

Tideline



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Celebrating Two Decades of Common Murre Restoration at Devil's Slide Rock

By Michael Parker

Devil's Slide Rock is a small nearshore islet that has become a significant symbol for seabird conservation throughout the world. Mention the Common Murre Restoration Project to other seabird biologists and they will instantly know what you are talking about.

I first learned about Devil's Slide Rock the summer of 1989 when I was working for Harry Carter, a passionate seabird biologist who conducted seabird surveys along the California coast. Harry told me 3,000 murren once nested on this rock, located between Montara and Pacifica, but a gill-net fishery, oil spills and other human disturbances led to the extirpation of murren from this colony.

He explained how the 1986 *Apex Houston* oil spill caused oiling of shorelines from Salmon Creek in Sonoma County to Point Lobos in Monterey County, killing nearly 6,300 murren in the process. In Harry's estimation, that oil spill was the final blow resulting in the loss of the Devil's Slide Rock murre colony.

Fast forward five years to November 16, 1994... I was standing on the shoulder of Highway 1 staring down at Devil's Slide Rock with Harry, Jean Takekawa (former supervisory wildlife biologist of San Francisco Bay National Wildlife Refuge Complex) and Steve Kress (National Audubon Society's Project Puffin and father of social attraction). We were there that day to describe our plan to Steve; how we intended to use social attraction to restore murren to the rock. A court settlement resulting from litigation of the *Apex Houston* oil spill would provide the



Common murre decoys on Devil's Slide Rock. Below: Harry Carter (left) and Mike Parker pose with awards for their work. Photos: FWS



funding for the work. We were attempting to convince Steve to join our team and help implement our plan.

Social attraction was a relatively new technique that Steve had fostered to restore colonies of Atlantic puffins and terns along the coast of Maine. This technique uses

decoys, vocalizations and other social cues to lure seabirds into unoccupied habitats with the hope that, with enough time, the birds will once again breed at the colony.

That day, enormous swells were crashing up onto the rock. It was a sight that clearly gave Steve pause as I recall him asking Harry if he really thought we could place decoys out on the rock with such treacherous conditions.

Steve didn't know that Harry was a master Zodiac boat driver. Harry was confident he could get us to the rock safely and I had no doubts that we could get the decoys and sound systems to the top of the rock. However, to give the project the

continued next page

best chance to succeed, we needed Steve's expertise. We needed his years of experience, thoughts, and ideas to help guide our use of social attraction for murres at this colony. Fortunately, Steve joined our team.

With Steve on board, I began implementing our plan. Building the best team possible, we added talented scientists and field biologists including Dr. Rick Golightly from Humboldt State University, Elizabeth McLaren, seabird biologist at Point Blue Conservation Science (formerly Point Reyes Bird Observatory), and Sue Schubel and Jen Boyce from Project Puffin.

Our team tackled all sorts of administrative obstacles that made the field work seem easy. There was a government shutdown in 1995 during the Clinton administration that slowed us down. Completing environmental documents and obtaining permits took months. In addition, purchasing boats, solar-powered sound systems, rock climbing equipment, laptop computers and 400 murre decoys took creativity and patience.

However, after a year of planning and preparation, we deployed our decoys in January 1996 despite the skepticism from other Pacific coast seabird biologists who said the project wouldn't work. The stakes for success were high as this was the first use of social attraction on the Pacific coast and one of the first oil spill settlement cases in the country.

No one could have predicted just how quickly the murres responded. We were shocked and thrilled that a murre landed in the decoys the day after our deployment. We were even more ecstatic when Elizabeth spotted the first egg on May 26, 1996! Six pairs bred that year and we watched three chicks fledge from the colony. The murres outperformed our wildest expectations. After nearly a decade of absence, murres had returned home.

Each year our team of experts would gather, review data and then adapt our decoy deployment scheme to provide the best chance for long-term success. The murres continued to respond and in 2000, just five years after the start of the project, we met our 10-year goal of 100 breeding pairs.

In 2002, Gerry McChesney took over leadership of the project and he continues in that capacity to this day. After the 2005 season, the last of the decoys, sound systems and mirror boxes were removed to make



20th anniversary reunion. Photo:FWS

more room for live birds.

By 2007, the colony had grown to about 400 breeding pairs with just over 200 chicks fledged that year. Today, Devil's Slide Rock has nearly as many murres nesting as there were in the early 1980s prior to the gillnet and oil spill issues. The project had restored this extirpated murre colony.

Considering the myriad of issues that this project could have encountered, the 20th anniversary of the start of the project was clearly a cause for celebration. Not only was the project an enormous success, the project catapulted the use of social attraction to restore seabirds around the world. Even some of the biologists who doubted its efficacy have used the technique to restore seabird colonies.

For years, Harry Carter urged for a party to recognize the project's impressive accomplishments but we were all too busy to make it happen. Finally, Gerry and I agreed to organize a celebration to take place in April 2017. About 50 people attended the event held at the Half Moon Bay Yacht Club. It was a great time reconnecting with old friends, sharing stories about the project and recognizing the people that were instrumental in making this project a success.

Although Harry pushed for the celebration, he was unable to attend. Tragically, just a few weeks before the party, Harry was diagnosed with terminal cancer and he was unable to travel. Our thoughts were with him the entire evening and into the early hours of the next day as we sat around a campfire reminiscing about the project and telling tales of how Harry kept us all safe with his superb boat driving skills.

At six a.m. the next morning on April 30, I woke to join Gerry, Steve, Jean and

others at the trailside overlooking the rock. As I was leaving the Point Montara Lighthouse Hostel my phone rang. It was Emma Carter, Harry's wife, calling me to let me know that Harry had just passed 15 minutes earlier. It was devastating news but not unexpected given his prognosis.

Thinking about the situation, I chuckled. It was so like Harry to hold off passing until the celebration was over, the celebration he so desperately wanted to take place. At the overlook that morning, the ocean was strangely calm with barely a swell to be seen. As if showing their appreciation for all Harry had done for them, 2,000 murres were putting on a show atop the rock.

It was somehow fitting and very peaceful to be there with friends and colleagues admiring this scene with thousands of murres congregated on top of Devil's Slide Rock, a vision that Harry had dreamed up over two decades earlier.

If you get a chance, go hike the paved Devil's Slide Trail in San Mateo County between May and mid-July, look down upon the nesting murres and give thanks to Harry Carter for having this dream and making it happen.

*In Memory of Harry Carter
(1956 – 2017)*

Mike Parker led the Common Murre Restoration Project from 1995-2002 and was the Deputy Project Leader of the San Francisco Bay National Wildlife Refuge Complex from 2002-2004. He is currently the Executive Director of the California Institute of Environmental Studies and lives in Davis, CA with his wife Kyra and their two sons, Kyle (13) and Cody (12). He misses his mentor and friend, Harry Carter, every day.

Setting Conservation Priorities

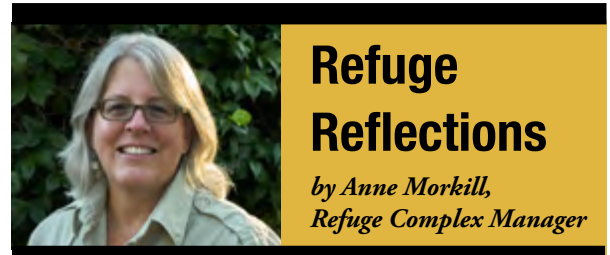
Last spring I reported on our use of *The Open Standards for the Practice of Conservation* to guide the optimal allocation of limited funding and staffing capacity in the years ahead. This process will help us work smarter and maximize results in support of our conservation mission. We are in the final stretches of that effort and wanted to update you on our progress.

One of the most valuable aspects has been bringing together diverse and multi-talented staff from across our seven refuges and from every program - biology, visitor services, maintenance, law enforcement, administration, and management - to learn from our collective decades of field experience, recognize parallel challenges at every refuge, and build a shared vision for the San Francisco Bay National Wildlife Refuge Complex as a whole, and even beyond.

The core of the *Open Standards* process is selecting your conservation targets, defined as "specific species or ecological systems/habitats that are chosen to represent

and encompass the full suite of biodiversity in the project area for place-based conservation or the focus of a thematic program." We evaluated over 2,000 species and 38 ecosystems/habitats under various criteria to filter down to a set of eight priority conservation targets for the Refuge Complex.

Our eight priority targets include one species group - waterbirds of the San Francisco estuary, and seven ecosystems - tidal marsh, coastal sand dunes, riparian sand dunes, estuarine islands, marine islands, vernal pool grasslands, and the Pajaro Valley watershed. Each of these represents either a unique habitat found only on our refuges, or for which our refuges contribute substantially towards the conservation of the target. Certain species within these ecosystems - for example, the ash storm-petrel on marine islands or the Santa Cruz long-toed salamander in the Pajaro Valley watershed



- were selected as key ecological attributes that are indicative of a healthy target, and will form the focus of our monitoring and management efforts.

We are also examining how healthy conservation targets benefit humans, benefits such as flood protection, recreational access, and wild food sources. Likewise, public engagement on specific activities can benefit a conservation target. We will begin implementing our prioritized work plan in October 2017. We still have more work to do, but as always, please feel free to contact me if you have any questions!

Art Show and Sale to Benefit Education Programs at the Refuge



Come see our newest art display at the Environmental Education Center in Alviso and learn about some of the native plants, birds and insects in nearby oak woodlands! Local artist Kathy Kleinsteiber has donated framed prints of her watercolor paintings to the San Francisco Bay Wildlife Society to be sold. The entire sale price will go toward the educational programs in Alviso.

These high-quality, limited edition giclee prints are framed with archival mats, wood frames and plexiglass glazing. The artwork will be on display until November 30, 2017. You may purchase any print now, but will need to come back after the exhibit to retrieve your purchase so that the show will remain intact for others to enjoy. Hurry in for the best selection!

Kathy Kleinsteiber is a San Jose nature artist who left the Silicon Valley tech industry to follow her lifelong passion for creating art. She loves to explore nature and to create artwork based on what she sees along the trail. While art is for humans and generally depicts some aspect of the human condition, Kathy likes to remember that life on this Earth is not all about us. She wants to communicate that we are not alone in this world and that other species call this beautiful planet home.

Kathy's artwork has been exhibited in various locations, including Triton Museum of Art, Arizona-Sonora Desert Museum, Yosemite National Park, Joshua Tree National Park, University of Colorado Museum of Natural History, Filoli Gardens, Berkeley Botanical Gardens, Santa Cruz Museum of Natural History, Pacific Art League, Santa Cruz Art League and the Almaden Quicksilver Mining Museum. Visit her website at kathykleinsteiber.com.

Cool New Nesting Boxes Help Save Seabird Colony

by Doug Cordell

By 8 a.m. on an unusually hot morning in May, 2008, surface temperatures on Farallon Islands National Wildlife Refuge, a rocky outcropping of small islands 30 miles off the coast of San Francisco, were already breaking records. Cassin's auklets, one of the species that make the islands a globally critical seabird breeding site, were dying in their nests.

Research biologists and refuge staff had augmented the auklets' natural nests with man-made wooden ones to promote breeding for a population that had shrunk to a quarter of its 1970s numbers. Now, as temperatures climbed, they scrambled to shield nests from the heat and rescue as many of the dying birds as possible.

The Cassin's auklet is an unusual bird for a number of reasons. It uses its small wings to swim underwater, and stores food in a throat pouch to carry to its young. It also feeds on krill, microscopic plankton-like organisms in the ocean—which makes the auklet an important indicator of ocean health and productivity for many other species.

Unfortunately, heat spikes like the one in 2008 have become a more frequent phenomenon on the Farallon Islands, part of a decades-long rise in surface air temperatures.

Refuge staff from the U.S. Fish & Wildlife Service and their research partners



Photo: Duncan Wright

from Point Blue Conservation Science knew they had to account for the new climate reality on the islands if the Cassin's auklets colony was to survive.

A first step in protecting the colony from more extreme heat was the installation of wooden shields over the nesting boxes. But a more weather-resistant, long-term fix would ultimately be needed—one that would also allow for easy monitoring of the nesting birds.

"We had to be creative," says Russ Bradley, Farallon Program Leader with Point Blue. "Luckily, the Bay Area has an amazing pool of design talent."

Enter master ceramicist Nathan Lynch and students from the California College of the Arts, who, together with Oikonos Ecosystem Knowledge, helped develop new, ceramic shield-and-box nesting modules.

Now the plan is to install 30 ceramic

modules on the refuge and monitor their effectiveness. If all goes well, the hope is that funding can be secured to construct more than 400 nesting modules.

A key to success of the project thus far has been the Service's unique partnership with Point Blue on the islands. Stretching back decades, it has produced one of the longest-term, continuous biological monitoring programs in the world. U.S. Fish & Wildlife Service Farallon Wildlife Refuge Specialist Jonathan Shore says, "It enables us to accomplish so much more together than either of us could do on our own."

It's clear, in talking to Service and Point Blue staff on the islands, that the work is inspiring.

"From the middle of Golden Gate Bridge in San Francisco to the Farallon Islands, it's only 30 miles, yet you're in a different universe," says Point Blue's Bradley. "You feel like you are just a visitor there. It's for wildlife."

Refuge Specialist Shore echoes the point: "There's such a huge diversity of life there, in such a small place. But it was disturbed by human activity for more than 150 years. It's our responsibility to restore and protect it."

Doug Cordell is a Public Affairs Specialist at the San Francisco Bay National Wildlife Refuge Complex

Sale of Native Plants

Saturday, October 7

10:00 a.m. - 2:00 p.m.

2 Marshlands Rd, Fremont

Time to landscape your yard before the rains start with drought-tolerant, native plants from the San Francisco Bay Area. Create habitat for pollinators and birds around the San Francisco Bay.

For driving directions to the Don Edwards San Francisco Bay National Wildlife Refuge, go to http://www.fws.gov/refuge/don_edwards_san_francisco_bay/drivingdirections.html

Sold by the San Francisco Bay Wildlife Society



National Wildlife Refuge Week Arts and Crafts Nature Festival Saturday, October 14 1:00 p.m. - 4:00 p.m.

Location: Don Edwards San Francisco Bay National
Wildlife Refuge • 1 Marshlands Rd, Fremont

More information including schedule will be posted on our
website September 16, 2017

http://www.fws.gov/refuge/don_edwards_san_francisco_bay
510/792-0222 ext. 363

Celebrate nature by exploring your creative side. Whether it's browsing artwork by local artists, crafting animals out of paper, or creating an animal-shaped yummy treat, there's something for everyone.

Origami

Transform paper into animals

Nature Quilt Project

Put your stamp on a fabric square

2017 California Jr. Duck Stamp Winners Display

Create your Fish Print Tote Bag

While supplies last

Animal Desserts

Get ideas for your next wildlife-themed party



The San Francisco Bay Wildlife Society Presents

Art Show & Reception

The San Francisco Bay Wildlife Society turns 30 this year!

Join us in commemorating this milestone during National Wildlife Refuge Week.

Date: Saturday, October 14, 2017

Time: 2:00 p.m. - 4:00 p.m.

Where: 1 Marshlands Rd, Fremont in the Auditorium

Auditorium is on top of the hill. Special needs can be accommodated.

There is no cost to attend.

Refreshments will be served. Proceeds of art sales benefit programs at the
San Francisco Bay National Wildlife Refuge Complex.

For more information, call Mary Deschene at 510-792-0222 ext. 364

Thank you San Francisco Bay Wildlife Society Donors!

We gratefully acknowledge the following donors who have made gifts to the San Francisco Bay Wildlife Society between April 1 and June 30, 2017. These gifts will be used for publishing Tideline, environmental education, habitat restoration, and interpretive programs at the San Francisco Bay National Wildlife Refuge Complex.

Donations

Bright Funds Foundation
Patricia Carelli
PayPal Giving Fund
Lori Duvall
Whole Foods Market for the Litterati
Pollution Prevention Exhibit
Laura Mello for donation of stipend for Ohlone talk in September.
Teresa Rogoway to support Tai Chi classes at the EEC in Alviso

Employer & Matching Gift Programs

IBM Corporation

Sponsor

Laurel Przybylski

Participant

Christine Holmes, Martha A Johnson, Susan A Klein, Laura E Mello, T Charles Moore, Margaret Panton

Family

Norton Bell, Susan Jane Boddy, Charlene Charles, Alvin Dockter, Craig & Barbara L Hecknam, Jan Z Hintermeister, Karen McCreddin, Phillip Vallejo, Kathleen Yoshikawa

Individual

Geo B & Stephanie Almeida, Marlene Grunow, Lynn P Hunwick, Lock C Jorgensen, Fran Tannebaum Kaye, Mary Light, Karen N Maxwell, Kammy Rose, Richard Santos, Rose Mary Wright, YooHsiu Yeh

Senior/Student

Rick Arellano, Patricia Callaway, Bonne Curtis-Leibee, William Donnelly, Cathie Guernusey, Katherine Jarrett, William H Kappler, Roman Kendzior, Patricia Kishi, Mary Maxwell, Miranda L Miller, Connie Simone, Christina Tworek, Stella Yang



San Francisco Bay Wildlife Society Quarterly Message

30th anniversary of the San Francisco Bay Wildlife Society: The San Francisco Bay Wildlife Society, established in 1987, was the second National Wildlife Refuge support group in the United States after the “Ding” Darling Wildlife Society was formed in 1982. See our timeline of San Francisco Bay Wildlife Society at <http://sfbws.com/timeline>.

To celebrate our 30 years, we launched a fund raising campaign with several objectives:

1. Support new and ongoing native habitat restoration projects.
2. Obtain funding for Society employees at Fremont to keep Visitor Contact Station open on both weekend days.
3. Support refuge facility improvements (i.e., support planning for a new Visitor Center, accessible boardwalks, fishing platforms, trail improvements, multi-lingual interpretive signs, restroom facilities, nature play area).
4. Develop new and enhanced environmental education and stewardship efforts.
5. Expand the nature stores.

We are seeking corporate and individual donations to fund these projects. Please share any company contacts so our Partnership and Fund Development Committee can explore funding opportunities with them.

Need your skills for committees: We need people to help with various commit-

tees: Communications and Marketing, Partnerships and Fund Development, and Bylaws. Interested in helping out with the Society’s activities in a different way? Write me and I’ll put you in touch with the committee chair. We are planning an event this October to celebrate our 30th anniversary and if you like to be involved in event planning, we could use you!

Publications and conferences: Your Society staff and Board of Directors had a busy quarter presenting research, process improvements, and guidance at several venues. Dr. Chris Kitting is submitting a poster, *Celebrating 30 years of Francisco Bay Wildlife Society: A pilot study on macroinvertebrate recolonization at the bottom of dredged Stockton ship channel in the California Delta*, for the 13th biannual State of the San Francisco Estuary Conference in October.

Mary Deschene and Dr. Ceal Craig, with Anne Morkill, San Francisco Bay National Wildlife Refuge Complex manager, hosted a session called “Grant Development Lessons and Best Practices” for a U.S. Fish & Wildlife Service Region 8 Visitor Services Workshop for Service staff and Friends Groups.

Watch out for our new book, *Sinking Underwater: A Ghost Town’s Amazing Legacy* by Anita Goldwasser and me! This updated book about Drawbridge will be in our nature stores soon.

Out on the trail: The Visitor Services

Region 8 Workshop (see above) included a project for the workshop host, San Luis National Wildlife Refuge Complex, and a field trip to learn about storytelling at our newest national park: Pinnacles! If you have not visited either place, I recommend a visit this fall and winter. It was a bit hot in late June. Best time to visit Pinnacles is during the week; weekends have long lines at the entrance gates.

Volunteer opportunities: Volunteers are vital to the nature stores at Fremont and Alviso. Email Mary.Deschene@SFBWS.com or call 510-792-0222 ext. 364 for more information or dates!

Your feedback desired! We welcome continued feedback on the hours at the visitor centers in Fremont and Environment Education Center in Alviso, and on nature store and San Francisco Bay Wildlife Society goals and mission. Go to www.surveymonkey.com/sfbws_survey to provide your comments.

Check out www.sfbws.com. I also strongly recommend a visit to the National Wildlife Refuge Association site refugeassociation.org to understand the challenges facing our refuges today.

As always, we welcome your inputs. Send your thoughts to [Ceal\[Craig\]@SFBWS\[dot\]com](mailto:Ceal[Craig]@SFBWS[dot]com)

Cecilia (Ceal) D. Craig, PhD
President, SFBWS Board of Directors



Celebrating 30 years of Support for the
San Francisco Bay National Wildlife Refuge Complex
1987 - 2017

Together with refuge Friends Groups throughout the nation, the San Francisco Bay Wildlife Society is a public voice that supports the National Wildlife Refuge System.

WHAT WE DO:

Environmental Education, Interpretation, and Outreach

For more than 20 years our Living Wetlands and Watershed Watchers programs for schools, Boys and Girls Scouts, Boys and Girls Clubs, and the general public have been funded through partnerships with the City of San Jose and the Santa Clara Valley Urban Runoff Pollution Prevention Program. Transportation for field trips and interns has been funded by Facebook, City of San Jose, and individual donors. Refuge interns have been funded through California Coastal Conservancy's Explore the Coast grant program.

Pollution Prevention and Habitat Cleanup

Using the Litterati™ app on mobile devices to photograph, identify, and map litter while collecting trash on the refuge lets us educate about sustainability and environmental responsibility. This melding of technology with trash cleanups is made possible by a Santa Clara Valley Water District grant and additional funding from the Santa Clara Valley Urban Runoff Pollution Prevention Program.

Refuge Planning, Conservation Research, and Climate Change Resilience

We provided funding for San Francisco Bay National Wildlife Refuge Complex's Strategic Plan and a related sea level rise literature review. The Refuge Complex is completing a multi-year work plan and comprehensive analysis of conservation targets and priorities; the Society will be responsive in support of plan outcomes.

Publishing and Printing

We have published *Tideline*, the Refuge Complex newsletter, for nearly three decades, and *Drawbridge, California: A Hand-Me-Down-History* by O.L. Monty Dewey. A new cultural history book about Drawbridge will also be published soon. We provided funds for publications like the *Baylands Ecosystem Habitat Goals – Science Update 2015*.

Visitor Services and Community Involvement

Honorariums for experts leading workshops at Refuge Complex events have been provided, and the Habitat Heroes program (service-learning camp for teens) is also funded by the Society. Volunteers for the Society operate two nature stores at Don Edwards San Francisco Bay National Wildlife Refuge and assist with public and school programming.

Our mission:

The primary focus of the San Francisco Bay Wildlife Society is to promote public awareness and appreciation of the San Francisco Bay and its natural history, and to conserve and preserve the remaining bay lands as essential wildlife habitat.

The San Francisco Bay Wildlife Society is a not-for-profit 501(c)(3) Refuge Friends Group, authorized by Congress to support the education, interpretation, and research activities of the U.S. Fish & Wildlife Service.



San Francisco Bay
Wildlife Society

July 30, 1987

The Society received a Federal 501(3)(c) designation, beginning a 30 year journey of support for the *San Francisco Bay National Wildlife Refuge Complex*

In 1987, the Don Edwards San Francisco Bay National Wildlife Refuge was 13 years old. The refuge needed help to accomplish projects as it could not do it alone. The San Francisco Bay Wildlife Society was established. One of its first projects was to convert the Fremont pumphouse into a classroom for school field trips. Another role the Society assumed was to apply for, and manage grants. The Society was awarded grants from local agencies to fund environmental education and interpretive programs at the Environment Education Center in Alviso, and to keep the education center open on weekends. Over three decades the Society supported projects, large and small, in refuges throughout the Refuge Complex.



The future will be exciting and new challenges and rewards are still ahead. Reflecting back over 30 years we share a quick look at our history and acknowledge the growth and accomplishments that grantors, donors, members, and volunteers have made possible.

Thank you. We look forward to the coming years!

**3rd decade
2007—2016**

- Grant received for native plant nursery and native plant project at San Pablo Bay and Marin Islands refuges
- Blue Goose Transportation Fund established for Title 1 schools coming to Don Edwards San Francisco Bay Refuge
- City of San Jose added funds for associates and Blue Goose Transportation Fund
- Shifted from Cooperating Association status to a Friends Group agreement
- 2013: Government shutdown, Shark Day cancelled.
- New rules from Department of Interior requires only Friends staff can operate nature stores and native plant sales, resulting in temporary closure of nature stores.

**4th decade
2017—2026**

- Society celebrates 30th anniversary. See page 5 for anniversary event.
- *Sinking Underwater: A Ghost Town's Amazing Legacy* to be published.
- More to come . . .

**2nd decade
1997—2006**

- Raised funds for boardwalk in Alviso and native plant nursery.
- Began funding summer camps in Alviso
- Received first grant to fund Bair Island restoration and management plan.
- Habitat enhancements at San Pablo Bay refuge
- Outreach for Devil's Slide Rock and Farallon Islands Refuge
- Began improving Fremont trails for people with mobility limitations.

**1st decade
1987—1996**

- Fremont pump house made into an environmental education classroom.
- Began publishing *Tideline*
- Environmental education and interpretive employees hired, funded by City of San Jose and the Santa Clara Valley Urban Runoff Pollution Prevention Program.
- Funded *Wetland Wildlife Viewing Guide* and *Salt Marsh Manual*. Published *Drawbridge, California: A Hand-Me-Down History*.
- For 14 years (1990—2004) supported other refuges to operate nature stores: Klamath Basin, Sacramento, Salton Sea, and Malheur.



Conserve the Future - Volunteer for Wildlife and the Next Generation

As a designated Refuge Friends Group for the San Francisco Bay National Wildlife Refuge Complex, we are here to help engage the community in support of the Refuge Complex. The Refuge Complex encompasses more than 50,000 acres of potential and restored wildlife habitat with many projects and programs that benefit from involving volunteers. This is your Refuge Complex. We'd like to find a volunteer role to get YOU involved!

Consider these volunteer possibilities to support the Refuge Complex and the work of the Society...

STEWARDSHIP and SCIENTIFIC RESEARCH

Assist biologists with field work. Remove invasive plants. Monitor nesting birds. Engage in citizen science. Collect trash – use Litterati™ phone app.

VISITOR SERVICES and PUBLIC OUTREACH

Staff a refuge visitor center/nature store. Assist with school field trips. Help lead a weekend hike. Do outreach tabling at community events. Present to service or corporate groups. Teach high school students about climate science.

LEADERSHIP – BOARD and COMMITTEES

Join the Society board of directors. Serve on a board committee as community member. Help plan more anniversary events. Recruit other volunteers. Assist with administrative tasks. Coordinate special projects-share your talents. Help with fundraising. Identify partnership opportunities.



Like San Francisco Bay Wildlife Society on Facebook!

Why Volunteer?

You'll learn new skills and develop new interests, meet and work with dedicated staff and eager youth, make friends and welcome strangers, learn to value and appreciate the salt marsh, sloughs, and uplands ringing San Francisco Bay - all as you become a champion for the Refuge Complex and the plant and animal species that call the varied habitats home.

San Francisco Bay Wildlife Society volunteers receive enrichment training and continuing education, enjoy special refuge and Society events, participate in group outings to unique locations, and have the personal reward of knowing their time, skills, and interests are contributing to an important Bay Area conservation effort.

Now that you are keen to find your place in the conservation landscape of the refuge and learn more about the Society as a volunteer, contact Mary Deschene at mary.deschene@sfbws or call 510-792-0222, ext. 364 to get signed up.

We look forward to getting to know you!



Volunteers on a special tour of Devil's Slide Rock Trail



Tabling event at Bair Island Nature Day

Become A Member - Donate

Join us in public education and scientific support for the Refuge Complex.



YOUR SUPPORT IS IMPORTANT FOR THE FUTURE OF WILDLIFE and a HEALTHY BAY HABITAT - Become part of a conservation constituency.

Wildlife Habitat Conservation

Hands-on Science for Kids

Refuge Restoration

Pollution Prevention

Visitor Centers & Nature Stores

Facility Improvements

Help Us Protect Your San Francisco Bay Wetlands!

Mail your membership donation to: San Francisco Bay Wildlife Society, P.O. Box 234, Newark, CA 94560. You may also become a member at www.sfbws.com/donate.

For a gift membership, call 510-792-0222 ext. 364.

San Francisco Bay Wildlife Society is a not-for-profit 501(c)(3) organization that raises money and awareness for the San Francisco Bay National Wildlife Refuge Complex.

YES! I want to support San Francisco Bay Wildlife Society and its programs.

Enclosed is my donation of:

- | | |
|--|--|
| <input type="checkbox"/> \$20 Student/Senior | <input type="checkbox"/> \$200 Corporation |
| <input type="checkbox"/> \$35 Individual | <input type="checkbox"/> \$250 Sponsor |
| <input type="checkbox"/> \$50 Family | <input type="checkbox"/> \$500 Sustainer |
| <input type="checkbox"/> \$75 Supporter | <input type="checkbox"/> \$1,000 Leader |
| <input type="checkbox"/> \$100 Participant | |

Check enclosed

For credit card payment, please use PayPal at www.sfbws.com/donate

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

Thank you for your support!

The San Francisco Bay Wildlife Society has:

- Introduced tens of thousands of students of all ages to the Don Edwards SF Bay National Wildlife Refuge
- Provided weekend staffing at Visitor Centers
- Provided funding for restoration projects, a new boardwalk, trails, a greenhouse and native plant nursery

And much more ...

Become a Supporting Member of the Society. Benefits include:

- Free subscription to *Tideline* newsletter
- Tax deduction to the extent permitted by law
- 15% off at our nature stores
- Free book – *Exploring Our Baylands*
- The joy of helping protect this important environment

Autumn Activity Schedule

Children under the age of 16 must be accompanied by an adult.

*Trails are generally level.
Surface and trail conditions vary.
Please call for accessibility information.

September

Saturday, September 2



Tai Chi & Refuge Nature Walk

Environmental Education Center, Alviso
9:30 a.m. – 11:00 a.m.

Morning Crane founder Chris Shelton is a certified Tai Chi and Qigong practitioner and instructor with 20 years of experience. Chris Shelton has helped thousands of people around the world reclaim their health and enjoy lives free from chronic pain. Join us for a short nature walk after practicing Tai Chi to learn about the refuge! Sponsored by San Francisco Bay Wildlife Society. No registration necessary.



Nature Yoga

Visitor Center, Fremont
10:00 a.m. – 11:30 a.m.

Enjoy the benefits of Yoga outdoors with great views of the salt marsh. Through story and postures, learn what attracted people and wildlife to the bay. There will be a short hike to the site on top of the hill from the Visitor Center. Bring a yoga mat. A limited number of mats are available to borrow. Wear comfortable clothing. Consult with your doctor before participating. All abilities welcome. Recommended for ages 13 and up. Reservations are required. Register at <http://donedwardsyoga.eventbrite.com> or call 510-792-0222 ext. 476. Led by Carmen Minch.



Nature Walk for Health

Visitor Center, Fremont
10:30 a.m. – 11:30 a.m.

Take a break from your busy schedule and refresh your spirit with nature at the refuge. Take a guided nature walk on the Tidelands Trail and hear what makes this National Wildlife Refuge unique. The 1.3-mile walk traverses through endangered species habitat and offers great views of south San Francisco Bay. Meet in front of the Visitor Center. Led by Matt Keehner.

Volunteer Orientation - Alviso

Environmental Education Center, Alviso
11:00 a.m. - 12:00 p.m.

If you have an interest in wildlife and their conservation, enjoy working with people, and are enthusiastic and dependable, the refuge's volunteer program is for you! As a volunteer, you will receive on-the-job training from staff and other volunteers in the project area you choose. Project areas in Alviso are: restoration projects, information desk on Saturdays, interpretive programs, school field trips, and citizen science/community service.

Saturday, September 9

*Marshlands of Dreams

Visitor Center, Fremont
10:00 a.m. - 11:00 a.m.

Join Paul Mueller on a 1-mile walk of the LaRiviere Marsh Trail to find traces of the past. Prior to marsh restoration, learn how Californians utilized the area for farming, quarrying, salt production, and transportation.

Saturday, September 16

Bay Bike Ride

Meet at the Visitor Center, Fremont
10:30 a.m.

Go on an 11-mile bike ride with docent Gregg Aronson along Marshlands Road and on the Shoreline Trail to observe birds and the occasional leopard shark! Pass through several habitat types along the way including salt marsh, salt pond, and the bay. The paved and dirt trails are almost flat and trail and hybrid bicycles highly recommended. Helmets are required. Recommended for more experienced bicyclists. Program cancels if it rains the day before and the day of due to mud. Register at <https://donedwardsbike.eventbrite.com> or call 510-792-0222 ext. 363 for reservations.

Geology Rocks on the Hills

Visitor Center, Fremont
10:30 a.m. – 12:00 p.m.

Ever wondered why the Coyote Hills rise up out of the surrounding marshland? Take a walk with Dr. Malcolm Pringle around the hills of the refuge. Observe rocks that formed deep in the ocean during the time of the dinosaurs. Ponder how they could have joined North America, then been uplifted to form the rocks, colors, and soils that provide the footing of the varied plants and animals that we see now. Sturdy walking shoes recommended. Register at <https://donedwardsgeology.eventbrite.com>.

Duck Hunting Informational Meeting

Environmental Education Center, Alviso
1:00 p.m. - 2:00 p.m.

Want to know more about the Don Edwards Refuge's duck hunting program like where you can hunt and what the refuge regulations are? Join us at this informational meeting and speak with our refuge manager and refuge police.

*Family Bird Walk

Visitor Center, Fremont
2:00 p.m. - 4:00 p.m.

Let family walks become a shared time of nature learning. We'll begin by helping kids create their personal bird watching field guides, and then head out onto the trails to find those birds. A limited number of binoculars are available to borrow. Recommended for children ages 5-10. RESERVATIONS REQUIRED. Go to <https://donedwardsfamilybird.eventbrite.com> or call 510-792-0222 ext. 363. Led by Ken Roux.

Saturday, September 23

Volunteer Orientation

Visitor Center, Fremont
10:00 a.m. – 11:00 a.m.

Increase your quality of life with a resolution to volunteer for a good cause. Come to this presentation to see if volunteering at the Don Edwards San Francisco Bay National Wildlife Refuge is right for you. Begin by learning the mission and goals of the San Francisco Bay National Wildlife Refuge Complex, its parent agency U.S. Fish & Wildlife Service, and volunteer positions currently open at the Fremont location. Presented by Paul Mueller.

Crafts in the Outdoors: Deerskin Pouch Making

Environmental Education Center, Alviso
10:00 a.m. – 12:00 p.m.

Learn the skills needed to fashion your own deerskin pouch. The Ohlone used deerskin for a variety of purposes. We will make small pouches together to hone our skills. We'll lace our pouches and add decorative beads. Deerskin is luxurious to the touch, feels cool in summer and warm in winter. It is lightweight and breathable, and stays soft even after getting wet repeatedly. Enrollment is limited. Minimum 12 years of age to participate. Led by Steve Stolper, Certified California Naturalist. RESERVATIONS REQUIRED. Go to <https://deerskinpouch.eventbrite.com>. Questions? Call Hope at 408-262-5513 ext.104.

Drawbridge Van Excursion

Environmental Education Center, Alviso
1:00 p.m. – 3:30 p.m.

An abandoned town in the San Francisco Bay? That's right! Nestled on an island in the salt marshes of South San Francisco Bay, the town of Drawbridge once boomed. Was it a quiet, peaceful town full of nature lovers, or people scabbling out a living? How long did it exist? Find out at this program, led by Ceal Craig. We will start with a slideshow, and then take a short van excursion to view Drawbridge across Coyote Creek. Program will be of most interest to adults interested in history or nature; children 13 and over with an adult are welcome. Space is very limited. RESERVATIONS REQUIRED. Go to <https://drawbridgefall.eventbrite.com>. Questions? Call Hope at 408-262-5513 ext.104. (Note: we do not visit the town itself – we go to the closest spot that one can legally view Drawbridge.)

Saturday, September 30

Stewardship Saturday

Visitor Center, Fremont
9:30 a.m. - 12:00 p.m.

If you are interested in improving the refuge for visitors and for wildlife alike, join us at the Visitor Center for a stewardship project. We will do either a trash cleanup or a planting/weeding project. Dress appropriately for the task and for the weather. We will have gloves to lend and will provide the tools. Bring your own water bottle. Meet in the parking lot at the Visitor Center. Driving an additional 2.5 miles may be required since the project may be at a different location. For more information, or to make reservations, call 510-792-0222 ext. 361.

Paint with a Ranger

Environmental Education Center, Alviso
10:00 a.m. – 11:30 a.m.

Connect with nature via paint! Art is a great way to gain a new perspective on what you see out on the refuge. It allows you to discover shapes and colors you may not have noticed before. Each Paint with a Ranger program will have a different theme. All materials are supplied, so just bring yourself, your family, and friends. All skill levels are welcome to join. Recommended for ages 7 and up. Reservations required. Go to <https://paintranger.eventbrite.com>. Questions? Call Hope at 408-262-5513 ext.104.

Insect Exploration

Environmental Education Center, Alviso
10:30 a.m. - 12:00 p.m.

Insects have been on this Earth for hundreds of millions of years. Come learn about the many different insects that call the San Francisco Bay Area their home. We will examine insects and learn how they've adapted to survive. Join us as we dig in the dirt and crawl through the plants in search for our six-legged friends. Be prepared to get dirty. All ages are welcome. Register at <http://eecinsect.eventbrite.com> or call 408-262-5513 ext. 102.

Indicators that Fox are in Your Area

Visitor Center, Fremont

2:00 p.m. – 3:30 p.m.

Do you sometimes see paw prints in mud or scat (poop) on the trails and assume that a dog left it? It could be from something else. Come along with me and I will show you how to distinguish and identify the markings of a gray fox. Gain some insights into the fox's nature and their behavior during the walk. By the time we are through, you will have a set of "tools" you can use to identify the presence of foxes in any area that you are in. Bring a hat, binoculars, and good walking shoes. Led by Bill Leikam, the Fox Guy. Register at <http://donedwardsfox.eventbrite.com>.

October

Friday, October 6

Night Sky Party!

Environmental Education Center, Alviso

7:30 p.m. – 9:30 p.m.

Meet the stars of fall and view the full harvest moon! Join our amateur astronomers as we learn about constellations. Make a star chart and then venture outside to view the night sky through a telescope. Afterwards, warm up with some hot chocolate. Bring your own binoculars or spotting scopes if you have them. Dress warmly, as it gets cold in the evening. Fun for the whole family! Great for scout groups. RESERVATIONS REQUIRED. Go to <https://nightskyfall.eventbrite.com>. Questions? Call Hope at 408-262-5513 ext.104.

Saturday, October 7



*Nature Walk for Health

Visitor Center, Fremont

10:30 a.m. – 11:30 a.m.

See September 2 for program description.

Native Plant Sale

Visitor Center, Fremont

10:00 a.m. – 2:00 p.m.

This is your chance to purchase that perfect native plant to add to your garden! Whether you're looking to re-landscape your yard with drought-resistant plants, or you want to create habitat for neighborhood birds and butterflies, this is the place to be!

BAY DAY: How to Hike

Environmental Education Center, Alviso

10:00 a.m. – 12:00 p.m.

Interested in hiking and enjoying nature but haven't made the effort yet to get outside? Come join us at the refuge for a fun introduction to hiking! Learn about the benefits of hiking, what you need, safety, and how to plan your next hiking adventure. Then head out on the trails with the option for a guided 1-mile hike. Families and people of all ages encouraged to join. Led by Steve Stolper, Certified California Naturalist. Reservations required. Go to <https://howtohike.eventbrite.com>. Questions? Call Hope at 408-262-5513 ext. 104.

*Pacific Flyway

SF2 Trail, Menlo Park

11:00 a.m. - 12:30 p.m.

Our wetlands are an important stop on the Pacific Flyway, a major bird migration route. Stroll with docent Laurel Stell to learn why birds migrate, why they stop along the San Francisco Bay, and to spot the birds in action. Trail is easy and level. All ages and abilities welcome. Meet at the SF2 trail parking area on the west side of the Dumbarton Bridge. Reservations required. Go to <https://pacificflyway.eventbrite.com>. Questions? Call Hope at 408-262-5513 ext. 104.

BAY DAY: Jr. Refuge Ranger

Visitor Center, Fremont

1:00 p.m – 2:30 p.m.

Become a honorary Jr. Refuge Ranger on Bay Day by completing activities on the refuge. We will guide you in some of the activities that will help you earn the Refuge Ranger Badge. Those who complete the activities in the booklet for your age group will receive a Jr. Refuge Ranger badge. Register at <http://donedwardsranger.eventbrite.com> or call 510-792-0222 ext. 363. Led by Jackie Warren.

BAY DAY: Become a Watershed Watcher!

Environmental Education Center, Alviso

1:30 p.m. – 3:30 p.m.

Want to make a difference? Celebrate Bay Day by becoming a Watershed Watcher! No matter where you live, you are part of a watershed, and the Bay Area is the largest watershed in California. Come join us in learning about ways that you can protect and enhance the environment we live in. It is fun and easy to be an environmental steward. We will learn about local citizen science projects and create something to take home. All ages are welcome. Reservations required. Go to <https://watershedwatcher.eventbrite.com>. Questions? Call Hope at 408-262-5513 ext. 104.

National Wildlife Refuge Week is October 8-14

Saturday, October 14

*Restoring Inner Bair Island Walking Tour

Inner Bair Island, Redwood City

10:00 a.m. – 11:00 a.m.

Bair Island is now open! On this 1.5-mile walk, witness wetland restoration in progress. Hear the story of Bair Island and see how we are turning the former salt pond back into a healthy tidal marsh. Directions: Take HWY 101 and exit at Whipple Ave in Redwood City. Head west toward the bay. The road winds 0.5 mile becoming East Bayshore, then Bair Island Rd. The Bair Island parking lot is on the right. Meet by the restrooms. RESERVATIONS RECOMMENDED. Go to <http://innerbairtour.eventbrite.com>.

*Family Bird Walk

Visitor Center, Fremont

10:00 a.m. – 12:00 p.m.

Let family walks become a shared time of nature learning. We'll begin by helping kids create their personal bird watching field guides, and then head out onto the trails to find those birds. A limited number of binoculars are available to borrow. Recommended for children ages 5-10. RESERVATIONS REQUIRED. Go to <https://donedwardsfamilybird.eventbrite.com> or call 510-792-0222 ext. 363. Led by Ken Roux.

Salt Marsh Walk

Visitor Center, Fremont

10:30 a.m. – 12:00 p.m.

Take a walk with docent Gregg Aronson around the wetlands of the wildlife refuge and learn about their history. See examples of salt collection ponds and learn what is being done to convert them back to their original, natural salt marsh state. Hear how wildlife is affected by the two types of habitat, and why it is important to control the rate of conversion from salt ponds back to the salt marshes. Binoculars and/or a camera are recommended. Register at <http://marshwalk.eventbrite.com> or call 510-792-0222 ext. 363.

Arts and Crafts Nature Festival

Visitor Center, Fremont

1:00 p.m. - 4:00 p.m.

Art and nature goes hand in hand. Explore your creative side and delve into different artistic persuasions, such as origami, animal-themed desserts, and decorating your own tote bag. Crafts not your thing? Peruse artwork from local artists and the winner of the 2017 California Jr. Duck Stamp contest while noshing on small bites provided by the San Francisco Bay Wildlife Society. All are welcome. Schedule will be posted on our website September 16.

National Wildlife Refuge Week! JR Refuge Ranger with Nature Play

Environmental Education Center, Alviso

1:00 p.m. – 2:30 p.m.

Become a Jr. Refuge Ranger to celebrate National Wildlife Refuge Week! Our Jr. Refuge Ranger program is an introduction to the Don Edwards San Francisco Bay National Wildlife Refuge, from its wildlife to its plants. You'll taste pickleweed while you learn about endangered species. Jr. Refuge Rangers will participate in several fun hands-on activities in order to earn their badge at the end of the program. Dress in layers—we'll be going on a nature walk. Best suited for ages 8-11. RESERVATIONS REQUIRED. Go to <https://jrrefugerangeralviso.eventbrite.com>. Questions? Call Hope at 408-262-5513 ext.104.

San Francisco Bay Wildlife Society presents Nature Art Show

Auditorium, Fremont

2:00 p.m. - 4:00 p.m.

The San Francisco Bay Wildlife Society celebrates its 30th year by inviting you to an art show. Browse nature-themed art by local artists while enjoying hors d'oeuvres. This event is free!

Saturday, October 21

Stewardship Saturday

Visitor Center, Fremont

9:30 a.m. - 12:00 p.m.

See September 30 for program description and registration information.

Geology Rocks on the Hills

Visitor Center, Fremont

10:30 a.m. – 12:00 p.m.

See September 16 for program description and registration information.

Saturday, October 28

Webelos Adventure Into the Wild

Visitor Center, Fremont

10:00 a.m. – 12:30 p.m.

Attention Webelos! Earn your naturalist badge in just 2.5 hours. During this hike, learn about birds, flyways, food chains, and the importance of wetlands. Bring your binoculars, or borrow one of ours. Siblings of webelos are welcome to attend. Registration required. Register at <https://donedwardswebelos.eventbrite.com>. Program led by June Smith.

Ohlone in the Marshes: Tools

Environmental Education Center, Alviso

1:00 p.m. – 3:00 p.m.

Do you want to know more about the Native Americans that lived in the Bay Area before us? Come to the refuge to learn about some of the tools the Ohlone might have used. Use Ohlone tools to make your own shell necklace. Best suited for ages 8 and up. Please call 408-262-5513 ext. 102 for reservations, or sign up at <http://ecoholonetools.eventbrite.com>.

Indicators that Fox are in Your Area

Visitor Center, Fremont

2:00 p.m. – 3:30 p.m.

See September 30 for program description and registration information.

November

Saturday, November 4

Stewardship Saturday

Visitor Center, Fremont

9:30 a.m. - 12:00 p.m.

See September 30 for program description and registration information.

Volunteer Orientation - Alviso

Environmental Education Center, Alviso

11:00 a.m. - 12:00 p.m.

See September 2 for program description.

Salt Marsh Walk During King Tides

Visitor Center, Fremont

12:00 p.m. – 1:30 p.m.

Take a walk with docent Gregg Aronson around the wetlands during the King Tides. See examples of salt collection ponds and learn what is being done to convert them back to their original, natural salt marsh state. Hear how wildlife is affected by the two types of habitat, and why it is important to control the rate of conversion from salt ponds back to the salt marshes. Binoculars and/or a camera are recommended. Register at <http://marshwalk.eventbrite.com> or call 510-792-0222 ext. 363.

*Nature Walk for Health

Visitor Center, Fremont

10:30 a.m. – 11:30 a.m.

See September 2 for program description.

Crafts in the Outdoors:

Beginning Leatherwork

Environmental Education Center, Alviso

10:00 a.m. – 12:00 p.m.

Doing crafts outdoors is a wonderful experience. Make and decorate (tool) a small patch for your backpack or clothing made from vegetable tanned leather. Learn how Bay Area residents used the tanoak tree for food and for making leather. This family-friendly program lets you have fun crafting your own leather item. Bring water, snacks, and appropriate clothing. This program runs rain or shine. Led by Steve Stolper, Certified California Naturalist. RESERVATIONS REQUIRED. Go to <https://beginningleatherwork.eventbrite.com>. Questions? Call 408-262-5513 ext.104.

Jr. Refuge Ranger

Visitor Center, Fremont

1:00 p.m. – 2:30 p.m.

Become a honorary Jr. Refuge Ranger by completing activities on the refuge. We will guide you in some of the activities that will help you earn the Refuge Ranger Badge. The rest of the activities can be completed on your own. Those who complete the activities in the booklet for your age group will receive a Jr. Refuge Ranger badge. Register at <http://donedwardsranger.eventbrite.com> or call 510-792-0222 ext. 363. Led by Jackie Warren.

Saturday, November 11

*Pacific Flyway

SF2 Trail, Menlo Park

10:30 a.m. - 12:00 p.m.

See October 7 for program description and registration information.

Saturday, November 18

Paint with a Ranger

Environmental Education Center, Alviso

10:00 a.m. – 11:30 a.m.

See September 30 for program description and registration information.

Webelos Adventure Into the Wild

Visitor Center, Fremont

10:00 a.m. – 12:30 p.m.

See October 28 for program description and registration information.

Geology Rocks on the Hills

Visitor Center, Fremont

10:30 a.m. – 12:00 p.m.

See September 16 for program description and registration information.

Intro to Geo PDF Maps

Visitor Center, Fremont

10:30 a.m. - 12:00 p.m.

What's a Geo PDF map? How do you use it? A Geo PDF map is a map that you download and store on your smart phone. Use the free app called PDFMaps to view and navigate from the stored map in your phone. Use it on hikes or bike rides to log your distance, start time,

and duration, as well as perform other functions. You don't need wi-fi or a data connection once the app is installed. It uses your phone's GPS feature so it works even if you are out of range of mobile phone service. Meet at the Visitor Center to see a slideshow and find out how to obtain a copy of a Geo PDF map of the Don Edwards SF Bay National Wildlife Refuge. A live demonstration will follow. Led by docent Gregg Aronson. Register at <https://geopdf.eventbrite.com>.

*Marshlands of Dreams

Visitor Center, Fremont

1:00 p.m. - 2:00 p.m.

See September 9 for program description and registration information.

*Family Bird Walk

Visitor Center, Fremont

2:00 p.m. – 4:00 p.m.

See September 16 for program description and registration information.

Saturday, November 25

Indicators that Fox are in Your Area

Visitor Center, Fremont

2:00 p.m. – 3:30 p.m.

See September 30 for program description and registration information.

Shark Day!

Join us for a **FREE** event!

Saturday, October 21, 2017

10 a.m. – 3:30 p.m.



Where:

Don Edwards San Francisco Bay
National Wildlife Refuge
Environmental Education Center

Address:

1751 Grand Blvd, San Jose, CA 95002



~ Live Leopard Shark ~ Arts & Crafts ~ Nature Walks ~
Bring a picnic and enjoy the Bay Area's Wetland Wildlife!

Register:

<https://eecsharkday.eventbrite.com>

priority given to those who register early



For questions, call 408-262-5513 and for more information visit www.fws.gov/refuge/don_edwards_san_francisco_bay/

The U.S. Fish and Wildlife Service is committed to providing access to this event for all participants. Please direct all requests for sign language interpreting services, closed captioning, or other accommodation needs to Genie Moore by October 13, 2017 at 408-262-5513 ext. 100, genie.moore@fws.gov. Shark Day is sponsored by:



San Francisco Bay
Wildlife Society



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Santa Clara Valley
Urban Runoff
Pollution Prevention Program



Field Trips to the Refuge

General Education Program Information

We offer FREE field trip programs at two sites at the Don Edwards San Francisco Bay National Wildlife Refuge. Wetland Round-Up field trip programs are offered at our headquarters in Fremont, and Wetland Round-Up and Living Wetlands are offered at the Environmental Education Center in Alviso. These programs actively involve teachers, adult volunteers, and students in investigating the diverse habitats and wildlife at the refuge. The hands-on, small-group activities are designed to teach basic ecological concepts and to introduce endangered species, migratory birds, and wetland habitats to the students. All programs have been correlated to the appropriate State of California Education Standards.

Educators and adult leaders conduct their own field trips after attending a Field Trip Workshop. The workshops allow you to design and conduct your own field trip. In addition, adult volunteers must be recruited to lead the activities at the different learning stations and to chaperone the rotation groups of students. We provide easy to follow scripts for each station, but both leaders and chaperones are strongly encouraged to attend a Field Trip Workshop. **New teachers must attend a Field Trip Workshop.**

Field Trips at the Learning Center in Fremont

Wetland Round-Up Field Trip

Wetland Round-Up field trip programs will not be offered in fall 2017. Details about scheduling a Wetland Round-Up field trip for spring 2018 will be posted on our website on November 15, 2017.

Contact the Environmental Education Staff at Fremont:

Office: 510-792-0222 ext. 475

Cell: 510-377-7269

email: tia_glagolev@fws.gov

Field Trips at the Environmental Education Center in Alviso

Wetland Round-Up Field Trips

Investigate the butterflies in the butterfly garden, taste pickleweed in the salt marsh,

or discover the creatures that live in the slough and salt pond water on a Wetland Round-Up field trip.

This field trip program is designed for up to 65 students in grades K-5. This fall, Wetland Round-Up is offered from mid-October through mid-December 2017.

Mail In Registration

Instructions on how to request field trip dates and registration forms are available on our website at <http://go.usa.gov/xx8pC>.

Registration forms must be received by September 6, 2017. Details about spring 2018 registration will be posted on our website by **Wednesday, November 15, 2017.**

Wetland Round-Up Field Trip Workshops

New teachers who have not yet attended a field trip orientation must attend a training. The workshops are offered from 4:00 p.m. – 6:00 p.m. on weekdays in the fall.

We highly recommend that **returning teachers accompany parent leaders and chaperones** to a workshop prior to your field trip. The workshops are offered from 4:00 p.m. – 6:00 p.m. on weekdays in the fall. The workshop dates will be announced on-line with the field trip registration information (see above). For more information call the Environmental Education Staff at Alviso:

Office: 408-262-5513 ext. 100

Email: genie_moore@fws.gov

Living Wetlands Program

The Living Wetlands program provides a learning environment for students and educators to explore the topics of watershed health, wetlands, and habitat preservation. Activities and presentations focus on the relationship between personal habits and their effects on their local wetlands. Living Wetlands is an environmental education program offered at no cost through the cooperative efforts of the City of San Jose, U.S. Fish & Wildlife Service, and the San Francisco Bay Wildlife Society.

Program Offerings: (See below for information about priority schools)

5th-12th grades: Integrated Field Trip Program

This program incorporates multiple

activities related to wetlands and watershed health. Participating classes will receive one pre-classroom presentation from Living Wetlands educators, a field trip to the Don Edwards Refuge, and one post-classroom presentation, all including hands-on activities and demonstrations. There is a limit of 60 students per field trip, and a 1:10 chaperone to student ratio is required.

5th-12th grades: Classroom Presentations

Presentations include an in-depth look at the habitats of the south bay along with the pathways of indoor and outdoor water use. Students will have a better understanding of the role they play in the health of their watershed and what personal actions they can take to help. The presentation takes approximately one hour. Please contact us for specific classroom presentation needs.

Due to funding restrictions, first priority will be given to Title 1 schools in San Jose. Second priority will be given to schools in Milpitas, Santa Clara, Saratoga, Monte Sereno, Los Gatos, Campbell, and Cupertino.

For more information, or to make a reservation, contact the Living Wetlands Program Coordinator at 408-262-5513 ext. 102 or at colter.cook@sfbws.com.

Programs for Colleges and Universities

Guided field trips are offered at the Environmental Education Center in Alviso. Programs generally last from 1 ½ hour to 2 hours. Reservations must be made at least eight weeks in advance of the desired field trip date. Please contact Colter Cook or Hope Presley at 408-262-5513 ext. 102 and 104, respectively. You may also contact them through email at colter.cook@sfbws.com and hope.presley@sfbws.com.

College instructor led tours are also allowed at the Environmental Education Center in Alviso. All college instructors planning this type of field trip must make a reservation at least eight weeks in advance of the desired field trip date. If your group size is over 25 you will need to acquire a special use permit from our headquarters office in Fremont. Please contact Genie Moore or Hope Presley, at 408-262-5513 ext. 100 and 104, respectively. You may also contact them through email at genie_moore@fws.gov and hope.presley@sfbws.com.

Application for 2017-2018 Blue Goose Bus Funds

The Blue Goose Transportation Fund was started with funding from the U.S. Fish & Wildlife Service's Connecting People with Nature Program. The San Francisco Bay Wildlife Society has provided additional funding for the 2017-2018 school year through a generous grant from the City of San Jose and the California Coastal Conservancy's Explore the Coast program. The program is administered by the U.S. Fish & Wildlife Service and San Francisco Bay Wildlife Society staff.

The fund was created to help Title 1 schools and schools with proven hardships to access the Wetland Round-Up and Living Wetlands Field Trip programs at the Don Edwards San Francisco Bay National Wildlife Refuge Environmental Education Center in Alviso and the Newark Slough Learning Center in Fremont.

Please refer to our website for more information at <https://go.usa.gov/xRVMJ>. You may also contact Genie Moore at 408-262-5513 ext. 100 or at genie_moore@fws.gov.



Traffic Delays on Marshland Rd. in Fremont this Fall

A 0.4-mile stretch of Marshlands Rd. from Thornton Ave. to the first parking lot is undergoing construction beginning September 1, 2017 and is expected to end February 1, 2018. The bridge that crosses over the slough is to be replaced with one that meets earthquake safety standards.

To minimize disturbance to endangered species habitat, a short section of the road will be reduced to one lane with traffic controls. Expect delays when leaving and entering the refuge.

The Harrier Spur Trail and the LaRiviere Marsh Trailhead that connects to Marshlands Rd. will be closed during this time.

Volunteers Needed to Prepare Duck Hunting Blinds

Come help Don Edwards San Francisco Bay National Wildlife Refuge prepare for the upcoming hunt season by volunteering to clean up the hunting site and repair hunt blinds in the Alviso Pond area. The refuge relies on volunteers to maintain the hunt blinds.

When: September 16, 2017

Time: 9:00 a.m. – 12:00 p.m.

Where: Alviso Ponds by Moffett Field in Mountain View

What to Bring: Blinds are in ponds. Bring a flat bottom boat. Boats with a Go devil Motor or Beaver Tail motor highly recommended. Canoes and Kayaks also good.

Go to <http://bit.ly/2vPKUfD> for more information on what to bring, where to meet, and how to register.

TIDELINE

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Editor: Carmen Minch

To receive *Tideline*, email carmen_leong-minch@fws.gov, or write to: *Tideline*, San Francisco Bay National Wildlife Refuge Complex, 1 Marshlands Rd., Fremont, CA 94555

San Francisco Bay National Wildlife Refuge Complex

Administered by the U.S. Fish and Wildlife Service, San Francisco Bay National Wildlife Refuge Complex exists to preserve wildlife habitat, protect threatened and endangered species, protect migratory birds, and provide opportunities for nature study. Seven refuges are managed from the headquarters in Fremont: Antioch Dunes NWR, Don Edwards San Francisco Bay NWR, Ellicott Slough NWR, Farallon NWR, Marin Islands NWR, Salinas River NWR, and San Pablo Bay NWR.

Tideline is On-Line Visit our web sites at

http://www.fws.gov/refuge/antioch_dunes

http://www.fws.gov/refuge/don_edwards_san_francisco_bay

http://www.fws.gov/refuge/ellicott_slough

<http://www.fws.gov/refuge/farallon>

http://www.fws.gov/refuge/marin_islands

http://www.fws.gov/refuge/salinas_river

http://www.fws.gov/refuge/san_pablo_bay



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San Francisco Bay NWR Complex



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DEPARTMENT OF THE INTERIOR

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Fremont, CA 94555

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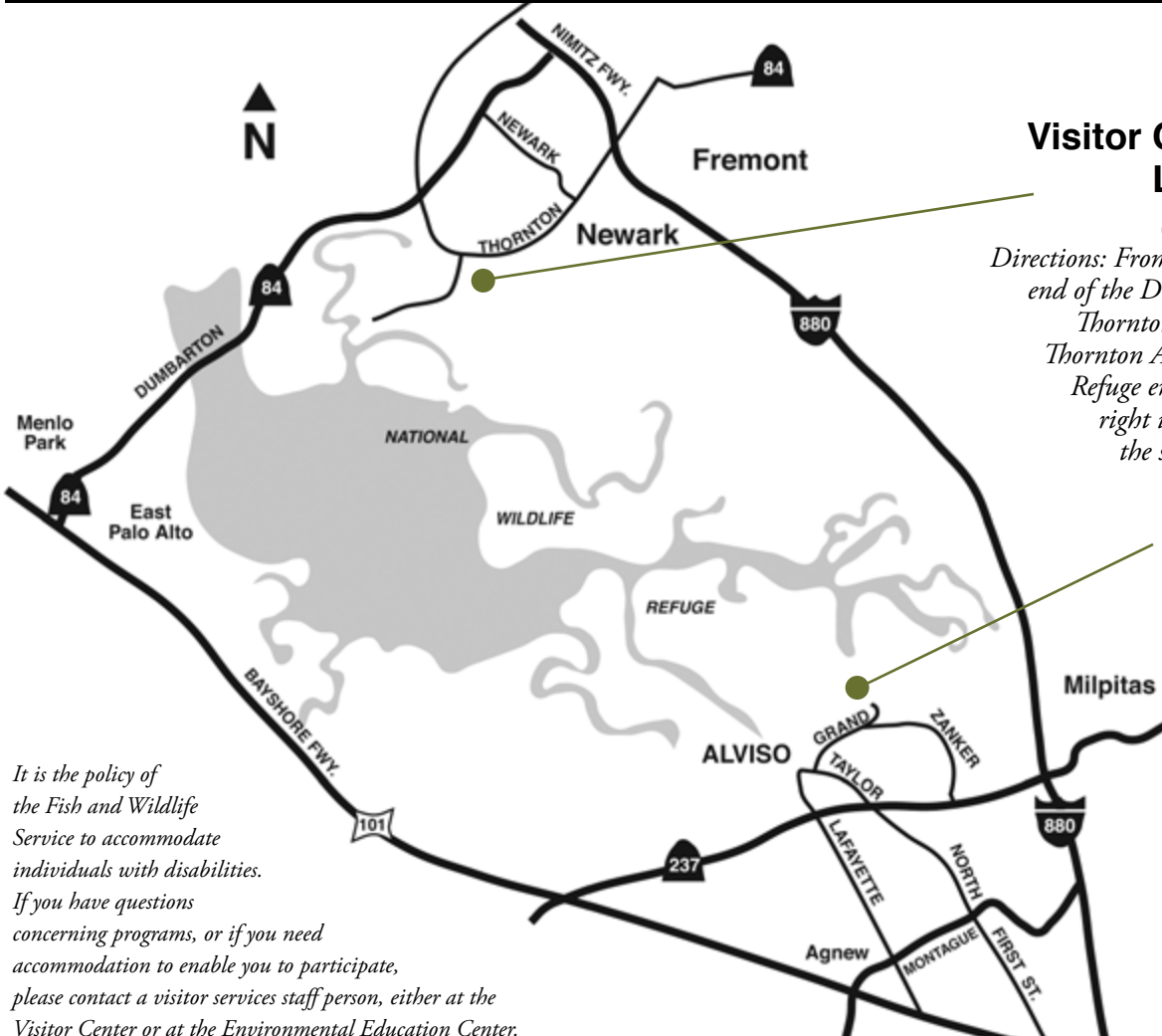
Tideline



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Don Edwards / Antioch Dunes / Ellicott Slough / Farallon Island / Marin Islands / Salinas River / San Pablo Bay



Visitor Center, Fremont Learning Center

(510) 792-0222 ext. 363
Directions: From Highway 84 (at the east end of the Dumbarton Bridge), exit at Thornton Avenue. Travel south on Thornton Avenue for 0.8 miles to the Refuge entrance on the right. Turn right into the Refuge and follow the signs to the Visitor Center.

Environmental Education Center, Alviso

(408) 262-5513
Directions: From I-880 or US-101, exit on CA-237 toward Mountain View/Alviso. Turn north onto Zanker Road. Continue on Zanker Road for 2.1 miles to the Environmental Education Center entrance road (a sharp turn at Grand Blvd.).

It is the policy of the Fish and Wildlife Service to accommodate individuals with disabilities. If you have questions concerning programs, or if you need accommodation to enable you to participate, please contact a visitor services staff person, either at the Visitor Center or at the Environmental Education Center.