

Farallon Islands Monthly Report

Report to the U.S. Fish and Wildlife Service

Farallon Islands National Wildlife Refuge

November 2021

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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**: Dan Maxwell, Lexi Roberts, Rya Rubenthaler Stella Solasz, Alex Soldo, Jim Tietz, Pete Warzybok.

November 6th: **“Hokahey”** (skipper Jan Passion) brought out Dan Maxwell, Jim Tietz, and supplies. Jan and his two crew members toured the island. They departed with Alex Soldo and Pete Warzybok

November 11th: **“Outer Limits”** (skipper Jim Robertson) brought out Robert Walsh, Steve Delgros, Jaime Zuno, and Roberto Quintanilla from Pioneer Contractors to patch the roofs on the houses. Robert Walsh departed on the Outer Limits in the afternoon.

November 12th: **“Outer Limits”** (skipper Jim Robertson) brought out Robert Walsh from Pioneer Contractors to oversee roof repairs. All four people from Pioneer Contractors departed on the Outer Limits in the afternoon.

November 20th: “**Valkyrie**” (skipper Jamis MacNiven) brought supplies to the island. Three crew from the boat and two HR people from Point Blue (Robyn Hettrich and Lynda Schaeffer) toured the island. Dan Maxwell departed with all the visitors.

**West End Island Visitors**

November 27th: Rya Rubenthaler and Jim Tietz 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 NW winds dominated this month, with moderate winds from the north and northeast occurring occasionally as well. The island received 2.78 inches of precipitation this month, of which 1.14 fell during a storm on the 1st and 2nd and another 1.15 inches fell on the 9th. The average midday air temperature this month was 15.36 ± 1.27 °C, which was 1.19 °C higher than the long-term average of 14.17 °C. The average sea surface temperature (SST) this month was 14.23 ± 0.28 °C, which was 1.01 °C above the long-term average of 13.22 °C. The air quality this month was mostly good according to EPA standards (Table 1), with an average Air Quality Index (AQI) of 48 for PM2.5 and 17 for PM10. The PM2.5 level was “unhealthy” on only one day, the 27th, with an AQI value of 111, while the PM10 level was “moderate” that day with a value of 56.

Chart, radar chart, waterfall 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**

During the first half of the month, three oiled birds were seen: a Common Murre on the 4th 70% oiled, a Western Gull juvenile 70% oiled, and a Thayer’s Gull juvenile 10% oiled.

Seventeen Zalophus (seven adult females, four subadult male, five immatures, and one unknown age/sex) were found to be entangled this month with monofilament, nylon rope, rubber strap, or unknown material embedded in their necks and/or head.

**Feeding Flocks**

November 17th: ~40 gulls 10 km west of the island.

November 22nd: ~300 birds (gulls and pelicans) 8 km east of the island.

November 25th: three flocks 7-10 km southwest, northwest, and northeast of the island had thousands of gulls, hundreds of pelicans, and several humpback whales.

November 27th: five flocks 2-8 km in all directions from the island contained thousands of gulls, hundreds of pelicans, and hundreds of cormorants.

**Breeding Birds**

**Storm-Petrels** – At the beginning of November, 4 Ashy sites were active with chicks and still being followed from October. Of these 4 nests, 1 fledged and 0 failed by the end of the month, while 3 were still being monitored into December. The one known breeding site in the Ashy Castle was still active at the end of the month.

**Brandt’s Cormorant** – A few thousand birds (2,000-5,000) were seen daily roosting on offshore islets, such as Sugarloaf, Aulon Islets, and Saddle Rock. Many were also seen foraging in feeding flocks.

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

**Double-crested Cormorant** – Single birds were observed on the 4th and the 8th.

**Western Gull** – Adults and immatures roosted most nights on the island during the first half of the month. Roosting numbers increased throughout the month, with an estimate of 10,000 on a few mornings during the last week of the month.

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

**Common Murre** – Numbers varied over the month from a thousand scattered on the water during east wind days to over 200,000 (all colonies with full attendance) on days with strong northwest winds.

**Pigeon Guillemot** – No birds were seen this month.

**Rhinoceros Auklet** – One to four individuals were seen on the water most days during the latter half of the month. A remarkable passage of 87 Rhinoceros Auklets were counted over a 40-minute period on the 8th when several groups of up to 20 birds flew north.

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

**Cassin’s Auklet** – Estimates of vocalizing birds returning to the island to dig burrows ranged from just a few on moonlit nights, to 1,000 on the 3rd.

**Black Oystercatchers\*** – Roosting birds were counted daily during high tide surveys and averaged 23 birds per survey, with a high count of 43 on the 5th.

*\*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 5,703 (std ± 1554) individuals counted during the weekly pinniped census from the Lighthouse, with a high count of 7,683 individuals on the 25th. The high count for pups was 304 on the 4th. Twenty-five scat samples were collected from haul out areas for dietary analysis.

**Steller Sea Lion –** On average there were 63 (std ± 21) individuals counted, with the high count of 88 on the 11th. The high count for pups was 15 on the 11th. A trip to West End on the 27th counted 80 individuals, including 24 pups.

**Northern Fur Seal –** Numbers declined at the West End colony this month. On average there were 284 (std ± 35) individuals counted, with the high count of 315 observed on the 4th. We discontinued counting pups in mid-October, when it became too difficult from the lighthouse to distinguish yearlings from freshly molted juveniles. A trip to West End on the 27th counted 490 individuals, including 55 pups and 15 bulls. A total of 10 tags were read, with five of those tagged on the Farallones.

**Harbor Seal –** On average there were 21 (std ± 15) individuals counted, with a high count of 38 on the 11th.

**Northern Elephant Seal –** Numbers increased this month, with an average count of 262 (std ± 93) individuals. A high count of 344 individuals observed on the 25th. 84% of these were immatures while the others were subadult males or cow-sized individuals – no bulls have arrived yet.

**Canada Goose**

A flock of 22 arrived on the 14th and have taken up residence. They appear to be content eating the new sprouts on the island.

**Cetaceans**

**Standard Survey** – 21 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 most of the month, with a high count of 27 on the 25th. Single gray whales were seen near the island on 12 days.

**Figure 2.** Daily high counts of cetaceans observed from Southeast Farallon Island for September 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. These feeding events occurred at many places around the island: in Fisherman’s Bay, on the east side of the island around Shubrick, around Saddle Rock, and across Mirounga Bay over to Indian Head.

**Salamanders**

Two salamander surveys occurred this month. The first survey on the 2nd encountered 13 large and 1 small salamander, while the second survey on the 15th encountered 27 large and 2 small individuals.

**Owls**

Two Burrowing Owls were banded on the 14th (S/P79 and P69/S), and a third owl was banded on the 25th (S/P44). Inclement weather (i.e., wind, rain, or fog) and abundant Cassin’s Auklets hindered our ability to open nets and catch owls. We estimated that four owls arrived in November. High counts for the month consisted of five on the 17th and 18th.

**Crickets**

No surveys were conducted this month.

**Bats**

No bats were detected this month.

**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. The mice chewed through the foam under the PRBO kitchen sink and were a nuisance during the final week of the month.

**Inverts & Intertidal**

Three species of butterfly were observed in November: a Monarch on the 22nd, single Painted Ladies on the 8th and 25th, and two Red Admirals on the 16th and 24th.

**Plants**

After the recent rains, *Lasthenia maritima* has covered the island with young sprouts and has grown about 8 inches long. The remnant New Zealand Spinach (*Tetragonia tetragonioides*) in the chute north of the Lighthouse have grown quite large over the past month.

**Violations**

Ten fishing violations in the State Marine Reserve were documented in November from seven boats. The Racer (CF 8883 VT) was seen poaching fish in the MPA on three occasions this month. None of these boats were in the Special Closure area, nor did any of these boats disturb wildlife on the refuge.

**Maintenance**

Island biologists Tietz and Warzybok 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 November came back negative for Coliforms and E. Coli. A training at North Landing was conducted on the 13th.

Additional maintenance performed this month are as follows:

* Pumped ~4,000 gallons of water from Settling Tank to Cistern increasing level of cistern from 6’1” to 6’4”.
* Pioneer Contractors patched holes in the roofs of the PRBO and Coast Guard Houses. They also replaced missing flashing from the fascia.

**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 drywall in the cabinet mentioned above became saturated with water from the storms and now has extreme mold growth – the drywall needs to be replaced.
* 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.**
* The roof of the gravity tank caved in and poses a threat to seabirds becoming trapped in it. A hole was cut in the floor of the tank to allow birds to escape.
* 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.
* Webasto exhaust pipe is badly corroded and is likely to break in the near future.
* Hot water supply to downstairs PRBO shower is a pathetic trickle.

**Solar/Electric/Fuel/Water**

**PV System**

Distilled water used: 10 gallons

Distilled water reserves: 20 gallons

**Generator run times**

Kohler 30REOZJC (Speedwagon): 4.0 hours (724.2 on meter)

Kohler 40REOZK (Zeke): 11.9 hours (699.2 on meter)

Kohler 15REOZK (PeeVee Herman): 12.5 hours (159.2 on meter)

Webasto: 0 hours

**Power use**

Facilities power use: Start = 95,477; End = 96,054; for total of 577 kWh

**Fuel Reserves**

Diesel used: 21.6 gallons

Diesel drums: 2.5@55gal 137 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): 14 gallons

6 gallon boat tank: 1/3

3 gallon boat tank: Full

**Water Reserves**

Fresh water used this month: Start = 335,745; End =337,172; for a total of 1,427 gal

Cistern: 6’3” or ~ 78,750 gallons

Settling Tank: 2’5”

Drinking water: 12 five-gallon jugs

Gray water used this month: Start = 33,550; End = 35,631; for a total of 2,081 gal

The gray water was switched to filling the tank on 4-Nov.

**Sightseeing Boats**

Two commercial boats were recorded in November bringing passengers to view the island and wildlife: the **Salty Lady** was seen 6 times looking for whales and viewing the island with an average of 23 POB and the **Derek M. Baylis** was seen 9 times looking for sharks with an average of 11 POB.

**Non-breeding birds**

Pacific Loon, Common Loon, Horned Grebe, Eared Grebe, Western Grebe, Northern Fulmar, Pink-footed Shearwater, Buller’s Shearwater, Sooty Shearwater, Brown Booby, Northern Gannet, Brown Pelican, Cackling Goose, Canada Goose, Northern Pintail, Surf Scoter, Northern Harrier, Sharp-shinned Hawk, American Kestrel, Merlin, Peregrine Falcon, Pacific Golden-Plover, Killdeer, Spotted Sandpiper, Whimbrel, Ruddy Turnstone, Black Turnstone, Pomarine Jaeger, Bonaparte’s Gull, Heermann’s Gull, Short-billed Gull, California Gull, Herring Gull, Iceland Gull, Glaucous-winged Gull, Black-legged Kittiwake, Eurasian Collared-Dove, White-winged Dove, Barn Owl, Burrowing Owl, Short-eared Owl, Anna’s Hummingbird, Black Phoebe, Brown Creeper, Golden-crowned Kinglet, Ruby-crowned Kinglet, Western Bluebird, Mountain Bluebird, American Robin, Varied Thrush, Sage Thrasher, European Starling, American Pipit, Cedar Waxwing, Nashville Warbler, Black-throated Blue Warbler, Yellow-rumped Warbler, Palm Warbler, Wilson’s Warbler, Savannah Sparrow, Grasshopper Sparrow, Fox Sparrow, White-throated Sparrow, White-crowned Sparrow, Golden-crowned Sparrow, Dark-eyed Junco, Lapland Longspur, Red-winged Blackbird, Western Meadowlark, Brewer’s Blackbird, House Finch, Pine Siskin, and Lesser Goldfinch.