

Farallon Islands Monthly Report

Report to the U.S. Fish and Wildlife Service

Farallon Islands National Wildlife Refuge

September 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**: Matt Brady, Jason Gregg, Kristen Hayes, Mike Johns, Joey Negreann, Lexi Roberts, Stella Solasz, Alex Soldo, Savannah Stewart, Jim Tietz.

September 11th: **“Outer Limits”** (skipper Jim Robertson) brought out Matt Brady, Mike Johns, and Lexi Roberts. Nine volunteers and two Point Blue staff toured the island and departed with Kristen Hayes, Stella Solasz, and Jim Tietz.

September 13th: **“SF Helicopters”** brought out Scott Webster and his assistant Ralph.

September 16th: **“USCG helicopter”** brought out Gerry McChesney who visited the island for the day.

September 17th: **“SF Helicopter”** departed with Scott Webster and his assistant Ralph.

**West End Island Visitors**

No trips were made to West End this month.

**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**

Table

Description automatically generatedMonthly weather is summarized in Figure 1. Light to moderate NW winds dominated this month, with occasional light winds from the S and SW. The island received only trace amounts of rain. The average midday air temperature this month was 15.71 ± 1.39 °C, which was 0.27 °C lower than the long-term average of 15.98 °C. The average sea surface temperature (SST) this month was 14.46 ± 0.51 °C, which was 0.34 °C above the long-term average of 14.12 °C. The air quality this month was moderate according to EPA standards (Table 1), with an average Air Quality Index (AQI) of 58 for PM2.5 and 22 for PM10. The PM2.5 level was “unhealthy for sensitive groups” on only one day, the 14th, with an AQI value of 110, while the PM10 levels never exceeded the “moderate” level.

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)

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.

**Oiled & Entangled Wildlife**

On 14 Sep two oiled Western Gulls were seen: a juvenile with 70% dark oil covering its body and a third-cycle with 10% dark oil on its body (located on its head).

Eight Zalophus (two adults, three immatures, and three unknown age) were found to be entangled this month with monofilament, nylon rope, or unknown material embedded in their necks and/or head. One adult Cassin’s Auklet had string tightly wrapped around its wing and body.

**Feeding Flocks**

September 2nd: feeding flocks consisting of hundreds of gulls, cormorants, and pelicans, with ~10 humpback whales were seen 3-6 km to the NE and SW of the island

September 3rd: a flock late in the afternoon 2-6 km southwest of the island consisted of 400 pelicans, 200 gulls, 200 shearwaters, 20 humpback whales, and 50 sea lions.

September 15th: a flock in the afternoon 2 miles northeast of the island consisted of 50 pelicans, 100 gulls, and cormorants.

September 18th: a flock in the afternoon 2 miles south of the island consisted of 100 gulls, 20 pelicans, and three humpback whales.

**Breeding Birds**

**Storm-Petrels** – At the beginning of September, 35 Ashy sites were active with chicks and still being followed from August. Of these 35 nests, 10 fledged and 8 failed by the end of the month, while 17 were still being monitored into October (3 of which were on skip). The one known breeding site in the Ashy Castle was still active at the end of the month.

**Brandt’s Cormorant** – We collected 50 regurgitated pellets from the Corm Blind Colony on 7 Sep and 50 pellets from the Shubrick Cove colony on 8 Sep. A few unmonitored nests continued to be active at the beginning of the month. Thousands of chicks were creching along the shoreline near their colonies throughout the month.

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

**Double-crested Cormorant** – Chicks continued on Maintop throughout the month. Adults were observed flying towards the mainland in the morning.

**Western Gull** – The last followed nest fledged on 5 Sep. A few thousand adults and immatures roosted nightly on the island.

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

**Common Murre** – Very few birds were seen from the island during the month.

**Pigeon Guillemot** – The last followed site fledged on the Sep 1st. Juveniles and adults dispersed rapidly after nests fledged and few were seen on the water later in the month.

**Rhinoceros Auklet** – Very few adults or chicks were seen on the water throughout the month.

**Tufted Puffin** – A few birds were observed carrying fish into nesting areas during the first week of the month. Many puffins were observed during the first week of the month prospecting for future nest sites, as is typical for this time of year. Up to 40 birds were seen during the first week, but numbers declined rapidly thereafter, and the last bird was seen on the 24th.

**Cassin’s Auklet** – There were 13 monitored nests still active with second broods or relays at the beginning of the month, 7 from the Known-Age boxes and 6 from the PRBO boxes. Among the Known-Age boxes, 3 chicks were assumed fledged and 4 died (completed on the 15th). Among the PRBO study boxes, 1 chick fledged and 5 died or disappeared (completed on the 20th). The one remaining chick from the 15-day boxes died.

**Black Oystercatchers\*** – Several adults and juveniles seen at high tide roosts during shorebird surveys.

*\*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 12,499 (std ± 2769) individuals counted during the weekly pinniped census from the Lighthouse, with a high count of 14,549 individuals on the 16th, which was the highest single count and monthly average in Point Blue’s history. The high count for pups was 504 on the 16th.

**Steller Sea Lion –** On average there were 91 (std ± 28) individuals counted, with the high count of 111 on the 30th. The high count for pups was 19 on the 16th.

**Northern Fur Seal –** Numbers declined at the West End colony this month. On average there were 1,143 (std ± 201) individuals counted, with the high count of 1,332 observed on the 30th. The high count for pups was 192 on the 2nd. Two individuals were observed summiting Maintop.

**Harbor Seal –** On average there were 15 (std ± 5) individuals counted, with a high count of 21 on the 30th.

**Northern Elephant Seal –** Numbers remained low this month, with an average count of 59 (std ± 66) individuals. A high count of 136 individuals observed on the 30th. All of these were immatures except for a few subadult males.

**Canada Goose**

A flock of 22 were seen on the 13th.

**Cetaceans**

**Standard Survey** – Fifteen 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. A single blue whale was seen on the 20th and two were seen on the 25th. Pods of Risso’s Dolphins were seen on two 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 started at the lighthouse on the 1st. Six predation/scavenging events were observed this month. The first feeding event occurred on the 11th. All but one of these feeding events appeared to be on Zalophus.

**Salamanders**

No salamander surveys were conducted this month, but nine were seen incidentally during a nocturnal survey at the Gap on the 23rd.

**Owls**

This first Burrowing Owl of the fall arrived on the 16th. One owl was banded on the 25th. We estimated that four owls arrived in September, and there was a high count of three on the 30th.

**Crickets**

No cricket surveys were conducted this month.

**Bats**

A hoary bat was observed flying around Lighthouse Hill on the 4th. It roosted in the Coast Guard Tree on the 5th and 6th.

**Mice**

By mid-month, mice were being seen frequently outside during the day. On the 30th, two mice were found caught in mouse traps in the Coast Guard House, which may indicate they created a new access point into that house.

**Inverts & Intertidal**

Two species of butterfly were observed in September, a Monarch and a West Coast Lady. Four species of dragonfly were detected on the island in September: Green Darner, Blue-eyed Darner, Black Saddlebags, and Variegated Meadowhawk. One species of damselfly was seen this month, a Familiar Bluet.

**Plants**

Much of the island is denuded of vegetation now. There are still some remnant New Zealand Spinach (*Tetragonia tetragonioides*) in the chute north of the Lighthouse.

**Violations**

Seven fishing violations in the State Marine Reserve were documented in September from six boats. A gray Racer (CF 8883 VT) was a repeat violator on the 18th and 25th.

**Maintenance**

Island biologists Johns and 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 September came back negative for Coliforms and E. Coli. The crew conducted one NL training on the 8th and a training at EL on the 9th. Returning crew Joey Negreann completed the safety training refresher on the 9th.

Additional maintenance performed this month are as follows:

* Mike replaced the broken pipe for the gray water system between the gray water tank and the PRBO boiler room, and he added a new check valve and a new gate valve.
* Mike replaced the wire rope bridle for the safe boat and replaced the air hose on the 9.9 Yamaha.
* Joey and Jim cleaned the gutters and gull nest off the roof of the PRBO house above the laundry room.
* Mike replaced the fill valve on the downstairs PRBO toilet.

**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 closet next to the downstairs bathroom and recent water staining in the Walk-Through Room. Will continue to monitor but a professional roof inspection is recommended.
* The load cell battery and antenna at the EL crane were replaced, but now the load cell needs to be recalibrated. A2B is also non-functional.
* 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): 3.8 hours (717.2 on meter)

Kohler 40REOZK (Zeke): 15.5 hours (659.6 on meter)

Kohler 15REOZK (PeeVee Herman): 25.2 hours (131.5 on meter)

Webasto: 0 hours

**Power use**

Facilities power use: Start = 94,223; End = 94,854; for total of 631 kWh

**Fuel Reserves**

Diesel used: 39.2 gallons

Diesel drums: 3.5@55gal 192 gallons

Kohler 15REOZK (PV) Tank: 3/4

Kohler 30REOZJC (Speedwagon) Tank: Full

Kohler 40REOZK (Zeke) Tank: Full

Webasto Tank: 3/4

Gasoline for boats (racing fuel): 16 gallons

6 gallon boat tank: 1/3

3 gallon boat tank: Full

**Water Reserves**

Fresh water used this month: Start = 332,576; End 334,062 =; for a total of 1,486 gal

Cistern: 4’6” or ~ 52,500 gallons

Settling Tank: empty

Drinking water: 12 five-gallon jugs

Gray water used this month: Start = 26,640; End = 30,517; for a total of 3,877 gal

**Sightseeing Boats**

Two boats were recorded in September viewing the island and wildlife: the **Salty Lady** was seen 8 times viewing the island with an average of 16 POB, and the **Hyperfish** was seen twice looking for sharks with an average of 14 POB.

**Non-breeding birds**

Pacific Loon, Eared Grebe, Northern Fulmar, Pink-footed Shearwater, Flesh-footed Shearwater, Buller’s Shearwater, Sooty Shearwater, Short-tailed Shearwater, Nazca Booby, Northern Gannet, Brown Pelican, Green Heron, Greater White-fronted Goose, Canada Goose, Northern Pintail, Sharp-shinned Hawk, American Kestrel, Merlin, Peregrine Falcon, Virginia Rail, Semipalmated Plover, Greater Yellowlegs, Wandering Tattler, Spotted Sandpiper, Whimbrel, Ruddy Turnstone, Black Turnstone, Sanderling, Western Sandpiper, Least Sandpiper, Long-billed Dowitcher, Red-necked Phalarope, Pomarine Jaeger, Heermann’s Gull, Ring-billed Gull, California Gull, Eurasian Collared-Dove, Mourning Dove, Barn Owl, Burrowing Owl, Vaux’s Swift, Anna’s Hummingbird, Belted Kingfisher, Red-shafted Flicker, Olive-sided Flycatcher, Western Wood-Pewee, Willow Flycatcher, Least Flycatcher, Dusky Flycatcher, “Western” Flycatcher, Black Phoebe, Say’s Phoebe, Eastern Kingbird, Hutton’s Vireo, Warbling Vireo, Purple Martin, Violet-green Swallow, House Wren, Pacific Wren, Blue-gray Gnatcatcher, Swainson’s Thrush, Hermit Thrush, Northern Mockingbird, American Pipit, Cedar Waxwing, Tennessee Warbler, Orange-crowned Warbler, Nashville Warbler, Virginia’s Warbler, Yellow Warbler, Chestnut-sided Warbler, Magnolia Warbler, Audubon’s Warbler, Myrtle Warbler, Black-throated Gray Warbler, Black-throated Green Warbler, Townsend’s Warbler, Hermit Warbler, Blackburnian Warbler, Prairie Warbler, Palm Warbler, Bay-breasted Warbler, Blackpoll Warbler, Black-and-white Warbler, American Redstart, Ovenbird, MacGillivray’s Warbler, Mourning Warbler, Common Yellowthroat, Wilson’s Warbler, Canada Warbler, Yellow-breasted Chat, Western Tanager, Green-tailed Towhee, Spotted Towhee, Chipping Sparrow, Clay-colored Sparrow, Brewer’s Sparrow, Black-throated Sparrow, Savannah Sparrow, Vesper Sparrow, Lark Sparrow, Fox Sparrow, Lincoln’s Sparrow, White-throated Sparrow, White-crowned Sparrow, Golden-crowned Sparrow, Oregon Junco, Lapland Longspur, Rose-breasted Grosbeak, Black-headed Grosbeak, Blue Grosbeak, Lazuli Bunting, Bobolink, Red-winged Blackbird, Brewer’s Blackbird, Western Meadowlark, Brown-headed Cowbird, Orchard Oriole, House Finch, Pine Siskin, and Lesser Goldfinch.