C. Publications

- Alaska Shorebird Group. *Ongoing or new studies of Alaska shorebirds; Annual Summary Compilation. Kachemak Bay Shorebird Monitoring Project:2013*, George Matz and Kachemak Bay Birders

VII. Future Efforts

Plans are to continue the Kachemak Bay Shorebird Monitoring Project in 2015 using the same protocol as in previous years.

VIII. Acknowledgements

The Kachemak Bay Shorebird Monitoring Project is a citizen science effort that could not exist without strong volunteer support. A list of our 71 volunteers over the past six years is included in Table 16. In addition, we want to thank the Islands and Ocean Visitors Center who provided us with meeting facilities for our caucus after monitoring sessions. We also had the support of the Alaska Maritime National Wildlife Refuge and the Kachemak Bay Research Reserve, both based in Homer. Again, a special thanks to Richard Lanctot, PhD who is the Alaska Region Shorebird Coordinator, for the US Fish and Wildlife Service. Rick continues to provide us with important advice and assistance.

IX. Literature Cited

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X. Appendices

Appendix A: Checklist of Birds of Kachemak Bay, Alaska: Shorebird Checklist.

Appendix B: Kachemak Bay Shorebird Project Monitoring Report Form.

Appendix C: Observation Data for Kachemak Bay Sites.

Appendix D: Supplemental Monitoring Data for 2014.

Appendix E: Email reports to birding list-serves.

Appendix A

Birds of Kachemak Bay, Alaska: Shorebird Checklist

This checklist was derived from the *Checklist of Birds of Kachemak Bay, Alaska 2011* published by the Center for Alaskan Coastal Studies (www.akcoastalstudies.org). It covers all watersheds draining into Kachemak Bay (the area between Anchor Point and Point Pogibshi) as well as the Anchor River drainage.

Abundance

C - Common: Easily found in small to large numbers in appropriate habitat.

U - Uncommon: Occasionally, but not always, found in small number with some effort in appropriate habitat.

R - Rare: Occurs in very small numbers or in very limited number of sites and may not be found every year or even with concentrated effort. There are more than a few records of these species in appropriate habitats.

A - Accidental: Represents an exceptional occurrence of birds outside their normal range that might not be repeated again for decades.

Status

r - resident

b - confirmed breeder

s - summer resident

w - winter resident

m - migrant, passing through on way to summer or winter grounds, may only be found in narrow periods of time

v - visitor, not on normal migration route, may stay for one day or all season i - introduced

Sp - spring: March - May

Su - summer: June - Aug.

F - fall: Sept. - Nov.

W - winter: Dec. - Feb.

Species	Sp	Su	F	W	Status
Black-bellied Plover	C	C	C	A	m
American Golden-plover	U	R	U	-	m
Pacific Golden-plover	C	R	U	-	m
Semipalmated Plover	C	C	C	-	smb
Killdeer	R	R	-	-	v
Black Oystercatcher	C	C	U	U	sb
Greater Yellowlegs	C	C	C	-	sb
Lesser Yellowlegs	U	U	U	-	sb
Solitary Sandpiper	R	U	R	-	sb
Wandering Tattler	C	C	C	-	s
Spotted Sandpiper	C	C	C	-	sb
Whimbrel	C	C	C	-	sm
Bristle-thighed Curlew	A	-	-	-	m
Hudsonian Godwit	U	R	-	-	m
Bar-tailed Godwit	U	A	R	-	m
Marbled Godwit	U	R	A	-	m
Ruddy Turnstone	U	R	R	-	m
Black Turnstone	C	U	U	-	m
Surfbird	C	C	C	-	sm
Red Knot	U	R	R	-	m
Sanderling	U	U	U	R	m
Semipalmated Sandpiper	U	R	U	-	m
Western Sandpiper	C	C	C	-	m
Red-necked Stint	A	A	-	-	v
Temminck's Stint	A	-	-	-	v
Least Sandpiper	C	C	U	-	smb
Baird's Sandpiper	R	R	U	-	m
Pectoral Sandpiper	C	U	C	-	m
Sharp-tailed Sandpiper	-	-	U	-	m
Rock Sandpiper	C	R	U	C	w
Dunlin	C	U	U	R	m
Stilt Sandpiper	-	-	R	-	m
Ruff	A	-	-	-	v
Short-billed Dowitcher	C	C	U	-	m
Long-billed Dowitcher	U	U	U	-	sm
Jack Snipe	-	-	A	-	v
Wilson's Snipe	C	C	C	R	sb
Red-necked Phalarope	C	C	C	-	sb
Red Phalarope	A	A	A	-	V

Appendix B
Kachemak Bay Birders
2014 Shorebird Monitoring Project

Site:
Date:
Distance Covered:
Disturbance:

Time Started:
Time Ended:

Monitor #1
Monitor #2
Monitor #3
Monitor #4

Name of Species	Estimate	Actual Count	Total Count & Estimate	Time Observed	Time Left Site
Semipalmated Plover					
Killdeer					
American Golden-Plover					
Pacific Golden Plover					
Black-bellied Plover					
Black Oystercatcher					
Greater Yellowlegs					
Lesser Yellowlegs					
Yellowlegs sp.					
Spotted Sandpiper					
Whimbrel					
Bristle-thighed Curlew					
Bar-tailed Godwit					
Hudsonian Godwit					
Marbled Godwit					
Wandering Tattler					
Surfbird					
Ruddy Turnstone					
Black Turnstone					
Western Sandpiper					
Least Sandpiper					
Semipalmated Sandpiper					
LESA/WESA/SESA					
Sanderling					
Pectoral Sandpiper					
Dunlin					
Rock Sandpiper					
Baird's Sandpiper					
Red Knot					
Short-billed Dowitcher					
Long-billed Dowitcher					
Dowitcher sp.					
Wilson's Snipe					
Red-necked Phalarope					
Other					

Appendix C

Note: Cells with Comments (red flags) have information that can only be viewed in Excel. For the Excel version of these spreadsheets go to <http://kachemakbaybirders.org/>

2014 Shorebird Monitoring Project										
SITE : Mud Bay										
Stationary Count										
SPECIES	April			May						Total
	17	22	27	2	7	12	17	22	27	
Semipalmated Plover				7	1	12	7	4	7	38
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover				4						4
Black-bellied Plover		2	9	17	4	1				33
Black Oystercatcher										-
Greater Yellowlegs			1							1
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel				2	11					13
Bristle-thighed Curlew										-
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit				4						4
Wandering Tattler										-
Surfbird										-
Ruddy Turnstone					1					1
Black Turnstone										-
Western Sandpiper			25	190	1,750	150	63	13	2	2,193
Least Sandpiper				17			1	1		19
Semipalmated Sandpiper										-
LESA/WESA/SESA										-
Sanderling										-
Pectoral Sandpiper								72		72
Dunlin		1	28	210	750		14	1	1	1,005
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher			1							1
Long-billed Dowitcher										-
Dowitcher sp.				27	7	6				40
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Total	-	3	64	478	2,524	169	85	91	10	3,424

2014 Shorebird Monitoring Project											
SITE : Mariner Park Lagoon											
Stationary Count											
SPECIES	April			May						Total	
	17	22	27	2	7	12	17	22	27		
Semipalmated Plover						8	3				11
Killdeer											-
American Golden-Plover											-
Pacific Golden Plover											-
Black-bellied Plover											-
Black Oystercatcher											-
Greater Yellowlegs			1	4					1		6
Lesser Yellowlegs							4				4
Yellowlegs sp.											-
Spotted Sandpiper											-
Whimbrel								5			5
Bristle-thighed Curlew											-
Bar-tailed Godwit											-
Hudsonian Godwit											-
Marbled Godwit				1							1
Wandering Tattler											-
Surfbird											-
Ruddy Turnstone											-
Black Turnstone											-
Western Sandpiper					2		65				67
Least Sandpiper					55		22				77
Semipalmated Sandpiper											-
LESA/WESA/SESA				1		3					4
Sanderling											-
Pectoral Sandpiper								18			18
Dunlin							8				8
Rock Sandpiper											-
Baird's Sandpiper											-
Red Knot											-
Short-billed Dowitcher									2		2
Long-billed Dowitcher											-
Dowitcher sp.											-
Wilson's Snipe											-
Red Phalarope											-
Red-necked Phalarope											-
Total	-	-	1	6	57	11	102	23	3		203

2014 Shorebird Monitoring Project										
SITE : Mid-Spit										
Travelling Count										
SPECIES	April			May						Total
	17	22	27	2	7	12	17	22	27	
Semipalmated Plover			1	2	40	44	37	29	35	188
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover			11							11
Black-bellied Plover		2	28	4	34	8	2			78
Black Oystercatcher										-
Greater Yellowlegs										-
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel					12					12
Bristle-thighed Curlew										-
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit				3						3
Wandering Tattler								1		1
Surfbird					500	60	130	2		692
Ruddy Turnstone										-
Black Turnstone			1	2	15					18
Western Sandpiper			36	75	233	1,020	198	7		1,569
Least Sandpiper				2	4					6
Semipalmated Sandpiper							11	1		12
LESA/WESA/SESA			8	65	650	56				779
Sanderling								2		2
Pectoral Sandpiper										-
Dunlin			18	80	190	87	86	8	5	474
Rock Sandpiper							2			2
Baird's Sandpiper										-
Red Knot							1			1
Short-billed Dowitcher							2			2
Long-billed Dowitcher										-
Dowitcher sp.				3						3
Wilson's Snipe										-
Red Phalarope									1	1
Red-necked Phalarope									4	4
Total	-	2	103	236	1,678	1,275	469	50	45	3,858

2014 Shorebird Monitoring Project										
SITE : Outer Spit										
Travelling Count										
	April			May						
SPECIES	17	22	27	2	7	12	17	22	27	Total
Semipalmated Plover					3		5		1	9
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover										-
Black Oystercatcher										-
Greater Yellowlegs										-
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel										-
Bristle-thighed Curlew										-
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler						15	20		2	37
Surfbird			6	88	850	724	146	380	28	2,222
Ruddy Turnstone						1				1
Black Turnstone					15	30	1			46
Western Sandpiper					4		3			7
Least Sandpiper					10					10
Semipalmated Sandpiper										-
LESA/WESA/SESA				37	115	2	50			204
Sanderling										-
Pectoral Sandpiper										-
Dunlin	3									3
Rock Sandpiper				1		1	1	1		4
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.										-
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope					1					1
Total	3	-	6	126	998	773	226	381	31	2,544

Note: Monitors for the Outer Spit started and ended 15 minutes earlier to allow them to attend the caucus on time.

2014 Shorebird Monitoring Project										
SITE : Beluga Slough										
Travelling Count										
SPECIES	April			May						Total
	17	22	27	2	7	12	17	22	27	
Semipalmated Plover			2	1	1			1		5
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover			2							2
Black-bellied Plover			2	1						3
Black Oystercatcher										-
Greater Yellowlegs		3		2		4		7	1	17
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel						1	1	5		7
Bristle-thighed Curlew										-
Bar-tailed Godwit										-
Hudsonian Godwit				3						3
Marbled Godwit					4					4
Wandering Tattler										-
Surfbird										-
Ruddy Turnstone										-
Black Turnstone										-
Western Sandpiper				16	120	4	24			164
Least Sandpiper				1	10	12		60		83
Semipalmated Sandpiper				1						1
LESA/WESA/SESA										-
Sanderling										-
Pectoral Sandpiper							1	7		8
Dunlin				10	6	24				40
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher				9		1				10
Long-billed Dowitcher					2	20	14			36
Dowitcher sp.				6						6
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope								1		1
Total	-	3	6	50	143	66	40	81	1	390

2014 Shorebird Monitoring Project										
SITE : Islands and Islets										
Travelling Count										
SPECIES	April			May						Total
	17	22	27	2	7	12	17	22	27	
Semipalmated Plover										-
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover										-
Black Oystercatcher		1			2		2	1	2	8
Greater Yellowlegs										-
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel										-
Bristle-thighed Curlew										-
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler									1	1
Surfbird		4		72	28	14		100	12	230
Ruddy Turnstone										-
Black Turnstone				2		4			1	7
Western Sandpiper										-
Least Sandpiper										-
Semipalmated Sandpiper										-
LESA/WESA/SESA										-
Sanderling										-
Pectoral Sandpiper										-
Dunlin										-
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.										-
Wilson's Snipe										-
Red Phalarope				4						4
Red-necked Phalarope					3,000					3,000
Total	-	5	-	78	3,030	18	2	101	16	3,250

2014 Shorebird Monitoring Project											
SITE : Homer Spit (all 4 sites)											
Combined Total											
	April			May							
SPECIES	17	22	27	2	7	12	17	22	27	Total	
Semipalmated Plover	-	-	1	9	44	64	52	33	43	246	
Killdeer	-	-	-	-	-	-	-	-	-	-	
American Golden-Plover	-	-	-	-	-	-	-	-	-	-	
Pacific Golden Plover	-	-	11	4	-	-	-	-	-	15	
Black-bellied Plover	-	4	37	21	38	9	2	-	-	111	
Black Oystercatcher	-	-	-	-	-	-	-	-	-	-	
Greater Yellowlegs	-	-	2	4	-	-	-	-	1	7	
Lesser Yellowlegs	-	-	-	-	-	-	4	-	-	4	
Yellowlegs sp.	-	-	-	-	-	-	-	-	-	-	
Spotted Sandpiper	-	-	-	-	-	-	-	-	-	-	
Whimbrel	-	-	-	2	12	-	-	5	-	19	
Bristle-thighed Curlew	-	-	-	-	-	-	-	-	-	-	
Bar-tailed Godwit	-	-	-	-	-	-	-	-	-	-	
Hudsonian Godwit	-	-	-	-	-	-	-	-	-	-	
Marbled Godwit	-	-	-	4	-	-	-	-	-	4	
Wandering Tattler	-	-	-	-	-	15	20	1	2	38	
Surfbird	-	-	6	88	850	784	276	382	28	2,414	
Ruddy Turnstone	-	-	-	-	1	1	-	-	-	2	
Black Turnstone	-	-	1	2	15	30	1	-	-	49	
Western Sandpiper	-	-	61	265	1,989	1,170	329	20	2	3,836	
Least Sandpiper	-	-	-	19	69	-	23	1	-	112	
Semipalmated Sandpiper	-	-	-	-	-	-	11	1	-	12	
LESA/WESA/SESA	-	-	8	103	765	61	50	-	-	987	
Sanderling	-	-	-	-	-	-	-	2	-	2	
Pectoral Sandpiper	-	-	-	-	-	-	-	90	-	90	
Dunlin	3	1	46	290	940	87	108	9	6	1,490	
Rock Sandpiper	-	-	-	1	-	1	3	1	-	6	
Baird's Sandpiper	-	-	-	-	-	-	-	-	-	-	
Red Knot	-	-	-	-	-	-	1	-	-	1	
Short-billed Dowitcher	-	-	1	-	-	-	2	-	2	5	
Long-billed Dowitcher	-	-	-	-	-	-	-	-	-	-	
Dowitcher sp.	-	-	-	30	7	6	-	-	-	43	
Wilson's Snipe	-	-	-	-	-	-	-	-	-	-	
Red Phalarope	-	-	-	-	-	-	-	-	1	1	
Red-necked Phalarope	-	-	-	-	1	-	-	-	4	5	
Total	3	5	174	842	4,731	2,228	882	545	89	9,499	

Appendix D

2014 Kachemak Bay Shorebird Monitoring Project Session #1

Shorebirds have arrived! Or at least some. On Thursday, April 17th the Kachemak Bay Birders had its first shorebird monitoring session for this season. This is our sixth consecutive year of monitoring. Twenty three volunteers made observations for two hours (6:45-8:45 pm) at six sites in the Homer Spit area as well as Anchor Point/River. Sites in the Spit area include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area), nearby Beluga Slough, and the Islands and Islets on the south side of the bay. In addition, another team of birders monitored the mouth of the Kasilof River.

The only shorebirds seen on the Spit were 3 DUNLIN at the boat harbor. A GREATER YELLOWLEGS was seen at Beluga Slough a couple of days ago, but apparently moved on. The Anchor River team saw 8 GREATER YELLOWLEGS as well as 12 ROCK SANDPIPERS. The latter overwinter in the area, but have not been seen very often this past winter.

At Mud Bay the only other species noted was a BALD EAGLE. At Mariner Park Lagoon, which usually has a lot of ducks, there were only, 3 MALLARDS, as well as 3 BALD EAGLES and 1 NW CROW. The Mid-Spit area had 12 HARLEQUIN DUCKS.

However, the Outer Spit had 24 PELAGIC CORMORANTS, 1 SCOTER, 2 RED-BREASTED MERGANSERS, 3 COMMON LOONS, 7 BALD EAGLES, 1000+ BLACK-LEGGED KITTIWAKES, many GLAUCOUS-WINGED GULLS, 1 PIGEON GUILLEMOT, 6 ROCK PIGEONS, 2 COMMON RAVENS, 10 NW CROWS, and 3 SONG SPARROWS.

Beluga Slough had the most birds with 24 MALLARDS, 28 NORTHERN PINTAILS, 16 AMERICAN WIDGEON, 7 GREEN-WINGED TEAL, 2 BUFFLEHEAD, 4 GOLDENEYE, 2 BALD EAGLES, 36 MEW GULLS, and 1 LAPLAND LONGSPUR. On the bay they saw 3 WHITE-WINGED SCOTERS, 2 BLACK SCOTERS, 4 LONG-TAILED DUCKS, 2 GOLDENEYES, and 2 COMMON LOONS.

On Beluga Lake, which just became ice free, there were 3 BUFFLEHEADS and 2 TRUMPETER SWANS.

The Anchor River Team also saw 3 GREEN-WINGED TEAL, 2 BELTED KINGFISHERS and a MERLIN trying to pick off one of about 40 LAPLAND LONGSPURS.

Although Karl was out on his boat that morning, he didn't see any shorebirds on the other side of the bay.

There should be a report later from the Kasilof River.

This year April has been mild, as has the past winter. In fact, this was the first year of our monitoring when there hasn't been at least some snow or ice on the Spit. Based on NOAA's

web site (<http://w1.weather.gov/obhistory/PAHO.html>), at 6:53 pm the temperature at the nearby Homer Airport was 45° F, wind was from the W at 10 mph and the barometric pressure was 29.36. At 8:53 pm the temperature was 42°, the wind shifted to the SW at 6 mph and the barometric pressure rose to 29.58.

Next report in 5 days.

George Matz

2014 Kachemak Bay Shorebird Monitoring Project

Session #2

On Tuesday, April 22nd the Kachemak Bay Birders had its second shorebird monitoring session for this season. Twenty-one volunteers made observations for two hours (9:00-11:00 am) at six sites in the Homer Spit area as well as Anchor Point/River. Sites in the Spit area include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area), nearby Beluga Slough, and the Islands and Islets on the south side of the bay. In addition, another team of birders monitored the mouth of the Kasilof River.

Despite the string of mild weather, shorebirds are slowly arriving. At Mud Bay we had 2 BLACK-BELLIED PLOVER and 1 DUNLIN. The mid-spit area also had 2 BLACK-BELLIED PLOVER. Beluga Slough had 3 GREATER YELLOWLEGS. Out on the water, 1 BLACK OYSTERCATCHER was seen at Gull Island and 4 SURFBIRDS were at 60-foot Rock. Karl noted that this seems early for Surfbirds. The Anchor River team saw 1 BLACK-BELLIED PLOVER and 5 GREATER YELLOWLEGS.

Monitoring at the Kasilof River the first session found no shorebirds.

Other species seen at Mariner Park Lagoon include 4 SANDHILL CRANES, 2 MALLARDS, and 6 NW CROW. Our monitoring reports include disturbances. A small plane flying over the lagoon while landing at the airport didn't seem to disturb the cranes, but a helicopter that soon followed flying down the Spit put them on alert.

The mid-spit area saw 2 BALD EAGLES, 9 HARLEQUIN DUCKS, 13 BLACK SCOTER, 1 MALLARD, 1 PACIFIC LOON, 2 COMMON LOONS, and 8 LONG-TAILED DUCKS. The Outer Spit had 14 PELAGIC CORMORANTS, 12 SCOTERS, 18 HARLEQUIN DUCKS, 4 COMMON LOONS, 17 GULLS (perhaps HERRING), 3 GLAUCOUS- WINGED GULLS, 500 BLACK-LEGGED KITTIWAKES, 2 PIGEON GUILLEMOT, 2 COMMON MURRE, 8 BALD EAGLES, 5 NW CROWS, and 8 SONG SPARROWS.

Beluga Slough once again had a good variety of birds. There were 3 SANDHILL CRANES, 24 MALLARDS, 12 NORTHERN PINTAILS, 12 AMERICAN WIDGEON, 12 GREEN-WINGED TEAL, 3 BUFFLEHEAD, 1 BALD EAGLE, 48 MEW GULLS, NW CROWS, 6 ROCK PIGEONS, and 4 LAPLAND LONGSPUR. On the bay they saw 1 HORNED GREBE, 3 RED-NECKED GREBE, and 50 BLACK SCOTER. At Beluga Lake there were 2 COMMON

GOLDENEYE, and 3 BUFFLEHEADS. Heard was a VARIED THRUSH AND PINE SISKINS.

Once again, we had mild weather which should be favorable to migration. Based on NOAA's web site (<http://w1.weather.gov/obhistory/PAHO.html>), at 8:53 am the temperature at the nearby Homer Airport was 47° F, wind was from the E at 3 mph and the barometric pressure was 29.88. At 10:53 am the temperature was 50°, the wind was from the SE at 3 mph and the barometric pressure was 29.57.

Next report in 5 days.

2014 Kachemak Bay Shorebird Monitoring Project Session #3

On Sunday, April 27th the Kachemak Bay Birders had its third shorebird monitoring session for this season. Twenty volunteers made observations for two hours (3:45-5:45 pm) at five sites in the Homer Spit area. Sites in the Spit area include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area), and nearby Beluga Slough, The Islands and Islets on the south side of the Bay weren't covered this session. Another three volunteers monitored the Anchor Point/River and a team of two birders monitored the mouth of the Kasilof River.

Another miracle is beginning. The shorebird migration is underway. These incredible feathered fuselages are starting to arrive on our shores from far distant shores. We had a nice mix of new shorebirds this session with a total of 8 species. Numbers are small for now, but will increase soon.

In terms of shorebirds, at Mud Bay they saw 9 BLACK-BELLIED PLOVER, 1 GREATER YELLOWLEGS, 25 WESTERN SANDPIPERS, 28 DUNLIN, and 1 SHORT-BILLED DOWITCHER. Mariner Park Lagoon finally had a shorebird with 1 GREATER YELLOWLEGS. The mid-spit area had 1 SEMIPALMATED PLOVER, 11 PACIFIC GOLDEN PLOVERS, 28 BLACK-BELLIED PLOVERS, 1 BLACK TURNSTONE, 36 WESTERN SANDPIPERS, 8 LESA/WESA/SESA (a lumping of unidentified *Calidris* (sandpipers)), and 18 DUNLIN. There were 6 SURFBIRDS at the boat harbor that left just minutes before monitoring started. Beluga Slough had 2 SEMIPALMATED PLOVERS, 2 PACIFIC GOLDEN PLOVERS, and 2 BLACK-BELLIED PLOVERS.

At the Anchor River they saw 7 species of shorebirds including 12 BLACK-BELLIED PLOVER, 4 GREATER YELLOWLEGS, 2 LESSER YELLOWLEGS, 5 WESTERN SANDPIPERS, 2 LEAST SANDPIPERS, 5 DUNLIN, and 2 SHORT-BILLED DOWITCHERS. The Kasilof River team saw their FOS shorebirds including 3 species. They had 4 BLACK-BELLIED, 5 DUNLIN, and 2 SHORT-BILLED DOWITCHERS. After the survey they went to the Kenai River boat launch and saw 8 BLACK-BELLIED PLOVERS, 12 DUNLIN, and 1 SHORT-BILLED DOWITCHER.

Other species seen at Mud Bay include 1 RED-THROATED LOON. At Mariner Park Lagoon they saw 5 MALLARDS, 5 NORTHERN PINTAILS, 3 SANDHILL CRANES, and 1 NW CROW.

The mid-spit area saw 1 WHITE-FRONTED GOOSE, 1 BRANDT, 3 MALLARDS, 1 GOLDENEYE, 3 HARLEQUIN DUCKS, and 5 RED-BREASTED MERGNSERS plus 12 sea otters.

The Outer Spit had 6 COMMON LOONS, 11 PELAGIC CORMORANTS, 2 BRANT, 14 HARLEQUIN DUCKS, 6 BLACK SCOTERS, 7 SURF SCOTERS, 1 NORTHERN HARRIER, 17, BALD EAGLES, 16 GLAUCOUS-WINGED GULLS, at least 1,500 BLACK-LEGGED KITTIWAKES, 500 COMMON MURRES flew by, 6 ROCK PIGEONS, 1 COMMON RAVEN, 7 NW CROWS, 10 AMERICAN PIPITS, 3 SONG SPARROWS, and 1 SAVANNA SPARROW. They also saw 1 sea otter, and 1 harbor seal.

Beluga Slough had a good variety of birds. Their waterfowl observations included 5 RED-BREASTED MERGANSERS, 14 WHITE-FRONTED GOOSE, 14 MALLARDS, 50 NORTHERN PINTAILS, 48 AMERICAN WIDGEON, 7 GREEN-WINGED TEAL, 2, BUFFLEHEADS, 2 GOLDENEYE, 3 LONG-TAILED DUCKS. A DUSKY CANADA GOOSE was also reported, but that needs to be checked to see it was a CACKLING GOOSE.

Other species seen at Beluga slough include 1 BALD EAGLE, 12 SANDHILL CRANES, X MEW GULLS, 2 GLAUCOUS-WINGED GULLS, 1 HERRING GULL, 21 LAPLAND LONGSPURS, X NW CROWS, and 1 BLACK-CAPPED CHICKADEE.

Out on the Bay they saw 2 RED-NECKED GREBES, 2 HORNED GREBE, 3 COMMON LOONS, 2 RED-BREASTED MERGANSERS, 6 HARLEQUIN DUCKS, 50 BLACK SCOTERS, and a flock of COMMN MURRES flying by.

Weather went back to partly cloudy and cool. Based on NOAA's web site (<http://w1.weather.gov/obhistory/PAHO.html>), at the nearby Homer Airport at 3:53 pm the temperature was 48° F, wind was from the W at 5 mph and the barometric pressure was 29.41. At 5:53 pm the temperature was 47°, the wind was from the SW at 5 mph and the barometric pressure was 29.43.

Next report in 5 days.

George Matz

2014 Kachemak Bay Shorebird Monitoring Project Session #4

On Friday, May 2nd the Kachemak Bay Birders had its fourth shorebird monitoring session for this season. Twenty-one volunteers made observations for two hours (7:00-9:00 pm) at five sites in the Homer Spit area. Sites in the Spit area include Mud Bay, Mariner Park Lagoon, Mid-Spit,

and the Outer Spit (boat harbor area), nearby Beluga Slough, and by boat the Islands/Islets on the south side of the Bay. Another four volunteers monitored the Anchor Point/River and a team of two birders monitored the mouth of the Kasilof River.

The birds are boogying. What an evening! We saw a total of 17 species of shorebirds plus a good variety of other bird species. This string of mild weather has really put the shorebird migration in high gear. I wouldn't doubt if we reach a peak before next weekend when the Kachemak Bay Shorebird Festival takes place. If you haven't taken the time to look at shorebirds yet, do it soon.

A highlight of this session was seeing a small flock of MARBLED GODWITS. Three were seen in the Mid-Spits area and 1 at Mariner Park Lagoon. Then they all left and joined up, based on our observation times, at Mud Bay. I went to the Spit for the Saturday morning high tide, and none were seen. HUDSONIAN GODWITS were seen at Beluga Slough (3) and the Kasilof River (2).

As usual, there were a lot of plovers present. PACIFIC GOLDEN-PLOVERS were seen at Mud Bay (4), and Anchor River (1). BLACK-BELLIED PLOVERS were seen at Mud Bay (17), the Mid-Spits (> 4), Beluga Slough (1), Anchor River (20), and Kasilof River (3). More SEMIPALMATED PLOVERS showed up at Mud Bay (7), Mid-Spits (2), Beluga Slough (1), and Anchor River (1).

Yellowlegs seem to be past their peak. Mariner Park Lagoon had 2 GREATER YELLOWLEGS feeding for about an hour. Then they joined 2 more that flew over from Mud Bay flew off into the sunset. GREATER YELLOWLEGS were also seen at Beluga Slough (2), the Anchor River (3), and the Kasilof River (1). The Anchor River also had 4 LESSER YELLOWLEGS.

Mud Bay saw 2 WHIMBREL.

BLACK TURNSTONE were seen at the Mid-spits area (2), Gull Island (2), and Anchor River (3). SURFBIRDS were at the boat harbor (88), and Gull Island (72).

Lots of sandpipers. Mud Bay had a large flock including WESTERN SANDPIPER (190), LEAST SANDPIPER (17), and DUNLIN (210). They were there through most of the session, but about 200 flew off to the west at 8:22. Mariner Park Lagoon had 1 sandpiper of uncertain species (LESA/WSA/SESA). Mid-spits also had 65 LESA/WESA/SESA as well as 75 WESTERN SANDPIPER, 2 LEAST SANDPIPER, and sightings of 35 and 45 DUNLIN. The Outer Spit had 37 LESA/WESA/SESA and 1 ROCK SANDPIPER. Beluga Slough had WESTERN SANDPIPER (16), LEAST SANDPIPER (1), SEMIPALMATED SANDPIPER (1), and Dunlin (10). The Anchor River had WESTERN SANDPIPER (6), LEAST SANDPIPER (14), SEMIPALMATED SANDPIPER (1), and DUNLIN 9140. The Kasilof River had only DUNLIN (2).

SHORT-BILLED DOWITCHERS were seen at BELUGAS SLOUGH (9), Anchor River (10), and the Kasilof River (17). DOWITCHER SP. Was recorded at Mud Bay (27), Mid-spits (3), Beluga Slough (6), and Anchor River (2).

Karl saw 4 RED-NECKED PHALAROPES on the water.

Other species seen at Mud Bay include 6 BONAPARTE'S GULLS. At Mariner Park Lagoon they saw 2 MALLARDS, 3 NORTHERN PINTAILS, 1 MEW GULL, and 1 BLACK-BILLED MAGPIE.

The Mid-spit area saw 1 COMMON LOON, 5 AMERICAN WIDGEONS, 2 MALLARDS, 2 NORTHERN SHOEVELERS, x MEW GULL, x HERRING GULLS, x GLAUCOUS-WINGED GULLS, 3 BALD EAGLES, 1 ARCTIC TERN, 15 HARLEQUIN DUCKS, 30 SCAUP, and 25 sea otters.

The Outer Spit had 18 HARLEQUIN DUCKS, 10 SURF SCOTERS, 16 BLACK SCOTERS, 1 SCAUP, 19 PELAGIC CORMORANTS, 10 BALD EAGLES, 3 SANDHILL CRANES, 1 MEW GULL, 1 HERRING GULL, 1 HERRING/GLAUCOUS GULL, 10 GLAUCOUS-WINGED GULLS, 3-4,000 BLACK-LEGGED KITTIWAKES, 1 COMMON RAVEN, 1 AMERICAN PIPIT, 4 SONG SPARROWS, and sea otters.

Beluga Slough monitors saw 50 CANADA GOOSE, 3 CACKLING GOOSE, 42 WHITE-FRONTED GOOSE, 36 NORTHERN PINTAILS, 24 GREEN-WINGED TEAL, 12 AMERICAN WIDGEON, 12 NORTHERN SHOVELERS, 5 MALLARDS, 20 LESSER SCAUP, 24 BUFFLEHEAD, 2 RED-NECKED GREBE, 6 GLAUCOUS-WINGED GULLS, 1 SANDHILL CRANE, 1,000's of COMMON MURRES, x NW CROWS, 1 GOLDEN-CROWNED SPARROW,

Anchor Point monitors saw x GREATER WHITE-FRONTED GOOSE, 3 NORTHERN SHOVELERS, x LAPLAND LONGSPURS, and x AMERICAN PIPITS.

Weather was unseasonably mild. Based on NOAA's web site for the nearby Homer Airport (<http://w1.weather.gov/obhistory/PAHO.html>), at 6:53 pm the temperature was 53°F, clear, with winds S at 8 mph, and a barometric pressure of 30.12 inches. At 8:53 pm the temperature was 52°, skies were still clear, wind was from the W at 3 mph, and the barometric pressure was 30.13. Good flying weather for planes and birds.

Next report in 5 days.

George Matz

2014 Kachemak Bay Shorebird Monitoring Project Session #5

On Wednesday, May 7th the Kachemak Bay Birders had its fifth shorebird monitoring session for this season. Twenty-one volunteers made observations for two hours (8:45-10:45 am) at five sites in the Homer Spit area. Sites in the Spit area include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area), nearby Beluga Slough, and by boat the Islands/Islets

on the south side of the Bay. Another four volunteers monitored the Anchor Point/River and a team of birders monitored the mouth of the Kasilof River.

The weather changed Monday night going from high pressure for the past several days with sunny and warm temperatures in the 60s during the afternoon to low pressure with more typical cloudy and cool conditions and afternoon temperatures in the high 40s. It seems as if the pace of shorebird migration has also changed. Rather than the wide daily changes we had in sandpiper counts the past couple of days, the counts for today's monitoring were about the same as yesterdays. About 2,500 sandpipers were counted at Mud Bay. Other highlights were a flock of about a dozen WHIMBRELS moving around the Spit. Also, a large flock of over 850 SURFBIRDS were on the rocks near the barge basin. And ROCK SANDPIPERS as well as a RED KNOT was seen at the Anchor River. In addition, MARBLED GODWITS and EURASIAN WIDGEONS were seen at Beluga Slough. This all bodes well for the Kachemak Bay Shorebird Festival which starts tomorrow.

A lot of SEMIPALMATED PLOVERS were seen this session, some going through mating moves (these will probably nest here). Mud Bay had 1 SEMIPALMATED PLOVER, the drier area at Mid-spit had about 40, the boat harbor had 3, and wetter Beluga Slough had 1. BLACK-BELLIED PLOVERS were still around with 4 at Mud Bay, 34 at Mid-spit, and 2 at the Anchor River.

Yellowlegs seem to be on their nesting grounds. None were seen in the Spit area, but there were 3 GREATER YELLOWLEGS and 4 LESSER YELLOWLEGS at the Anchor River.

A flock of about a dozen WHIMBRELS were seen at Mud Bay and the Mid-spit. Another flock of 12 were seen at the Anchor River.

Monitors at Beluga Sleigh saw 4 MARBLED GODWITS. This species, which has an isolated nesting grounds on the Alaska Peninsula, have been consistently present this year.

The Mud Bay team saw 1 RUDDY TURNSTONE. Both Mid-spit teams saw 15 BLACK TURNSTONE. A flock of SURFBIRDS were moving between Mid-spit and the Outer Spit. The best count was 850. That will generate an eBird response.

Karl, who was out on his charter boat from 9:00 am till 12:00 saw 2,000-3,000 RED-NECKED PHALAROPES. He also saw 28 SURFBIRDS on Gull Island, and 2 BLACK OYSTERCATCHERS at Cohen Island. Sometimes the RED-NECKED PHALAROPES come close to the Spit. The Outer Spit team reported 1.

Should be good sandpiper populations for the festival, and maybe even better if a high pressure moves in over the weekend as forecasted. Mud Bay had a flock of 2,500 that were 70% WESTERN SANDPIPER (1,750) and 30% DUNLIN (750). There were 15 LEAST SANDPIPERS at Mariner Park Lagoon that were being harassed by a juvenile BALD EAGLE. A flock of about 40 LESA tried to land there, but the eagle spooked them and they flew off to Mud Bay. One team at Mid-spit saw 3 flocks of WESTERN SANDPIPERS with a total count of

233 as well as 4 LEAST SANDPIPER and 40 DUNLIN. The other team reported 150 peeps and another 500 that flew by as well as 150 DUNLIN. The Outer Spit monitors saw two flocks of sandpipers from a distance and reported a total of 115 peeps. Beluga Slough had about 120 WESTERN SANDPIPERS, 10 LEAST SANDPIPERS, and 6 DUNLIN. The Anchor River had a nice mix of *Calidris* (sandpipers) with 108 WESTERN SANDPIPERS, 9 LEAST SANDPIPERS, 5 SEMIPALMATED SANDPIPERS, 32 LESA/WESA/SESA (our term for peeps), 1 PECTORAL SANDPIPER, 4 DUNLIN, 10 ROCK SANDPIPERS, and 1 RED KNOT. If you are coming down to Homer for the festival, stopping at Anchor Point should be a must.

At Mud Bay they saw 7 DOWITCHERS. The Beluga Slough team saw 2 LONG-BILLED DOWITCHERS and at Anchor River they saw 3 SHORT-BILLED DOWITCHERS and 1 LONG-BILLED DOWITCHER.

Other species seen at Mud Bay include 2 SANDHILL CRANES.

Mariner Park Lagoon “others” included 2 NORTHERN PINTAILS, 5 NORTHERN SHOVELERS, 3 GREEN-WINGED TEAL, 2 SANDHILL CRANES, 2 BALD EAGLES, 4 MEW GULL, 12 NW CROWS, 2 FOX SPARROWS, 1 DARK-EYED JUNCO, and 1 BLACK-BILLED MAGPIE.

The Mid-spit area saw 3 NORTHERN SHOVELERS, 100 SCOTERS, 2 COMMON LOONS, 1 SANDHILL CRANE, and 8 BALD EAGLES. There was also a raft of about 200 sea otters just offshore.

The Outer Spit had 17 HARLEQUIN DUCKS, x SCOTERS, 2 COMMON LOONS, 4 BALD EAGLES, x MEW GULLS, x BLACK-LEGGED KITTIWAKES, 2 GLAUCOUS-WINGED GULLS, 4 AMERICAN PIPITS, 13 ROCK PIGEONS, and 3 NW CROWS.

Beluga Slough monitors saw 40 WHITE-FRONTED GEESE, 3 CACKLING GEESE, 24 NORTHERN PINTAILS, 12 GREEN-WINGED TEAL, 60 AMERICAN WIDGEONS, 2 EURASIAN WIDGEONS, 12 NORTHERN SHOVELERS, 7 MALLARDS, 8 SANDHILL CRANES, 16 BALD EAGLES, 3 ROCK PIGEONS, x NW CROWS, 5 BLACK-BILLED MAGPIE, 1 SAVANNA SPARROW, GOLDEN-CROWNED SPARROW (h), 1 LINCOLN SPARROW (h), 1 LAPLAND LONGSPUR, 1 RUBY-CROWNED KINGLET, and DARK-EYED JUNCO (h).

On Kachemak Bay they saw 5 LONG-TAILED DUCKS, 24 HARLEQUIN DUCKS, x SURF SCOTERS, x BLACK SCOTER, x WHITE-WINGED SCOTERS, 2 RED-BREASTED MERGANSERS, 1 COMMON LOON, 1 PACIFIC LOON, 40 RED-NECKED GREBE, 30 HORNED GREBE, and 12 MARBLED MURRELET.

On Beluga Lake they saw 30 SCAUP, x BUFFLEHEAD, and x RED-NECKED GREBE.

Anchor Point monitors saw a single CACKLING GOOSE with a flock of GREATER WHITE-FRONTED GEESE. Sea ducks included all 3 species of SCOTERS and HARLEQUINS. A

NORTHERN HARRIER came through and was very rapidly harried away by several NW CROWS.

Weather was back to normal. Based on NOAA's web site for the nearby Homer Airport (<http://w1.weather.gov/obhistory/PAHO.html>), at 8:53 am the temperature was 48°F, winds were calm, and skies overcast. At 10:53 am the temperature was 48°, winds were from the SW at 5 mph, and skies were overcast.

Next report in 5 days.

George Matz

2014 Kachemak Bay Shorebird Monitoring Project Session #6

On Monday, May 12th the Kachemak Bay Birders had its sixth shorebird monitoring session for this season. Twenty volunteers made observations for two hours (3:00-5:00 pm) at five sites in the Homer Spit area. Sites in the Spit area include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area), nearby Beluga Slough, and by boat the Islands/Islets on the south side of the Bay. Another three volunteers monitored the Anchor Point/River and a team of two birders monitored the mouth of the Kasilof River.

In my session #4 report I stated that the peak of migration may occur before the weekend of the Kachemak Bay Shorebird Festival. This prognosis was correct. At session #5 last Wednesday, we saw 2,500 sandpipers at Mud Bay and about 1,100 at Mid-spit. The next day I estimated that there were 7,900 sandpipers at Mud Bay and about 100 at the Mid-spit area plus probably more on the other side of the barrier dune. This appears to be the peak as daily estimates have since been declining. This session, there were about 1,200 in these two areas.

One issue with our protocol of monitoring once every five days is that significant numbers of shorebirds can come and go in-between scheduled sessions, particularly during the peak. We compensate for this by getting daily estimates for two weeks during the peak. This way we have some idea of what we missed. Two years ago, there were three separate pulses instead of one nice pulse like this year, probably because of variable weather. Fortunately, our scheduled monitoring data coincided with each of these pulses and it appears that our monitoring data counted most of the migration. However, last year the monitoring dates were on the shoulder of the pulse and our overall count was a bit less than the previous year, even though the number of shorebirds seemed about the same. But we could verify the difference by comparing our count data to our supplemental daily data.

What really helps us get a better handle on what we miss is all the other birders out there looking at shorebirds and recording their observations via eBird. Fortunately we have a lot of other birders during shorebird weekend. So thanks to all of you who submitted eBird reports. We will go over this record and glean from it a better estimate of how many shorebirds were here daily during the past week. All the data in this report will be on eBird.

Just having a daily count doesn't necessarily say how long the shorebirds are here. But with sandpipers, we can get some idea by looking at the composition of large flocks. For instance, if the size of the flock appears the same from one day to the next but the composition goes from 80% WESA and 20% DUNL one day to the opposite the next, good chance that these were not the same birds for both days. Using this approach, it appears this year that sandpipers in particular have not been around for more than a day. Weather certainly seems to be a factor. There haven't been any storms this year, which tend to back up the migration. Nor have conditions further north been much different than here. So it is safe for the shorebirds to continue their journey.

Because weather has not been an issue for this year's project, it will contribute to what we know about Kenai Peninsula shorebird migrations.

Another highlight this year has been the huge number of SURFBIRDS and RED-NECKED PHALAROPE we have been seeing throughout Kachemak Bay. It certainly appears as if Kachemak Bay is an important staging area while these birds wait for spring to arrive in the tundra (both alpine and coastal). This should be worth a study in itself. But, it would have to be by boat to get a composite picture of all the birds here at the same time. This is beyond the scope of our project, but maybe not for someone looking for a research project.

On to the shorebird report. Now that spring migration is waning, SEMIPALMATED PLOVERS have become the most numerous plover. Many breed in the supralittoral zone of the Spit, an area vulnerable to human/dog traffic in the Mid-spit area. Mud Bay had 12, Mariner Park Lagoon had 8, the Mid-spit area had 44, Anchor River had 5, and the Kasilof River had 1. BLACK-BELLIED PLOVERS were still around with 1 at Mud Bay, 8 at Mid-spit, 13 at the Anchor River, and 2 at the Kasilof River. The Kasilof River also had 1 PACIFIC GOLDEN-PLOVER, a species not nearly as abundant at any site this year compared to last year.

Yellowlegs have mostly dispersed to their breeding areas. There were 4 GREATER YELLOWLEGS at Beluga Slough, 1 at the Anchor and 4 at the Kasilof Rivers. Beluga Slough reported 1 LESSER YELLOWLEGS, the Anchor River had 4, and the Kasilof River had 3.

Beluga Slough saw 1 WHIMBREL, Anchor River had 11, and there were 3 at the Kasilof River. The last two years we have seen Bristle-thighed Curlews after the shorebird festival; so we will have to be on the alert for this possibility.

The only godwits seen were 3 HUDSONIAN GODWIT at the Kasilof River, which is closer to their breeding grounds than Kachemak Bay.

Last session we reported 850 SURFBIRDS in the Mid-spit and boat harbor areas. The next day Aaron Lang topped this with an estimate of 1,500. They have been around the Spit and Bay throughout the festival, to the delight of birders and photographers. The Mid-spit saw 60 and another 724 were seen near the entrance to the harbor. Hanging out with the Surfbirds were 1 RUDDY TURNSTONE, 30 BLACK TURNSTONE, and 1 ROCK SANDPIPER in alternate plumage (two were seen the previous day). We have great photos for all these species. The Anchor River team also saw 17 BLACK TURNSTONE. Karl reported 14 SURFBIRDS and 4 BLACK TURNSTONE on Gull Island. He also said that Bear Cover "had 243 Surfbirds, 10

Black Turnstones, 1 Red Knot, 4 Rock Sandpipers and 1 Ruddy Turnstone.” However, Bear Cove is not within the protocol area.

As said earlier, sandpiper counts are declining. Mud Bay had 150 WESTERN SANDPIPERS and Mariner Park had 3 sandpipers. The Mid-spit saw three flocks of WESA for a total of about 1,020 as well as another 56 sandpipers and 77 DUNLIN. The Outer Spit had 2 sandpipers fly by, and Beluga Slough had 4 WESTERN and 12 LEAST SANDPIPERS as well as 24 DUNLIN. Further north, the Anchor River had 7 WESTERNS, 3 LEAST, and 1 DUNLIN. The Kasilof River had 400 WESTERN’S and 30 DUNLIN.

Mud Bay saw 6 DOWITCHERS, Beluga Slough had 1 SHORT-BILLED and 20 LONG-BILLED DOWITCHERS. Anchor River had 6 SHORT-BILLED, 2 LONG-BILLED, and 2 just DOWITCHERS. They also had a WILSON’S SNIPE. Kasilof River had 30 SHORT-BILLED DOWITHCHERS and 1 WILSON’S SNIPE.

The highlight at Anchor River was RED-NECKED PHALAROPE. To quote from their report, “For as far as we could see, from south to north, there was almost a continuous string of Phalaropes spread out in small flocks, good sized flocks, dispersed flocks, flocks in the air, flocks on the water. Most of these were in the neighborhood of 1/4 to 1/2 mile off shore.”

In terms of other species of birds, all sites reported fewer waterfowl. There is a magical time in the spring when Kachemak Bay has both overwintering and migrating waterfowl, all dressed in their finest. But time has come to move on and get down to serious breeding.

Mud Bay reported disturbances to shorebirds from helicopters and Bald Eagles.

In addition to shorebirds, Mariner Park Lagoon saw 2 NORTHERN PINTAILS, 2 MALLARDS, 3 GREEN-WINGED TEAL, 2 SANDHILL CRANES, and 1 FOX SPARROW.

The Mid-spit team didn’t observe any waterfowl, which they typically see. They also reported disturbances from helicopters, walkers, and a person flying a remote controlled model plane.

The Outer Spit saw 2 SCOTERS, 1 COMMON LOON, 7, PELAGIC CORMORANTS, 3 BALD EAGLES, x MEW GULLS, x BLACK-LEGGED KITTIWAKES, and 2 SONG SPARROWS.

Beluga Slough monitors saw 14 WHITE-FRONTED GEESE, 7 CACKLING GEESE, 32 NORTHERN PINTAILS, 24 GREEN-WINGED TEAL, 26 AMERICAN WIGEONS, 48 NORTHERN SHOVELERS, 6 MALLARDS, 3 SANDHILL CRANES, x BALD EAGLES, 1 GLAUCOUS-WINGED GULL, x NW CROWS, 1 FOX SPARROW, 3 LAPLAND LONGSPURS, 1 HERMIT THRUSH, 80 AMERICAN PIPITS, 1 ORANGE-CROWNED WARBLER, and 1 DARK-EYED JUNCO.

On Kachemak Bay they saw only 6 HARLEQUIN DUCKS. We usually have small flocks of nonbreeders throughout the summer.

Anchor Point monitors saw BALD EAGLES, AMERICAN PIPITS, LAPLAND LONGSPURS, 2 ARCTIC TERNS, and 1 PARASITIC JAEGER. They also saw a pod of orcas, which is a first for this site.

Kasilof River monitors saw 24 CANADA GEESE, 4 MALLARDS, 12 NORTHERN PINTAILS, 3 GREATER SCAUP, 3 SURF SCOTER, 12 BLACK SCOTER, 15 COMMON GOLDENEYE, 3 BALD EAGLE, 3 SANDHILL CRANES, and 1 RUSTY BLACKBIRD.

NOAA's web site for the Homer Airport (<http://w1.weather.gov/obhistory/PAHO.html>) said that at 2:53 pm the temperature was 48°F, winds were from the W at 10 mph and skies were mostly cloudy. At 4:53 pm the temperature was still 48°F, winds were from the SW at 13 mph, and skies were mostly cloudy. But, as usual, there were stronger winds on the Spit.

Next report in 5 days.

George Matz

2014 Kachemak Bay Shorebird Monitoring Project Session #7

On Saturday, May 17th the Kachemak Bay Birders had its seventh shorebird monitoring session for this season. Sixteen volunteers made observations for two hours (7:15-9:15 pm) at five sites in the Homer Spit area. Sites in the Spit area include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area), nearby Beluga Slough, and by boat the Islands/Islets on the south side of the Bay. Two volunteers monitored the Anchor Point/River and a one volunteer monitored the mouth of the Kasilof River.

Another interesting session. Although yellowlegs, plovers, and sandpipers have mostly passed through Kachemak Bay, shorebirds that breed in the alpine or Arctic tundra, where spring thaw is just starting, are either still hanging out here or just arriving. Hundreds of Surfbirds are still in Kachemak Bay, flocks of Whimbrel continue to come and go, and Wandering Tattler are arriving. These species breed in the alpine. So far no Bristle-thighed Curlew. Shorebirds that breed in the Arctic tundra are also arriving. Last week we saw a Ruddy Turnstone and this week we had a Red Knot. Maybe Sanderlings will show up next time. We will be looking.

Weather continues to be a non-issue in terms of migration. Rather than a couple of pulses of arrivals, punctuated by storms, there has been this relatively smooth Gaussian curve of shorebirds flocks that have come and gone. Homer has had an amazing string of mild weather this spring, which makes you wonder if we are using up our annual allocation too soon. But the nice weather also contributed to more disturbance in intertidal areas, particularly at Bishops Beach where people were driving in areas closed to vehicles. Monitoring at the Kasilof River stopped after about an hour because of 4-wheelers tearing around the beach. King salmon fishing is now open on the Anchor River, which always draws a crowd.

The most numerous plover this session was the SEMIPALMATED PLOVER, which nest in the area. Mud Bay had 7, Mariner Park Lagoon had 3, the Mid-spit area had about 37, the Outer

Spit had 5, and the Anchor River had 3. BLACK-BELLIED PLOVERS were few with only 2 at Mid-spit.

Karl saw a pair of BLACK OYSTERCATCHERS at Cohen Island.

There were 4 LESSER YELLOWLEGS at Mariner Park Lagoon Slough and 5 at the Anchor River. The Anchor River also had 9 GREATER YELLOWLEGS and the Kasilof River had 2. About 20 WANDERING TATTLER, which are in the same genus as yellowlegs, were walking around the boat harbor.

Beluga Slough saw 1 WHIMBREL, and the Anchor River had 6. No one reported any godwits although I did see 1 MARBLED GODWIT the day before at the Anchor River with a flock of 34 Whimbrel.

Monitors at Mid-spit saw about 130 SURFBIRDS and 2 ROCK SANDPIPERS on the move and those at the Outer Spit saw 146 plus 1 BLACK TURNSTONE. However, there are still many more in the area. On a Kachemak Bay Birders boating field trip on Saturday morning with Karl Stoltzfus we didn't see any Surfbirds as we left the harbor at 9:00 am but saw hundreds foraging on the rocks at the harbor entrance when we returned just before noon. A low tide of -4.0 feet was at 11:05. Hanging out with the Surfbirds was 1 ROCK SANDPIPER and 1 RED KNOT which I photographed for verification. Attached is the photo, or for those on AKBirding check my file at George Matz. A ROCK SANDPIPER was also seen by the Outer Spit team during monitoring and the RED KNOT was seen at Mid-spit, both times in the accompany of Surfbirds. Those wanting to see the Red Knot should check for a flock of Surfbirds on the rocks at the entrance to the harbor by boat or from the small park on the other side and then carefully look at each one. If you don't see any Surfbirds there, check the rocks at the entrance to the Barge Basin which is near the skating rink.

Sandpipers are still around. With WESTERN SANDPIPERS Mud Bay had 63, Mariner Park had 65, Mid-spit saw 198, the Out Spit had 3, Beluga Slough had 24, and Kasilof River had 24. LEAST SANDPIPERS were seen at Mud Bay 1 and Mariner Park Lagoon had 22. Mid-spit reported 11 SEMIPALMATED SANDPIPERS. The Outer Spit team had 50 peeps fly by. DUNLIN were seen at Mud Bay 14, Mariner Park Lagoon 8, Mid-spit 86, Anchor River 2, and Kasilof River 1. Other sandpipers include 1 possible PECTORAL SANDPIPER at Beluga Slough and 7 at the Anchor River.

SHORT-BILLED DOWITCHERS were seen at Mid-spit 2, the Anchor River 5, and the Kasilof River 2. LONG-BILLED DOWITCHERS were seen Beluga Slough 14, and the Anchor River 2.

It appears that the huge flock of RED-NECKED PHALAROPE that were here for a while have headed north.

Other Kenai Peninsula shorebird monitoring of note is this May 16th email from Toby and Laura Burke reporting on the Kenai River. It is interesting to speculate why such a concentration of Dowitchers and Pectoral Sandpipers here and not in other nearby stopovers. The Burke's said; "There were two American Golden Plovers and a single Killdeer on the east side of Bridge

Access Road between the shallow melt-water ponds at 5:45 pm Thursday. There were also 1,000 Short-billed Dowitchers, 800 Pectoral Sandpipers, 200 Western Sandpipers, 50 Dunlin, 15 Yellowlegs, 1 Hudsonian Godwit, and 1 Whimbrel in the ponds.”

Also, I am including at the end of this report a recent, short article in BirdWatching magazine about shorebird monitoring at the Fraser River. This should be of interest to all shorebird aficionados’.

Here is the report on other species of birds seen by area.

Mariner Park Lagoon saw 3 NORTHERN PINTAIL, 2 MALLARDS, 2 GREEN-WINGED TEAL, 3 AMERICAN WIGEON, 1 SANDHILL CRANE on a nest, 1 BALD EAGLE cruising over which caused the ducks to flee but not the yellowlegs, 2 AMERICAN ROBINS, 1 HERMIT THRUSH, and 1 FOX SPARROW.

The Mid-spit saw 2 MALLARDS, 33 WHITE-WINGED SCOTER, 500+ BLACK-LEGGED KITTIWAKES getting nesting material, 1 JAEGER, and 12 GLAUCOUS-WINGED GULLS.

The Outer Spit saw 4 WHITE-WINGED SCOTERS, 2 HARLEQUIN DUCK, SCAUP, 7 PELAGIC CORMORANTS, 8 BALD EAGLES, 1 HERRING GULL, 15 GLAUCOUS-WINGED GULLS, x BLACK-LEGGED KITTIWAKES, 1 hybrid gull, and 2 ROCK PIGEONS.

Beluga Slough monitors saw 6 GREATER WHITE-FRONTED GEESE, 4 CANADA GEESE, 27 NORTHERN PINTAILS, 24 GREEN-WINGED TEAL, 21 AMERICAN WIGEONS, 6 NORTHERN SHOVELERS, 9 MALLARDS, 11 GREEN-WINGED TEAL, 3 SANDHILL CRANES, 5 BALD EAGLES, 17 GLAUCOUS-WINGED GULL, 18 NW CROWS, and 1 AMERICAN ROBIN.

On Kachemak Bay they saw 2 HARLEQUIN DUCKS, 18 BLACK-LEGGED KITTIWAKE, and 1,600 COMMON MURRES flying by.

Anchor Point monitors saw 6 GREATER WHITE-FRONTED GEESE, 1 SNOW GOOSE, AMERICAN WIGEON, GREEN-WINGED TEAL, COMMON MERGANSER, RED-BREASTED MERGANSER, AMERICAN PIPITS, LAPLAND LONGSPURS, SWALLOWS, and 1 SAVANNAH SPARROW,

The Kasilof River monitor saw 2 CANADA GEESE, 2 MALLARDS, 6 NORTHERN PINTAILS, 4 EURASIAN WIGEON, 4 NORTHERN SHOEVLER, 2 GREEN-WINGED TEAL, 50 GREATER SCAUP, 100 gulls, 2 ARCTIC TERN, 1 BLACK-BILLED MAGPIE, and 1 SAVANNAH SPARROW.

NOAA’s web site for the Homer Airport (<http://w1.weather.gov/obhistory/PAHO.html>) reported that at 6:53 pm the temperature was 61°F, winds were from the SW at 13 mph, and skies were mostly cloudy. At 8:53 pm the temperature was 56°F, winds were from the SW at 7 mph, and skies were fair.

Next report in 5 days.

George Matz

BirdWatching: June, 2014

Monitoring confirms importance of Fraser River Delta to Western Sandpiper and Dunlin
4/22/2014 |

Dunlin at Presqu'île Provincial Park, Brighton, Ontario, by [newfoundlander61](#).

A fresh analysis of two decades of daily counts at one of three extensive intertidal flats in the Fraser River Delta, in British Columbia, has underscored the area's critical importance to shorebirds that migrate every year along the Pacific Flyway.

According to researchers from Environment Canada and Bird Studies Canada, 600,000 Western Sandpipers and 200,000-250,000 Dunlins typically foraged and roosted at the flat, known as Brunswick Point, every spring between 1991 and 2013.

The estimates represent 14-21 percent of the total flyway population of Western Sandpiper (estimated to be 3.5 million) and 30-50 percent of the flyway population of Dunlin (550,000), and in some years, the percentage may have been higher.

Once uncertainties about length of stay and random variation are figured in, say Mark C. Drever, Moira J. F. Lemon, Robert W. Butler, and Rhonda L. Millikin, the median number of Western Sandpipers in 1994 may have been 1.8 million, or 42-64 percent of the total Pacific Flyway population.

What's more, the researchers write that aerial surveys indicate the birds counted at Brunswick Point represent only about 40 percent of all the sandpipers that stop in the estuary each spring. Many thousands more Western Sandpipers and Dunlins, they say, use the two other intertidal flats, Sturgeon Banks and Boundary Bay ([Hotspot Near You No. 173](#)).

“Thus, it is possible that entire Flyway populations of both species may be found on the Fraser River Delta during migration, underscoring the overall importance of the entire estuary.”

Effective conservation measures for Western Sandpiper and Dunlin, conclude Drever and his colleagues, should focus on protecting the mudflats as feeding and roosting sites, and securing the sites from disturbance and pollution.

The Fraser River Delta was designated a site of hemispheric importance in the [Western Hemisphere Shorebird Reserve Network](#) in 2005.

Read the paper

Mark C. Drever, Moira J. F. Lemon, Robert W. Butler, and Rhonda L. Millikin, 2014, [Monitoring Populations of Western Sandpipers and Pacific Dunlins during Northward Migration on the Fraser River Delta, British Columbia, 1991–2013](#), *Journal of Field Ornithology* 85 (1): 10–22 (PDF).

2014 Kachemak Bay Shorebird Monitoring Project Session #8

On Thursday, May 22nd the Kachemak Bay Birders had its eighth shorebird monitoring session for this season. Fifteen volunteers made observations for two hours (9:15-11:15 am) at five sites in the Homer Spit area. Sites in the Spit area include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area), nearby Beluga Slough, and by boat the Islands/Islets on the south side of the Bay. One volunteer monitored the Anchor Point/River and another volunteer monitored the mouth of the Kasilof River.

The number of shorebirds continues to slide, but there was good diversity this session as late migrants arrived. The highlight was 2 SANDERLINGS on the outer beach of Louie's Lagoon. These late arrivals breed in the high Arctic with the North Slope of Alaska being the southern part of its breeding range. They don't migrate through here until thaw comes to their breeding grounds. Identification can be a bit tricky since they are in various stages of reaching their breeding (alternate) plumage. But thanks to Gary Lyon, we have some photos of which one (with a Surfbird) is attached for those on the Kachemak Bay Birders list.

Now that we are nearing the end of this fantastic spring migration, it doesn't appear as if the numbers of shorebirds will be comparable to the last two years. Perhaps that cold spring last year took its toll. Toby Burke, a Kasilof Rover monitor, has a similar impression. He said in this sessions report; "In between the normally scheduled May 12 and May 17 surveys we conducted two additional surveys (on May 14 and May 16) that conformed to the established survey protocol. We were all a bit confounded by the low numbers so we decided to insert a few more surveys. Perhaps the peak occurred between May 7 and May 12 as it did in Homer this year. Regardless, we suspect that the peak this year most likely was more modest than last year's on the Kasilof."

One factor noted during our sessions is disturbance to shorebirds from raptors, people/dogs, aircraft, etc. The Homer Airport was built in a wetland near the base of the spit. But not that many planes actually use the airport, so there doesn't seem to be that much bird disturbance from planes. Also, planes have a predictable flight pattern. But this year there seems to be more helicopter traffic from the airport with random flight patterns. Our anecdotal observations are that helicopters have a more disturbing effect on birds than planes. This session I noted a helicopter flying over Mariner Park Lagoon at a low elevation which flushed several crows. A few minutes later a DE Havilland two engine plane came over and there didn't seem to any reaction from the crows.

On to the birds. The only plover this session was the SEMIPALMATED PLOVER with 4 at Mud Bay, 29 at Mid-spit, 1 at Beluga Slough, and 1 at the Kasilof River. Some of these, if not most, will be nesting in the area.

Karl saw 1 BLACK OYSTERCATCHER at Cohen Island.

Yellowlegs are sparse in the coastal area. Beluga Slough had 7 GREATER YELLOWLEGS and the Anchor River had 1. The Kasilof River had 5 plus 2 LESSER YELLOWLEGS. The Mid-spit had 1 WANDERING TATTLER.

A flock of 5 WHIMBREL landed briefly at Mariner Park Lagoon as well as the Beluga Slough.

The Kasilof River had 2 HUDSONIAN GODWIT.

There were 2 SURFBIRDS at the Mid-spit, a flock of about 350 and 30 at the Outer Spit on the boat harbor rock jetty, and 100 near Gull Island.

WESTERN SANDPIPERS are still around with 13 at Mud Bay, 7 at Mid-spit, and 3 at the Kasilof River. Mud Bay and the Mid-spit each saw 1 SEMIPALMATED SANDPIPER. DUNLIN were seen at Mud Bay 1, Mid-spit 8, Beluga Slough 7, and Kasilof River 2. Beluga Slough had 60 LEAST SANDPIPERS. The Outer Spit saw 1 ROCK SANDPEPER. The new arrival is the PECTORAL SANDPIPER with 72 at Mud Bay, 18 at Mariner Park Lagoon, 7 at Beluga Slough, and 2 at the Kasilof River. The Mid-spit had a big find with 2 SANDERLING. Lots of SHORT-BILLED DOWITCHERS at the Kasilof River which had 52. At the Anchor River 1 LONG-BILLED DOWITCHER was heard flying by.

A single RED-NECKED PHALAROPE was at Beluga Slough.

Other species of birds seen are as follows.

Mud Bay had 3 BRANT and 260 sea otters.

Mariner Park Lagoon saw 4 NORTHERN PINTAIL, 1 GREEN-WINGED TEAL, 2 AMERICAN WIGEON, 2 SANDHILL CRANES trading positions on a nest, 1 BALD EAGLE cruising over, 5 NW CROWS, 2 AMERICAN ROBINS, 1 HERMIT THRUSH, and 1 FOX SPARROW.

The Mid-spit saw 2 HARLEQUIN DUCKS, 2 WHITE-WINGED SCOTER, 5 BALD EAGLES, 1 SAVANNAH SPARROW and 200 sea otters.

The Outer Spit saw 44 SCAUP, 3 HARLEQUIN DUCK, 6 SCOTERS, 18 PELAGIC CORMORANTS, 7 BALD EAGLES, x BLACK-LEGGED KITTIWAKES, x NW CROWS, and 3 SONG SPARROWS.

Beluga Slough monitors saw 11 GREEN-WINGED TEAL, 18 NORTHERN PINTAILS, 34 AMERICAN WIGEON, 3 NORTHERN SHOVELERS, 13 MALLARDS, 5 SANDHILL CRANES, 6 ROCK PIGEONS, 9 VIOLET GREEN SALLOW, 10 NW CROWS, 6 AMERICAN ROBIN, 1 GOLDEN-CROWNED SPARROW, and 2 SAVANNAH SPARROWS.

On Kachemak Bay they saw 6 HARLEQUIN DUCKS, 6 MURRELETS, x BLACK-LEGGED KITTIWAKES, x GLAUCOUS-WINGED GULLS, and 2 PACIFIC LOONS.

Anchor Point monitors saw 6 GREATER WHITE-FRONTED GEESE, 1 SNOW GOOSE, AMERICAN WIGEON, GREEN-WINGED TEAL, COMMON Merganser, RED-BREASTED Merganser, AMERICAN PIPITS, LAPLAND LONGSPURS, SWALLOWS, and 1 SAVANNAH SPARROW,

The Kasilof River monitor saw 2 CANADA GEESE, 2 MALLARDS, 6 NORTHERN PINTAILS, 4 EURASIAN WIGEON, 4 NORTHERN SHOVELER, 2 GREEN-WINGED TEAL, 50 GREATER SCAUP, 100 gulls, 2 ARCTIC TERN, 1 BLACK-BILLED MAGPIE, and 1 SAVANNAH SPARROW.

NOAA's web site for the Homer Airport (<http://w1.weather.gov/obhistory/PAHO.html>) reported that at 8:53 am the temperature was 45°F, winds were calm, and skies were fair but smoky due to forest fires. At 10:53 pm the temperature was 52°F, winds were from the SE at 3 mph, and skies were fair.

Next and last report for this year in 5 days.

George Matz

2014 Kachemak Bay Shorebird Monitoring Project Session #9

On Tuesday, May 27th the Kachemak Bay Birders had its ninth shorebird monitoring session for this season. Seventeen volunteers made observations for two hours (4:15-6:15 pm) at five sites in the Homer Spit area. Sites in the Spit area include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area), nearby Beluga Slough, and by boat the Islands/Islets on the south side of the Bay. Two volunteers monitored the Anchor Point/River and another volunteer monitored the mouth of the Kasilof River.

As expected, the number of migrating shorebirds were down to a few stragglers. We did see a fair number of shorebirds, but these were mostly breeding birds. One highlight was a RED PHALAROPE seen by Karl Stoltzfus while on the south side of the Bay. This is the first one he has seen on Kachemak Bay since 2008 and the first during our six years of shorebird monitoring. Attached is a photo by Karl.

This has been another successful monitoring year with good shorebird appearance, volunteer support, and weather. As stated before, during this mild spring there have been no storms to delay shorebird migration.

The only plovers seen on the Spit were breeding SEMIPALMATED PLOVERS. Mud Bay had 7, another 35 were at Mid-spit and 1 at the Outer Spit. Gary Lyon and Susan McLane said that the SEPL at Mid-spit were dispersed on nesting sites and getting into some territorial squabbles.

Anchor River monitors saw 4 SEPL. The Kasilof River saw 1 PACIFIC GOLDEN-PLOVER and 1 BLACK-BELLIED PLOVER.

Two BLACK OYSTERCATCHERS were seen at Cohen Island.

A few Yellowlegs were seen, which also breed in this area. Mariner Park Lagoon had 1 GREATER YELLOWLEGS as did Beluga Slough. Anchor River monitors saw 5 GREATER and 1 LESSER while the Kasilof River had 2 GREATER and 8 LESSER. The Outer Spit had 2 WANDERING TATTLER and Gull Island as well as the Anchor River each had 1.

The Kasilof River had 2 MARBLED GODWIT.

A number of SURFBIRDS are still around with 28 at the Outer Spit and 12 at Gull Island. There was also 1 BLACK TURNSTONE at Gull Island.

There were a few straggling sandpipers. Mud Bay saw 1 WESTERN SANDPIPER and Anchor River had 9. Mud Bay also had 1 DUNLIN, the Mid-spit saw 5, and Anchor point had 2.

There were 2 SHORT-BILLED DOWITCHERS at Mariner Park Lagoon, the Anchor River had 3, and Kasilof River had 6. The Anchor River also had 1 LONG-BILLED DOWITCHER as well as all 4 DOWITCHER sp.

The Anchor River had 1 WILSON'S SNIPE.

In addition to a RED PHALAROPE, there were 4 RED-NECKED PHALAROPE on the water at Kachemak Bay as well as 2 at Kasilof River.

Other species of birds seen are as follows.

Mud Bay had 3 COMMON LOONS as well as about 150 sea otters.

Mariner Park Lagoon saw 2 NORTHERN PINTAIL, 1 GREEN-WINGED TEAL, 2 AMERICAN WIGEON, 2 SANDHILL CRANES on a nest, 2 NW CROWS, 2 AMERICAN ROBINS, 1 ORANGE-CROWNED WARBLER, and 1 BLACK-BILLED MAGPIE.

The Mid-spit saw 2 HARLEQUIN DUCKS, 5 WHITE-WINGED SCOTER, 21 BLACK SCOTER, 1 PACIFIC LOON, 2 COMMON LOONS, 5 GLAUCOUS-WINGED GULLS, 500 BLACK-LEGGED KITTIWAKE, 1 ARCTIC TERN, 3 BALD EAGLES, 1 MERLIN, and 7 SAVANNAH SPARROWS.

The Outer Spit saw 1 HARLEQUIN DUCK, 3 COMMON LOONS, 5 PELAGIC CORMORANTS, 4 BALD EAGLES, 250 GLAUCOUS-WINGED GULLS, x BLACK-LEGGED KITTIWAKES, 2 PIGEON GUILLEMOT, 3 ROCK PIGEONS, 3 NW CROWS, 1 SONG SPARROW, and 3 SAVANNAH SPARROWS.

Beluga Slough monitors saw 6 GREEN-WINGED TEAL, 6 NORTHERN PINTAILS, 6 AMERICAN WIGEON, 8 NORTHERN SHOVELERS, 11 MALLARDS, 2 SANDHILL CRANES, 10 ROCK PIGEONS, x NW CROWS, 1 HERMIT THRUSH, 1 FOX SPARROW, 1 GOLDEN-CROWNED SPARROW, and 1 SAVANNAH SPARROWS.

On Kachemak Bay they saw 1 WHITE-WINGED SCOTER, 20 GREATER SCAUP, 2 COMMON LOONS, 12 GLAUCOUS-WINGED GULLS, and 15 TREE SWALLOWS. On Beluga Lake were RED-NECKDED GREBES, SCAUP, and flocks of swallows.

Anchor Point monitors saw AMERICAN WIGEON, SCAUP, COMMON LOON, HARLEQUIN DUCK, PARASETIC JAEGAR, and SAVANNAH SPARROW,

NOAA's web site for the Homer Airport (<http://w1.weather.gov/obhistory/PAHO.html>) reported that at 3:53 pm the temperature was 54°F, winds were W at 3 mph, and skies were overcast. At 5:53 pm the temperature was 53°F, winds were W at 5 mph, and light rain was falling.

This is the last monitoring session for this year. Next comes writing a report on the observations of this is session, which should be interesting.

Thanks to all those who have volunteered this year as well as previous years. There have been too many to list here, but I'll come up with a list.

George Matz