A Growing Year for Bird Conservation

Estuaries are among the most dynamic, complex, and biologically productive ecosystems, yet they are also extremely vulnerable to human disturbance. The San Francisco Bay is recognized as a site of hemispheric importance, but it is also one of the most heavily developed estuaries in the world, with nearly 8 million people living on its shores, placing unprecedented pressures on the region’s biological resources, goods, and services.

Over the last 150 years, an estimated 90% of historic tidal marsh has been eliminated through development and/or conversion to salt evaporation ponds and agricultural fields, and increasing rates of habitat and climate change continue to threaten the globally significant avian communities in this region. Maintaining and restoring viable bird populations and their habitats in the face of these increasing conservation threats requires careful planning, strong partnerships, and sound science upon which policy makers and land managers can base decisions.

The San Francisco Bay Bird Observatory (SFBBO) is a non-profit dedicated to the conservation of birds and their habitats through science and outreach. Since 1981, we have been an authority on the birds that rely on the San Francisco Bay and its surrounding environments. We envision a San Francisco Bay Area where conservation issues are understood and land-use decisions are made based on science, resulting in healthy wild bird populations and the ecosystems in which they live.

We are committed to quality applied research and monitoring to address land management challenges. We believe that science is only effective in conserving birds and their ecosystems when shared and communicated, so we build relationships with land managers and other researchers in order to effectively share our findings and strive to inspire, educate, and connect with the public to promote conservation through science.

In the pages that follow, you will read about the work we did in 2014. Whether it was capturing and banding landbirds at our Coyote Creek Field Station with local university students; studying and improving habitat for Burrowing Owls, Snowy Plovers, and tidal marsh species; or monitoring the more than 1.5 million waterbirds that use the San Francisco Bay as a wintering, nesting, or migratory stopover site, SFBBO conducted valuable science and shared our data with regional partners to inform the future management of birds. In addition, our more than 180 citizen science and outreach volunteers helped us offer birds walks, Family Science Nights, and other community activities to build awareness about birds and support for bird conservation. All of this was possible thanks to the funders and donors who support this important work.
**Landbird Program**

For more than 30 years, SFBBO staff and volunteers have banded birds at our Coyote Creek Field Station (CCFS), located on a restored riparian habitat on Santa Clara Valley Water District property in Milpitas. SFBBO and academic partners use this information to track avian responses to climate change, restoration and urbanization, and to document long-term demographic trends.

In 2014, we captured 3,847 birds of 62 species.

In addition, in 2014 SFBBO began a three-year partnership with the Midpeninsula Regional Open Space District to evaluate bird communities in montane grassland habitat throughout central coastal California. Montane grassland is a unique habitat that has largely gone unstudied, yet faces threats from habitat alteration such as grazing and fire suppression, as well as urban development. Grassland-obligate species such as the Grasshopper Sparrow rely on open grassland habitats, and SFBBO will be combining existing datasets to evaluate the impacts of habitat quality on grassland bird communities.

**Impacts**

- 35 citizen science volunteers spent nearly 3,340 hours to collect our CCFS data, which was shared with researchers from several universities and other organizations.
- Three graduate students from San Jose State University, San Francisco State University, and CSU East Bay continue to utilize SFBBO datasets to study Western Flycatcher, Hermit Thrush, and Common Yellowthroat populations to answer questions about migration timing, breeding destinations, and the impact of climate change on breeding timing.

**Habitats Program**

SFBBO’s Habitats Program is a science-based program that works to determine feasible methods of managing habitats for the conservation of birds.

**Tidal Marsh Restoration**

In 2014, SFBBO completed work at several tidal marsh transition sites and introduced over 20 species of local native plants, while contributing to the methods and materials that will be used on over 50 acres of other sites. We published several technical reports and held the 6th annual meeting of regional vegetation managers, hosted by The Elkhorn Slough Foundation and attended by partners from federal and state agencies, as well as several NGOs. Project highlights included finishing an experimental seeding study on beneficially reused dredge spoils in the Don Edwards San Francisco Bay National Wildlife Refuge’s Bair Island project site, which led to an opportunity for SFBBO to lead vegetation management at the site in 2015. Other great news includes a six-year partnership to create plant communities on Refuge levees maintained by the Santa Clara Valley Water District’s Stream Maintenance Program in 2015.

**Vernal Pool Grasslands**

The Fremont Warm Springs Unit of the Refuge is composed of 719 acres of vernal pool grasslands and is managed to provide habitat to several endangered and special status species, including Western Burrowing Owls. In 2014, SFBBO assisted the Refuge in annual surveys

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*“The Coyote Creek Field Station is incredibly valuable to scientists seeking to investigate impacts of urbanization on passerines as it is one of the only long-term banding stations near urban areas.”* —Deanna De Castro, former graduate student at CSU East Bay who conducted her master’s research on Common Yellowthroats at CCFS

*“SFBBO has been a valued partner at Warm Springs. Their knowledge and research efforts have led to enhancement of vernal pool grassland habitat for the benefit of Western Burrowing Owls and several other threatened and endangered species.”* —Ivette Loredo, Wildlife Refuge Specialist, Don Edwards San Francisco Bay National Wildlife Refuge
to monitor habitat quality at Warm Springs, performed vegetation management for weed abatement, recruited and coordinated volunteers to perform spring and summer Burrowing Owl breeding surveys, and worked actively to improve foraging habitat for the Burrowing Owl. In addition, we wrapped up and presented the results of a pilot experimental study to identify methods of establishing vegetation beneficial to the Burrowing Owls. Our active work on vegetation management and strong involvement in the ecological monitoring at Warm Springs allowed us to gain an understanding of the complex and fragile ecosystem and led to a new project to manage Burrowing Owl habitat for the Santa Clara Valley Habitat Agency in 2015.

**Impacts**

- SFBBO Habitats Program has worked to restore over five acres of bird habitat.
- SFBBO developed new projects that will directly contribute to the conservation of sensitive species such as the Western Burrowing Owl and California Ridgeway’s Rail through habitat management.
- Our research is being used in climate adaptability planning for conservation of the San Francisco Bay.
- Partnered with City of East Palo Alto, Ducks Unlimited, San Francisco Bay Wildlife Society, Midpeninsula Regional Open Space District, and US Fish & Wildlife Service.

**Snowy Plover Program**

For more than 10 years, SFBBO has studied and worked to protect the Western Snowy Plover, a species that is federally listed as threatened. In 2014, our research showed that the number of Western Snowy Plovers in the San Francisco Bay was slightly lower than in 2013, though nest numbers were higher. Apparent nest success (i.e. the percentage of nests that successfully hatched at least one egg) decreased compared to 2013 rates to 50%, with the majority of nest failures attributed to predation events. The increase in the number of nests in 2014 may be a result of re-nesting attempts after predation. SFBBO staff continued to monitor Snowy Plover habitat impacted by construction for the South Bay Salt Pond Restoration Project to ensure that tidal marsh restoration activities in the South Bay took place without negative impacts to nesting plovers and young plover chicks. SFBBO staff conducted rigorous field surveys and bird banding, which contributed to a multi-year reproductive success study, led by the Institute for Wildlife Studies.

**Impacts**

- Monitored and worked with partners and students from local universities to protect 228 plover nests in 2014.
- Informed pond management and restoration planning across the Bay Area.
- Partnered with the Institute for Wildlife Studies during the first year of a Reproductive Success Study, in order to determine an appropriate metric of measuring reproductive success.
- Initiated a large scale oyster shell enhancement project in September at Eden Landing pond E14, which will provide cover and protection for adults, nests and chicks in future breeding seasons.

“SFBBO’s research provides students the chance to conduct scientific studies and provides data essential to protecting our local avian biodiversity.”
—Lynne Trulio, PhD, Professor and Chair, Environmental Studies, San Jose State University

**Waterbird Program**

SFBBO conducted several research projects on waterbirds and their habitats in 2014.

**Managed Pond Surveys**

Since 2005, SFBBO has monitored waterbird use and water quality of 22 Cargill managed salt ponds. Beginning in 2014, our pond surveys increased dramatically to include the monitoring of 82 ponds associated with the South Bay Salt Pond Restoration Project. This includes ponds within the Alviso, Ravenswood and Eden Landing complexes. In 2014, SFBBO biologists surveyed over 20,000 acres of managed ponds in the South Bay and counted over 1.5 million birds over the course of the year. We added a full-time intern and a field biologist to the waterbird team to meet the needs of this growing program.
Colonial Waterbird Program
For 33 years, a dedicated team of citizen scientists and SFBBO biologists has monitored nesting herons, egrets, terns, and other colony-nesting waterbirds through our Colonial Waterbird Program. In 2014, the team monitored 70 waterbird colonies throughout the Bay Area from February to August using observational methods. They recorded the number of adults, chicks, and nests and also noted conservation threats such as human disturbance. In addition, participants in this program also documented 53,000 nesting California Gulls in the South Bay during several all-day walk-through surveys and re-sighted 60 banded gulls.

Pacific Flyway Shorebird Survey
In 2014, we continued to be a key partner in the annual Pacific Flyway Shorebird Survey. On December 18, 2014, SFBBO biologists and citizen scientists surveyed 28 areas across the South Bay from Inner Bair Island to New Chicago Marsh. The SFBBO team counted over 120,000 shorebirds and also collected data on habitat conditions. Our data, combined with many others, provided a Flyway-wide assessment of shorebird communities that is used to identify conservation needs along the Pacific coast.

Avian Disease Prevention Program
In 2014, SFBBO staff and volunteers conducted surveys on several sloughs in the South Bay to retrieve dead, sick and injured birds with the ultimate goal of detecting and preventing avian botulism. The surveys were conducted from June to November, and have been conducted annually since 1982. Thankfully no avian botulism outbreaks were detected in the South Bay in 2014. Some memorable success stories from birds rescued during these surveys last year included a Northern Shoveler and a Glaucous-winged Gull which were rehabilitated and released into the wild by our partners at the Wildlife Center of Silicon Valley.

Landfill Surveys
SFBBO staff has been conducting gull surveys at a local landfill since 2007. The goal of the project thus far has been to monitor the number of gulls using the landfill over time and to note their response to abatement measures intended to prevent their use of the landfill as a food source. The current abatement efforts have been highly successful at minimizing gull use of the landfill. In 2014, we increased our survey area and also began monitoring corvid use of the landfill.

Impacts
Data from our managed pond surveys was used by the U.S. Fish and Wildlife Service and the South Bay Salt Pond Restoration Project to determine optimal pond water levels, assess restoration impacts on target species like the Ruddy Duck, and make other management decisions. Data from our Colonial Waterbird Program was shared in an annual report with the Don Edwards San Francisco Bay National Wildlife Refuge, which uses it to make resource management decisions. It was also shared in mini-reports with local land managers such as the San Francisco Public Utilities Commission and Lake Cunningham Regional Park, and with local Audubon Societies and the media.

SFBBO’s 30+ years of California Gull monitoring and research was presented at two conferences in 2014—the Ecological Society of America’s Annual Conference in August and the Bay-Delta Science Conference in October—and our band re-sighting data helped determine gull movement within the South Bay as habitat changes due to restoration events.

Our landfill surveys continued to identify effective abatement measures to reduce gull use of the landfill and helped the landfill understand for the first time how corvids use the area. These are both important steps to promote a diverse avian community in the South Bay.

In 2014, 59 volunteers contributed more than 903.75 hours to the Colonial Waterbird Program; 10 volunteers contributed 62 hours to the Gull Surveys; 28 volunteers contributed 69 hours to the Pacific Flyway Shorebird Survey; and 11 volunteers contributed 127.5 hours to the Avian Disease Prevention Program surveys.

“SFBBO’s avian disease prevention monitoring has been instrumental in helping local agencies identify and respond to rare outbreak events rapidly and effectively, which is a critical component to containing and limiting the spread of avian disease.”
—Eric Dunlavey, Wastewater Compliance Supervisor, Sustainability and Compliance Division, San José-Santa Clara Regional Wastewater Facility
Outreach Program

Our Outreach Program continued to grow in 2014. We offered five bird ID workshops with Senior Biologist Alvaro Jaramillo; three bird banding demos at our Coyote Creek Field Station (CCFS) for students at Santa Clara University and De Anza College and for adults from the general public; and a bird walk at Picchetti Winery with Let’s Go Birding. We also participated in 13 events organized by others in the community; celebrated our accomplishments at our Volunteer Appreciation Party and our Annual Membership Meeting; and raised thousands of dollars for our Outreach Program at our annual Big Sip major donor event.

Communications
We continued to communicate about our work in our Bay Bird Review and Wingbeat newsletters; achieved more than 1,000 “Likes” on our Facebook page; published a new brochure; wrote articles for national publications like All Bird Bulletin and local newsletters like EcoLogic; and our California Gull research was covered in a special report by CBS Evening News.

Volunteers
More than 180 volunteers donated more than 5,500 hours to our science and outreach programs, and we piloted a popular new citizen science program to engage volunteers in work to study Western Burrowing Owls and enhance owl habitat.

California Fall Challenge
We offered 22 special events, family bird banding demos, and birding trips, and organized bird photo, bird-a-thon, and fundraising contests during our California Fall Challenge (CFC) fundraising campaign. Thanks to an incredible effort by staff and the wider birding community (and a $3,000 matching gift from H. T. Harvey & Associates to support CCFS), we surpassed our CFC campaign goal and raised more than $30,000!

New Corporate Outreach
Facebook invited our Executive Director Cat Burns to speak about local birds in a video the company produced for people to download while hiking a new trail on Facebook’s bayside campus. In addition, as a result of the outreach work we did in 2013 to cultivate our relationship with Patagonia, the company gave us a $2,000 grant in 2014 to support our Colonial Waterbird Program citizen science work.

New Ambassador Program
We offered two bird banding demos for families led by volunteers from our Coyote Creek Field Station and four “Birds in Your Neighborhood” bird viewings led by Colonial Waterbird Program program volunteers to showcase the colonies they study in Alameda, Livermore, and Newark.

We partnered with Environmental Volunteers, the Livermore Area Recreation and Park District, the Bay Farm Island Library, and the Sequoia Audubon Society, among others, and offered a presentation about our gull and plover research to members of the Santa Clara Valley Audubon Society. We were also awarded a $10,000 grant from the Oiled Wildlife Care Network to continue our citizen science Colonial Waterbird Program.

New Family Program
We piloted our first Family Science Night in partnership with the Fremont Main Library and a new Women in Science Day in partnership with Environmental Volunteers, and offered a bird sketching bird walk for families and a Kids Bird Art Contest in partnership with local artist John Muir Laws.

Our Outreach Program reached thousands of people in 2014 and promoted our mission to conserve birds and their habitats throughout the Bay. We also instituted a new Smile Sheet protocol to collect feedback from Outreach participants’ activities so we can better serve the community and impact more birds.

“I love birds and wanted to make a difference. I feel that in a small way I’ve been able to share this love with friends and families.”
— Carole Hutchinson, SFBBO Colonial Waterbird Citizen Scientist and Outreach Volunteer.

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Statement of Financial Position

SFBBO 2014 FINANCIALS, year ended Dec 31, 2014

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<th>SUPPORT AND REVENUE</th>
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<td>Net assets, end of year</td>
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**2014 Professional Reports**


2014 Professional Reports


**Partners**

All Bird Bulletin  
Alvaro’s Adventures  
Bay Area Climate Literacy Collaborative  
Bay Farm Island Library  
Bay Nature  
Bird Education Network  
Borrow Lenses  
Brian Fullfrost & Associates  
California State University at East Bay  
Cave Creek Ranch  
CBS Evening News  
Citizen Science Association  
City of Santa Clara  
Cornell Lab of Ornithology  
CurioOdyssey  
East Bay Regional Park District  
Environmental Volunteers  
Exploratorium  
Facebook  
Fremont Main Library  
Fremont Nature Learning Center  
George Walker House  
Hawk Ridge  
John Muir Laws  
Livermore Area Recreation and Park District  
Los Gatos Birdwatcher  
NOAA Climate Stewards Education Project  
Oceanic Society  
Ohlone Audubon Society  
Point Blue Conservation Science  
Princeton University Press  
Ramrod Ranch  
REI  
Restore Coyote Creek Project  
Rock Jumper  
Ruby’s Clay Studio and Gallery  
San Francisco Public Utilities Commission
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**FOUNDATION, ORGANIZATION, CORPORATE AND BUSINESS FUNDERS**

We also would like to thank the 293 people that gave up to $59.
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