

Farallon Islands Monthly Report

Report to the U.S. Fish and Wildlife Service

Farallon Islands National Wildlife Refuge

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**Point Blue Conservation Science –** Point Blue advances conservation of birds, other wildlife and ecosystems through science, partnerships and outreach. Our highest priority is to reduce the impacts of habitat loss, climate change, and other environmental threats while promoting nature-based solutions for wildlife and people, on land and at sea. Visit Point Blue on the web [www.pointblue.org](http://www.pointblue.org).

**Island Visitors**

**Point Blue**: Jason Gregg, Joey Negreann, Lexi Roberts, Rya Rubenthaler Stella Solasz, Alex Soldo, Savannah Stewart, Jim Tietz, Pete Warzybok.

October 9th: **“Starbuck”** (skipper John Wade) brought out supplies. Three crew members and two Point Blue interns (from Palo) toured the island and departed with Joey Negreann and Savannah Stewart.

October 16th: **“Salty Lady”** (skipper Jared Davis) brought out Stella Solasz.

October 29th: **“John A.B. Dillard”** (skipper Kixon Meyer) brought out Rya Rubenthaler and Pete Warzybok. Two crew members toured the island. They departed with Jason Gregg and Jim Tietz.

**West End Island Visitors**

October 15th: Alex Soldo and Jim Tietz visited West End Island to conduct pinniped survey.

October 31st: Lexi Roberts, Stella Solasz, and Pete Warzybok visited West End Island to conduct pinniped survey.

**COVID-19:** In response to ongoing concerns over impacts of this global pandemic, certain precautionary measures have been employed to minimize the risk of COVID-19 infecting island personnel. We have been following a strict protocol that has allowed continued, safe operations on the island.

**Weather/Ocean**

Monthly weather is summarized in Figure 1. Light to strong northwest winds dominated this month, with light to strong winds from the south preceding and during storm events. A strong northwest gale occurred from the 10th to the 12th, which caused minor damage to island infrastructure. The island received 4.46 inches of precipitation this month, of which 2.81 inches fell during the atmospheric river event on the 24th and 25th. The average midday air temperature this month was 14.84 ± 2.84 °C, which was 0.60 °C lower than the long-term average of 15.44 °C. The average sea surface temperature (SST) this month was 13.78 ± 0.94 °C, which was equal to t0.002 °C below the long-term average of 13.79 °C. The air quality this month was moderate according to EPA standards (Table 1), with an average Air Quality Index (AQI) of 57 for PM2.5 and 22 for PM10. The PM2.5 level was “unhealthy” on only one day, the 25th, with an AQI value of 153, while the PM10 level was “moderate” that day with a value of 70.

Chart, radar chart

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**Figure 1**. Noon air and sea surface temperature data summary. Light blue depicts the long-term (1971 – 2020) range of observations with years given for record highs and lows; dark blue shows the long-term range of averages for this month. Orange depicts the range of current (2021) observations. Differences between the long-term and current means are shown in red if above normal, and blue if below normal. Daily wind speed (color scale) and direction binned into sectors for morning, noon, and afternoon observations for this month. Larger bars indicate more wind from that direction.

Table

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Table 1. The Air Quality Index (AQI) is divided into six categories that correspond to different levels of health concern. The breakpoints between these categories are selected based on a review of the health effects evidence. (https://www.epa.gov/wildfire-smoke-course/wildfire-smoke-and-your-patients-health-air-quality-index)

**Oiled & Entangled Wildlife**

Nine Western Gulls and one California Gull were seen with small amounts of oil (<5% on total body) on head and neck during October.

Twenty-two Zalophus (five adult females, one subadult male, ten immatures, and six unknown age/sex) were found to be entangled this month with monofilament, nylon rope, fishing net, or unknown material embedded in their necks and/or head. One South Polar Skua, photographed flying over Lighthouse Hill, had blue plastic material wrapped around its wing/body (difficult to determine). And one juvenile Western Gull had a fishing lure embedded in its bill.

**Feeding Flocks**

October 5th: ~40 pelicans SW of the island during the morning.

October 23rd: 4 flocks throughout the morning had 50-500 pelicans, 100-500 gulls, ~100 murres, and a few humpback whales.

October 25th: a flock ~10 km southeast of the island had ~300 gulls.

October 26th: six flocks between noon and 1 PM were east, south, west from 5-7 km consisted of 40-200 pelicans and 50-300 gulls.

October 30th: four flocks between noon and 1 PM were north to northwest from 4-10 km consisted of 30-100 pelicans and 80-200 gulls.

**Breeding Birds**

**Storm-Petrels** – At the beginning of October, 17 Ashy sites were active with chicks and still being followed from September. Of these 17 nests, 7 fledged and 6 failed by the end of the month, while 4 were still being monitored into November. The one known breeding site in the Ashy Castle was still active at the end of the month. One moribund bird was found near the SLC blind, which died later that day. The autonomous recording units (ARU’s) were collected on the 29th, thus completing that study for the season.

**Brandt’s Cormorant** – Creches mostly dispersed by mid-month, with most birds (~2,000) then roosting on offshore islets, such as Sugarloaf, Aulon Islets, and Saddle Rock.

**Pelagic Cormorant** – Approximately a hundred birds were seen daily roosting along the shoreline or on steep cliffs.

**Double-crested Cormorant** – A flock of 16 were seen flying to the mainland on the 2nd. Only a few birds were seen subsequently during the remainder of the month.

**Western Gull** – A few thousand adults and immatures roosted most nights on the island during the first half of the month. Roosting numbers increased during the second half of the month, with an estimate of 7,500 on the 30th.

**California Gulls** – Migrants from the mainland were counted every evening.

**Common Murre** – Zero to 200 birds were seen daily during the first half of the month. During the second half of the month, numbers increased with 2,000 individuals estimated on three days, and 8,000 estimated on or around the island on the 28th – the first day this fall that murres landed on the island en masse.

**Pigeon Guillemot** – A few birds (1-4) were seen during the first week of the month, but none were detected afterwards.

**Rhinoceros Auklet** – Single individuals were seen on the water on only three days this month.

**Tufted Puffin** – No birds were seen this month.

**Cassin’s Auklet** – Very few were detected until the last week of the month, when 15-20 were heard and seen nightly until the 31st, when 250 were detected.

**Black Oystercatchers\*** – Roosting birds were counted daily during high tide surveys and averaged 20 birds per survey, with a high count of 44 on Oct 22nd.

*\*We no longer conduct dedicated monitoring of this species, and only incidental breeding behaviors and attempts are noted.*

**Pinnipeds**

**California Sea Lion –** On average there were 8,428 (std ± 1942) individuals counted during the weekly pinniped census from the Lighthouse, with a high count of 11,064 individuals on the 7th. The high count for pups was 599 on the 22nd.

**Steller Sea Lion –** On average there were 84 (std ± 19) individuals counted, with the high count of 105 on the 7th. The high count for pups was 27 on the 7th.

**Northern Fur Seal –** Numbers declined at the West End colony this month. On average there were 958 (std ± 137) individuals counted, with the high count of 1,090 observed on the 7th. The high count for pups was 179 on the 7th. We discontinued counting pups after the 14th, when it became too difficult from the lighthouse to distinguish yearlings from freshly molted juveniles.

A trip to West End on the 15th counted 1,443 individuals, including 248 pups and 47 bulls. A total of 18 tags were read, with six of those tagged on the Farallones.

**Harbor Seal –** On average there were 2 (std ± 2) individuals counted, with a high count of 3 on the 7th and 14th.

**Northern Elephant Seal –** Numbers increased this month, with an average count of 150 (std ± 49) individuals. A high count of 190 individuals observed on the 14th. 68% of these were immatures while the others were subadult males or unidentified.

**Canada Goose**

None were seen this month.

**Cetaceans**

**Standard Survey** – Eighteen one-hour standard whale watches were conducted this month from the Lighthouse using the Ocean Alert app. Daily high counts from standard watches combined with incidental observations are summarized in Figure 2. Humpback whales were common around the island all month, with a high count of 64 on the 18th. One or two gray whales were seen on four days. A pod of 60 Risso’s Dolphins was seen on the 15th.

**Figure 2.** Daily high counts of cetaceans observed from Southeast Farallon Island for October 2021. Survey days are denoted with an asterisk.

**Sharks**

Shark surveys were conducted from the lighthouse on most days. Sixteen predation/scavenging events were observed this month. Most of these feeding events occurred on the east side of the island, but a few were seen in Mirounga Bay and one was off West End.

**Salamanders**

The first salamander survey of the 2021/2022 season occurred on the 14th, but none were detected because of the dry conditions. However, all coverboards were put back in place along the standard survey route, with rocks on top to keep them from being moved around. A few salamanders were seen incidentally at various places.

**Owls**

Two Burrowing Owls were banded on the 19th. The owl intern resighted a Burrowing Owl (P30/S) banded in 2018. Weather (i.e., wind, rain, or fog) and abundant Cassin’s Auklets later in the month hindered our ability to open nets and catch owls. We estimated that nine owls arrived in October. High counts for the month consisted of four on the 12th and four on the 19th.

**Crickets**

Cricket surveys were conducted this month from the 10th to the 16th in all monitored caves: Cricket Cave had an average of 2042 (SD ± 102) crickets; Rabbit Cave 242 (SD ± 42), Spooky 103 (SD ± 34), Corm Blind 7 (SD ± 8), Gap 5 (SD ± 4), and North Landing 16 (SD ± 11).

**Bats**

No bats were detected this month, and the survey was discontinued on the 31st.

**Mice**

Mice were seen frequently outside during the day and night. A slow trickle of mice continue to be caught in the Coast Guard House.

**Inverts & Intertidal**

Two species of butterfly were observed in October, a Monarch on two days and Painted Ladies on five days. Four Pacific Sea Nettle were seen on the 1st.

**Plants**

After the recent rains, *Lasthenia maritima* is sprouting all over the island. The remnant New Zealand Spinach (*Tetragonia tetragonioides*) in the chute north of the Lighthouse have grown quite large over the past month.

**Violations**

Six fishing violations in the State Marine Reserve were documented in October from six boats. None of these boats were in the Special Closure area, nor did any of these boats disturb wildlife on the refuge.

**Maintenance**

Island biologist Tietz conducted routine weekly maintenance checks on the PV system and generators. Monthly changes of water filters and crane greasing were conducted. The water quality test for October came back negative for Coliforms and E. Coli. No trainings were conducted at NL or EL this month.

Additional maintenance performed this month are as follows:

* Cleaned off debris and dead birds from the Water Catchment Pad
* Pumped ~25,000 gallons of water from Settling Tank to Cistern increasing level of cistern from 4’5” to 6’1”.

**Maintenance Needs**

* Outdoor shutoff valves along the gray water line to CG house are severely corroded and need to be replaced.
* PV system charge controllers 3 and 4 are not functioning and need to be replaced.
* The cistern and other elements of the water catchment system are showing their age and are need of major repairs or replacement. The cistern continues to lose water at a rate ~250 gallons per month.
* The Settling Tank has a leak in it when water is above 5.1 feet.
* The PRBO house kitchen counters especially around the sink continue to deteriorate. Replacement sometime in the next year is recommended.
* The HADS weather station is no longer transmitting data to the web. Attempts to reset the unit have failed and will require expert guidance to fix.
* The gutters and flashing on both houses are degrading and will need to be improved or replaced.
* Aluminum railings at East Landing and the Lighthouse need repair.
* Powerhouse roof-access ladder mounts are badly corroded and need to be replaced.
* There are several locations in the PRBO house that show evidence of moisture penetration in the ceiling and/or walls. This includes a small leak in the door jamb to the downstairs bathroom and the adjacent cabinet and recent water staining in the Walk-Through Room.
* The Speedwagon generator occasionally experiences a rotor lock shutdown fault. This is likely due to a bad starter solenoid. The frequency of the fault is reduced with regular exercising of the generator.
* The rail cart axles are badly corroded and may need replacement soon.
* There is visible corrosion in the freshwater pipes between the 5- and 1-micron filters in the PRBO water closet and the kitchen sink. A full replacement of the PRBO freshwater pipes is long overdue.
* PRBO house fire hose station shutoff valve is leaking at a drop per second.
* Box housing fire hose for the Coast Guard house has been blown apart by strong winds this spring and needs to be rebuilt. The fire hose is currently in the boot room of the Coast Guard house.
* Two side-impact helmets necessary for crane operation safety are missing straps need to be replaced.
* Metal mesh on several “windows” along the perimeter of the cistern have corroded open, allowing sediment, debris, and potentially birds to enter the cistern.
* Yamaha 9.9hp (kicker) needs new a carburetor rebuild to fix the rough idle.
* Post-installation testing of the freshwater flow meter revealed that the flow meter is unable to detect water usage at low flow faucets and shower, thus underestimating the amount of water used in the PRBO house. It is recommended that a more sensitive flow meter is installed.
* **Annual maintenance of the Honda 15 and Yamaha 25 at North Landing are overdue and need to be performed asap.**
* Air flow gaps on the gravity tank are open, no longer covered by mesh, and present a hazard to wildlife. The tank either needs to be disassembled or the gaps need to be covered with a permanent fix.
* The teeth on the slewing gear at North Landing have worn down so that the chain slips over the gear while slewing. The gear should be replaced.
* Speedwagon exhaust pipe is badly corroded and broken where it exits Powerhouse. Exhaust is leaking and/or backing into the Powerhouse. This needs to be replaced. In the meantime, the powerhouse doors need to be open when running this generator.
* Hot water supply to downstairs PRBO shower is a pathetic trickle.

**Solar/Electric/Fuel/Water**

**PV System**

Distilled water used: 0 gallons

Distilled water reserves: 30 gallons

**Generator run times**

Kohler 30REOZJC (Speedwagon): 3.0 hours (720.2 on meter)

Kohler 40REOZK (Zeke): 27.7 hours (687.3 on meter)

Kohler 15REOZK (PeeVee Herman): 15.2 hours (146.7 on meter)

Webasto: 0 hours

**Power use**

Facilities power use: Start = 94,854; End = 95,477; for total of 623 kWh

**Fuel Reserves**

Diesel used: 46.8 gallons

Diesel drums: 3@55gal 165 gallons

Kohler 15REOZK (PV) Tank: Full

Kohler 30REOZJC (Speedwagon) Tank: Full

Kohler 40REOZK (Zeke) Tank: Full

Webasto Tank: 3/4

Gasoline for boats (racing fuel): 17 gallons

6 gallon boat tank: 1/3

3 gallon boat tank: Full

**Water Reserves**

Fresh water used this month: Start = 334,062; End =335,745; for a total of 1,683 gal

Cistern: 6’0” or ~ 75,000 gallons

Settling Tank: 4’3”

Drinking water: 12 five-gallon jugs

Gray water used this month: Start = 30,517; End = 33,550; for a total of 3,033 gal

The gray water drained from the tank to the leach field all month.

**Sightseeing Boats**

Three boats were recorded in October viewing the island and wildlife: the **Salty Lady** was seen 4 times looking for whales and viewing the island with an average of 22 POB; the **Bayliss** was seen 3 times looking for sharks with an average of 15 POB; and the **Mi Amigo** was seen 4 times looking for sharks with an average of 26 people.

**Non-breeding birds**

Pacific Loon, Eared Grebe, Northern Fulmar, Pink-footed Shearwater, Flesh-footed Shearwater, Buller’s Shearwater, Sooty Shearwater, Short-tailed Shearwater, Brown Booby, Northern Gannet, Brown Pelican, Cackling Goose, Black Brant, Northern Pintail, Surf Scoter, Northern Harrier, Sharp-shinned Hawk, American Kestrel, Merlin, Peregrine Falcon, Black-bellied Plover, Pacific Golden-Plover, Wandering Tattler, Spotted Sandpiper, Whimbrel, Ruddy Turnstone, Black Turnstone, Dunlin, Red-necked Phalarope, Red Phalarope, South Polar Skua, Pomarine Jaeger, Heermann’s Gull, Short-billed Gull (formerly Mew Gull), California Gull, Herring Gull, Iceland Gull, Glaucous-winged Gull, Black-legged Kittiwake, Elegant Tern, Eurasian Collared-Dove, White-winged Dove, Barn Owl, Burrowing Owl, Short-eared Owl, Vaux’s Swift, Anna’s Hummingbird, Northern Flicker, Black Phoebe, Yellow-green Vireo, Violet-green Swallow, Barn Swallow, Brown Creeper, House Wren, Ruby-crowned Kinglet, Swainson’s Thrush, Hermit Thrush, American Robin, Varied Thrush, Sage Thrasher, European Starling, White Wagtail, American Pipit, Orange-crowned Warbler, Yellow Warbler, Chestnut-sided Warbler, Yellow-rumped Warbler, Black-throated Gray Warbler, Black-throated Green Warbler, Townsend’s Warbler, Prairie Warbler, Palm Warbler, Blackpoll Warbler, Common Yellowthroat, Chipping Sparrow, Clay-colored Sparrow, Savannah Sparrow, Grasshopper Sparrow, Fox Sparrow, Lincoln’s Sparrow, Swamp Sparrow, White-throated Sparrow, White-crowned Sparrow, Golden-crowned Sparrow, Dark-eyed Junco, Lapland Longspur, Red-winged Blackbird, Brewer’s Blackbird, Western Meadowlark, Orchard Oriole, House Finch, and Lesser Goldfinch.