

Tideline



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

Wilderness and the Farallones

By Gerry McChesney, Farallon National Wildlife Refuge Manager

Editor's Note: The Wilderness Act celebrates its 50th anniversary on September 3, 2014. Moreover, 2014 also marks the 40th anniversary of Farallon National Wildlife Refuge being designated as wilderness. This is the final story in the series that commemorates these milestones.

In early July on a rocky beach on West End Island, a pregnant female northern fur seal hauls herself out of the cold ocean waters. She's been far at sea for eight months, feeding on a variety of fish and squid, "eating for two." After briefly settling in to a spot of her liking, protected from other marauding males by a large, territorial bull, she'll give birth to her single pup.

West End Island is the largest of several rocks and islets that make up the Farallon Wilderness, part of the Farallon National Wildlife Refuge (Farallon Refuge). It's not

the largest island of the Farallon group; Southeast Farallon Island holds that prize. Although wild in many ways, Southeast Farallon has buildings, motorized cranes that allow safe landing, generators, a photovoltaic system to provide electricity, and hot

showers. You won't find these on West End, or on Sugarloaf, Arch Rock, Saddle Rock or any of the North Farallon Islands. These other islands have been given a designation that makes them extra special. Wilderness. But what does that mean?



Northern fur seals breed only on West End Island, within the Farallon Wilderness. Photo: Adam Brown

Fifty years ago, Congress passed the Wilderness Act of 1964, then signed into law by President Lyndon B. Johnson. This short and simple piece of legislation was as novel and landmark as the creation of our national wildlife refuge, national park, and national forest systems. Years in the making and spearheaded by such conservation icons as Howard Zahniser, Aldo Leopold, and Arthur Carhart, the Wilderness Act created a federal National Wilderness Preservation System with the main purpose of providing "...for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness..."

Realizing that humans were altering the American landscape at a frenetic pace, the

Wilderness Act came about to ascertain that large sections of the nation were set aside to preserve their "primeval character," "...untrammelled by man, where man himself is a visitor who does not remain."

This came with the understanding that humans not only had a desire, but an inherent need for places where the solitude of wilderness provided a reprieve from the confines, conveniences, and hectic pace of civilized life. It also realized that this needed to be done not just for the people of today, but for those of untold generations to come.

Wilderness areas are designated by the U.S. Congress. All such wildernesses are on federal lands managed by the U.S.



continued next page

Fish and Wildlife Service, National Park Service, National Forest Service, or Bureau of Land Management. To date, 110 million acres have been set aside under the National Wilderness Preservation System. Most designated wilderness areas are over 5,000 acres in size. For example, the John Muir Wilderness in California's Sierra Nevadas is nearly 652,000 acres, and the nearby Ansel Adams Wilderness is just over 231,000 acres in size. These large tracts of land allow for extensive primitive outdoor experiences such as remote backpacking, camping and exploring. However, other smaller wildernesses have also been set aside to preserve their unique, wild character. The Farallon Wilderness, at only 141 acres, is among the smallest. But this says nothing about the Farallones wild and rugged beauty, remoteness, or bountiful wildlife. On these islands, the hand of man is essentially invisible.

Nationally, wilderness areas are designated and managed to preserve the qualities of five basic wilderness characters: untrammeled by man; undeveloped; natural; containing outstanding opportunities for solitude or primitive and unconfined recreation; and any unique attributes or other features. Although the Farallon ecosystem has been dramatically altered by humankind over the last two centuries, the Farallon Wilderness looks as primitive today as when Sir Francis Drake's crew landed there in 1579 to re-stock their ship's food supplies with marine mammal meat and seabirds.

With rugged wave-washed shores, rocky slopes covered in nesting seabirds, natural archways cut into cliffs, and the omnipresent cacophony of barking California sea lions, screaming western gulls, and calling common murrens, these islands are almost inaccessible. To circumnavigate the Farallones in a boat gives a feeling of visiting a remote island archipelago far, far away from civilized life. There, the word primeval certainly comes to mind. Yet, the Golden Gate and metropolis beyond lie a mere 30 miles distant.

The Farallon National Wildlife Refuge was established in 1909 by President Theodore Roosevelt as "a preserve for native birds." Then, only the smaller North and Middle Farallon Islands, along with the mostly wave-washed Noonday Rock, were included.

The larger South Farallon Islands were kept as a U.S. Coast Guard Light Station and, between World Wars I and II, a naval base and weather station. With the automa-

tion of the lighthouse, the South Farallones were finally added to the refuge in 1969. By then, the islands' wildlife had been drastically reduced from a century and a half of human occupation and exploitation. With the primary goal of protecting and restoring the islands' sensitive wildlife populations, the Farallon Refuge has always been closed to the public.

Designated in 1974, 10 years after the creation of the Wilderness Act, the Farallon Wilderness is managed much the same as the Farallon Refuge as a whole. But there are differences. While Southeast Farallon hosts a permanent biological field station run out of former U.S. Coast Guard buildings, visits to the Farallon Wilderness are strictly limited. Most biological monitoring is done from distant vantage points on Southeast Farallon. West End Island is visited a mere dozen or so times per year, and only then to collect valuable and otherwise unobtainable

nipeds (seals and sea lions), were completely extirpated for their thick and soft furs. Massive northern elephant seals were killed for their blubber, used to make oil, until they were feared to be completely extinct. The California Gold Rush brought a new venture, the harvesting of Common Murre eggs, to feed the rapidly growing multitudes in nearby San Francisco. This harvest went on for nearly half a century, and its impacts on bird populations for long after. Today, remnants of the eggers can still be found on some of the islands.

Other remnants of human presence have also been left behind. House mice, a species native to Eurasia, were introduced by some former visitors to the islands, probably in the 19th century. As on thousands of other islands worldwide, these invasive rodents cause large-scale ecosystem changes, both known and unknown. Non-native plants such as New Zealand spinach, in-



At only 141 acres, the Farallon Wilderness is mainly comprised of small islands and islets.

Photo: Jesse Irwin

information on the island's breeding northern elephant seals and northern fur seals. No access is permitted during the spring and early summer so as not to disturb nesting seabirds. The other islands are almost never visited; and then, it has only been to conduct censuses of natural resources that cannot be done any other way.

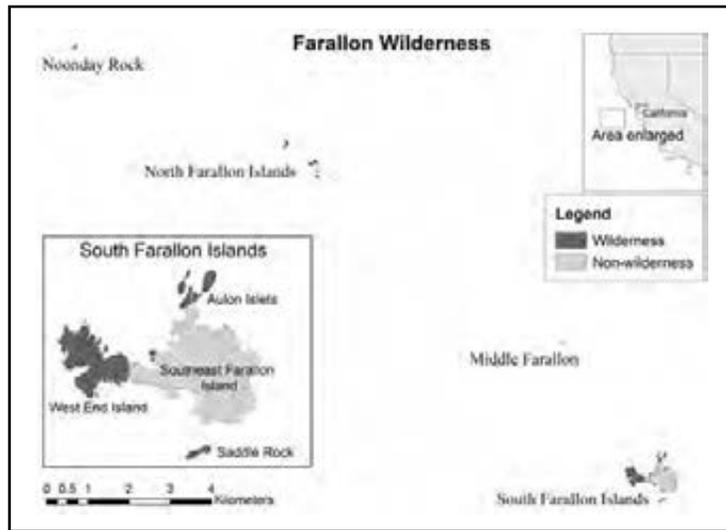
While the Farallon Wilderness looks untouched by humans, it is not entirely so. In the early 19th century, both American and Russian entrepreneurs dropped off crews to hunt the abundant marine mammal life, decimating populations. Fur seals, thought to be most numerous of the islands' pin-

truded by former lighthouse keepers and other residents, have invaded portions of the Farallon Wilderness. These introduced species have an impact on the natural character of the Farallon Wilderness.

Today, the impacts of human-induced rapid climate change are also altering the Farallon Wilderness landscape. Until a short time ago, both Southeast Farallon and West End islands hosted several small beaches packed with sand. These beaches were favored by the islands' elephant seals, which used those areas for hauling up and giving birth to their pups. The so-called Shell Beach, on West End Island, once hosted

the islands' largest rookery of elephant seals. But accelerated coastal erosion, driven by huge storm surges, has all but eliminated these sandy places. Without the sand slope entrance from the sea, elephant seals now have difficulty pulling themselves up on the steep rocky shorelines. After dramatic increases following their return in the early 1970s, the Farallon elephant seal population is now declining. In 2014, only one pup was born on Shell Beach.

The Wilderness Act does provide exceptions to wilderness use for management in order to preserve or restore wilderness character. But these exceptions are only permitted after thorough analysis of alternatives, and must use the "minimum necessary" tools to accomplish the task. These exceptions have been used in other wilderness areas nationwide to restore watersheds, meadows, sensitive species, and other wilderness qualities. As we move forward with managing the Farallon Wilderness, we will have decisions to make about whether and how we might better restore its natural



or other wilderness qualities.

The Farallon Islands hold the largest nesting colony of seabirds in the contiguous U.S., with over 300,000 breeding birds of 13 species. Thousands of pinnipeds of five species also haul up on the islands to rest and give birth to their pups. Many of these animals occur in the Farallon Wilderness. In the spring and summer, the four large islets of the North Farallones are nearly covered with over 100,000 nesting common murrelets, the most numerous Farallon seabird. Tufted

puffins, at their southern-most breeding outpost, seem to prefer the rock crevices of the wilderness for nesting. Most of the Farallon population of Steller sea lions is found along the shores of the wilderness. And the entire Farallon rookery of northern fur seals, once decimated and now returned, breed in one small area of West End Island. Why they have chosen that spot, we do not know. Perhaps it's because it is untrammelled, undeveloped, and natural. It is...wild.

For more information about wilderness and wilderness areas, visit www.wilderness.net.

Gerry McChesney has been the Farallon National Wildlife Refuge Manager since 2010. Since 2002, he has also managed the Refuge Complex's Common Murre Restoration Project. Gerry has a BA in Biology from U.C. Santa Cruz and an MS in Biological Sciences from Sacramento State University. Before joining the Service in 2002, Gerry worked for 12 years as a Seabird Biologist with Humboldt State University.

Join the Conservation and Get "Climate-Smart"

Consensus among the world's major scientific organizations is that our climate is changing, and these changes are affecting our shorelines and how we manage habitat for wildlife and people. In response, we, along with San Francisco Bay's communities, organizations and agencies are actively engaged in planning and piloting projects to address the impacts of sea level rise and more extreme weather.

An important component of these projects is the use of "climate-smart" strategies, also known as nature-based solutions or green infrastructure. Climate-smart strategies address climate change impacts and other threats by relying on natural processes whenever possible to reduce greenhouse gas emissions, enhance ecosystem services, and improve the ability of wildlife and people to adapt to a rapidly changing climate. Examples include restoring wetlands to support flood-risk management, fortifying shorelines using living resources such as eelgrass and oyster beds to protect against erosion, and protecting upland habitats to provide space for marshes and wildlife to migrate inland as sea level rises.

Here at the Refuge Complex, we are incorporating climate-smart strategies into our various tidal marsh restoration efforts, from the South Bay Salt Pond Restoration Project on Don Edwards San Francisco Bay NWR to San Pablo Bay NWR's Cullinan Ranch and Sonoma Creek. Our collective concern about the need to adapt to climate change was a driving force behind the US Fish and Wildlife Service's recently released Tidal Marsh Recovery Plan and the State Coastal Conservancy's forthcoming Baylands Ecosystem Habitat Goals Update. We are also active participants in the Bay Area Ecosystem Climate Change Consortium (BAECCC), founded in 2009 to bring together natural resource managers, scientists, and others to collaboratively understand and reduce the negative impacts of climate change on Bay Area ecosystems and communities.

As an agency or an individual, we all have opportunities to learn more and work towards a solution to climate change in or-



der to protect our wildlife and their habitats for both present and future generations. BAECCC has regular quarterly meetings and special workshops focused on the topic of adapting to climate change that are open to the general public (www.baeccc.org). You can also learn more about similar initiatives in your own community by reading the Bay Area Joint Policy Committee's (JPC) Bay Area Climate and Energy Resilience Project's report that provides a snapshot of each of the Bay Area's nine counties' efforts to address climate change and links to various regional level climate-related efforts (www.abag.ca.gov/jointpolicy/projects.html#climate).

National Wildlife Refuge Week is October 12-18!

Look for special events at your local national wildlife refuge to celebrate the largest network of lands devoted to wildlife and conservation. There's at least one in every state. In the meantime, here's some trivia about the refuges in the San Francisco Bay National Wildlife Refuge Complex.

By the numbers

7

National Wildlife Refuges are in the San Francisco Bay National Wildlife Refuge System Complex.

2

percent of San Pablo Bay NWR lands were purchased using money generated by the sale of Federal Duck Stamps.

11

adult burrowing owls were surveyed at the Warm Springs Unit on the Don Edwards San Francisco Bay NWR in June 2014.



40

years ago the north Farallon Islands and West End Island were designated as Wilderness by US Congress.

40,000

cubic yards of sand dredged from the San Joaquin River as part of the Port of Stockton's annual river maintenance program were deposited on Antioch Dunes NWR to create sand dune habitat. More is needed.

1992

is the year Marin Islands NWR was established.

14

Santa Cruz long-toed salamander larvae were discovered in newly constructed Prospect Pond at Ellicott Slough NWR.

4

federally-listed threatened and endangered species are known to occur on Salinas River NWR.



Endangered Robust Spineflower.

Photo by Christopher Caris

Left: Burrowing Owl. Photo by Tom Bennett

National Wildlife Refuge Week October 11-18

Annual Sale of Native Plants

Saturday, October 18, 2014

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



Help save water use by landscaping your yard with California native plants and attract hummingbirds and butterflies to your neighborhood. Sale will be held at the Visitor Center located at the first parking lot to your right.

Don Edwards San Francisco Bay National Wildlife Refuge
2 Marshlands Rd, Fremont, CA

For more information, call Carmen Minch at 510-792-0222 ext. 476.

Celebrate National Wildlife Refuge Week October 11-18

At Don Edwards San Francisco Bay National Wildlife Refuge

1 Marshlands Rd · Fremont, CA · 510/792-0222 ext. 476

Science Day

Saturday, October 18, 2014

7:00 a.m. - 5:00 p.m.

Discover what wildlife species lay on the refuge's land, water, and air with experts, or discover them on your own. Join us for a day of exploration as we view creatures up close. Check our activity schedule for information on some of the programs listed below. Beginning October 1, a complete schedule will be posted on our by website at http://www.fws.gov/refuge/don_edwards_san_francisco_bay.

- Bird Banding
- Mammal Trapping
- Bird Walks
- Plant Walks
- Twilight Marsh Walk
- Macroinvertebrate Sampling
- Plankton Sampling
- Microbe Sampling
- Workshop on Citizen Science Apps
- Insect Exploration



For more information, contact Carmen Minch at 510/792-0222 ext. 476.

Sponsored by the US Fish and Wildlife Service and San Francisco Bay Wildlife Society.

Contributing Partners: Ohlone Audubon Society,
and US Department of Agriculture and US Geological Survey



Spooky Slough



Free Event

Crafts, Costumes, Live Animals, and much more!

Saturday, October 25th

6:00 PM - 8:30 PM

Grab a flashlight and head to the

Don Edwards San Francisco Bay National Wildlife Refuge
for this FREE special event celebrating our nocturnal neighbors!

1751 Grand Boulevard, Alviso

For more information and directions visit
www.fws.gov/refuge/don_edwards_san_francisco_bay or call (408)262-5513

Spooky Slough is Sponsored by the City of San Jose, Santa Clara Valley Urban Runoff Pollution Prevention Program, San Francisco Bay Wildlife Society, and U.S. Fish and Wildlife Service

Scout and Youth Group Programs

The Don Edwards San Francisco Bay National Wildlife Refuge offers free, hands-on programs for youths. During the programs participants learn about endangered species, migratory birds, wetland habitats, and the relationship between personal habits and their effects on the San Francisco Bay. These programs are designed to meet badge/patch requirements of Scout Groups, but anyone can participate. Because of the popularity of such programs, reservations are required. Children under the age of 16 must be accompanied by an adult. Badges are not provided.

Below is the list of programs we offer. Programs at the Environmental Education Center are sponsored by the Santa Clara Valley Urban Runoff Pollution Prevention Program and the San Francisco Bay Wildlife Society.

Youth Group Programs at the Environmental Education Center in Alviso

Please call Julie to make a reservation and customize your visit 408-262-5513 ext. 104. (Note: badges are not provided)

Webelos Naturalist Badge

Anyone out there need to earn a Naturalist badge? We've got the program that's right for Webelos! Learn about birds, migration, flyways, food chains, human impact, and the importance of wetlands. Then take a walk and use our binoculars to spot birds in the wild.

Daisies Journeys

Journeys: 5 flowers, 4 stories, 3 cheers for animals (Sessions 1-6) Between earth and sky (Sessions 1-5)

Brownies Journeys and Badges

Journeys: WOW! Watching our Water: Life can't exist without water, neither can rainbows! Water does so much for you. Can you return the favor? On this journey you will take action by discovering how to love water, save water, and share water. Badges: (from WOW badge activity set): Household Elf: make a natural cleaner, water log on ways to save water, trash clean up, discover natural filters. Hiker: go over trail map, leave no trace, detective hike with birds.

Juniors Journeys and Badges

Journeys: Get Moving!: Are you prepared to use your energy to save the planet? On this Journey, you'll find out how to reduce your energy use, make buildings energy efficient, and create a plan to fix an energy problem in your community. Badges (from Get Moving badge activity set): Gardner: outdoor garden, native plant garden design, seasonal plants, seeds and soil, plant own native plant to take home. Badges (from aMUSE badge activity set): Animal Habitats: puppet show, explore five different habitats,

make bird house, learn about endangered wetlands and animals, help clean up.

Cadet Journeys

Breath (Sessions 1 & 3)

Youth Group Programs at the Refuge Headquarters in Fremont

The Refuge Headquarters offer Webelos programs for up to 15 Webelos. **Webelos Naturalist Program**

Sunday, October 5

Saturday, November 15

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. To register, call 510-792-0222 ext. 362 or at <https://donedwardswebelos.eventbrite.com>. Program is led by June Smith.



Visions of the Wild Festival
A Festival Connecting Nature, Culture & Community

September 03-06, 2014
Downtown Vallejo, California

PARTNERS:
Bureau of Land Management
Californians for Western Wilderness
City of Vallejo
Sierra Club
Solano Land Trust
The Student Conservation Association
Tuleymore
USDA Forest Service
U.S. Fish and Wildlife Service
Vallejo Community Arts Foundation
Vallejo Watershed Alliance



Visit us, online at: visionsofthewild.org
Or on Facebook at: <https://www.facebook.com/VisionsoftheWild>



Don Edwards San Francisco Bay National Wildlife Refuge

Coastal Cleanup Day



Dumbarton Fishing Pier Parking Lot • Marshlands Rd, Fremont
Saturday, September 20, 2014 • 9:00 a.m. – 12:00 p.m.

Do you want to help wildlife and the environment? Join the thousands of people around the world for International Coastal Cleanup Day. At Don Edwards SF Bay NWR you can remove invasive weeds or pick up trash along the parking lot and trails.

We'll supply plastic gloves (or bring your own) and trash and recycling bags. You supply energy, sturdy shoes, sun protection, and clothes you don't mind getting dirty. Bring a reusable water bottle. Volunteers can choose to be shuttled to areas along the Shoreline Trail to reach areas farther away. For more information, call 510-792-0222, ext. 362 for the Visitor Services Intern or Paul Mueller at ext. 361. No reservations necessary.

Children under age 18 must have parental approval. Children under the age of 16 must be accompanied by an adult. To expedite the registration process, log on to http://www.fws.gov/refuge/don_edwards_san_francisco_bay to download the forms and bring to the registration table. Forms are also available at the registration table.

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, 2014 and June 30, 2014. These gifts will be used for publishing *Tideline*, capital, environmental education, habitat restoration, and interpretive programs at the Don Edwards San Francisco Bay National Wildlife Refuge.

Employer Matching Gift Program

United Airlines
Paypal (roundcube)

Leader

Andrea Silva

Sponsor

Helen E Conway, Tim & Cecilia Craig, and Robert Half

Participant

Andrew J Blasband, Kim Brink, Norborn M Felton, Ronald G Franck, Dave Hattorimanabe, Susan A Klein, Robert & Harriet Jakovina, Martha A Johnson, Gloria Laird, Jens Steineke, Gerald Watanabe, and Carol Wolf

Supporter

Sherlyn Brubaker, Charlotte S Epstein, and James C Lyang

Family

Darlene Ceremelo, Steve Ferguson, Craig & Barbara L Heckman, Jan Z Hintermeister, John B & Laura Jamieson, Mary T Light, Karen McCreddin, Margaret Panton, David R Thompson, and Kathleen Yoshikawa

Individual

Richard Beidleman, Jeffrey M Dickemann, William Donnelly, Marlene S Grunow, Blanca L Haendler, Karen Jang, Locke C Jorgensen, Richard P Santos, Georg Suchland, and Beverly Watros

Senior/Student

Harriette Atkins, Patricia Callaway, Crystal Collins, Ken Crowley, William H Kappler, Patricia Kishi, Donald G McKinstry, May Manabe, Miranda L Miller, Pamela Rapp, Kammy Rose, and Hoag Schmele



Help Us Help the Refuge

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

For a gift membership, call 510-745-8170.

San Francisco Bay Wildlife Society is a not-for-profit 501(c)(3) organization which 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 with my membership.
My dues include a subscription to *Tideline*. Enclosed is my contribution of:

- \$20 Student/Senior \$50 Family \$100 Participant \$200 Corporation \$500 Sustainer
 \$35 Individual \$75 Supporter \$250 Sponsor \$1,000 Leader

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

Signature _____

Name _____

Address _____ City _____ State _____ Zip _____

Phone _____ *Thank you for your support!*

San Francisco Bay Wildlife Society Seeks Donations for Yellow School Bus Transportation Fund

By James Bernard

The San Francisco Bay Wildlife Society (Society) is seeking donations to make the Yellow School Bus Transportation Fund permanent and sustainable. The Fund pays for buses that enable school field trips to visit the Don Edwards San Francisco Bay National Wildlife Refuge as a learning laboratory.

For the last two years, the Fund has enabled school groups to participate in the Wetland Round-up Field Trip (grades K-6) and Living Wetlands (grades 5 – 12) programs at the refuge. These programs

transportation costs, provided \$4,000 for a second year. The program goal is to provide underserved local Title 1 schools access to meaningful programs held at the refuge's Environmental Education Center in Alviso and the Newark Slough Learning Center in Fremont.

Students from four schools totaling 240 children participated in the pilot year and funding for seven more visits from schools in Castro Valley, Half Moon Bay, Newark, San Jose, and Union City has been committed for this year. Several of the schools would not have been able to visit the

“Thank you so much for teaching us about wildlife and water. I learned a lot more than I knew before. I can't wait for my little sister to come on this field trip. We had fun learning.”

–Eliana, Los Gatos Christian School



actively involve teachers, adult volunteers, and students in investigating the diverse habitats and wildlife of the refuge. 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. The programs are relevant to the appropriate State of California Education Standards.

The Fund was initially financed as a pilot program by grants of \$1,500 each from the Connecting People with Nature Regional Funding Initiative of the U.S. Fish and Wildlife Service and \$4,000 from the Society. The Society was inspired by the success of the pilot program and, seeing the value of maintaining a permanent fund to assist underserved schools with

refuge without the Fund's support.

Making the Fund permanent allows teachers to plan visits and coordinate their curricula with the programs at the refuge. The experience of first two years using the Fund showed that the real cost of chartering a bus and driver to safely transport students to the refuge was just over \$700 per trip. The environmental education staff of the Society and the refuge can accommodate 20 Yellow School Bus funded visits annually and still maintain a high quality experience for the students.

Although donations of any amount will be welcomed and valued, the Society is seeking donations in multiples of \$700 from neighboring corporations, Society members, and the community of interest in the

refuge: \$14,000 will fund a year of visits; \$7,000 will fund visits for half of a school year; \$700 will enable a school visit that will change lives and open doors. Making a commitment to funding multiple years of support will help engage this generation's young students to appreciate wildlife and their habitats. Providing support for educational opportunity in the present will enrich lives in the future.

Please send your generous donation to the San Francisco Bay Wildlife Society, Attention: YSBTF, P.O. Box 234, Newark, California 94560. Donations will be recognized not only in *Tideline*, but also in local media and by the schools the Fund benefits.

Environmental Education Intern Wanted

The **Living Wetlands Program** is offering a four to nine month environmental education internship. Applicant must be available two weekdays for a total of 16 hours per week. Please email a resume and cover letter to livingwetlands@sfbws.com. Position is open until filled.

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 6

*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.

Team Citizen Scientists! – Community Service

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

Become a citizen scientist! Are you interested in plants and want to learn about native plant monitoring and bird monitoring at the EEC? We'll go out in the field and learn firsthand the effects of restoration and climate change in the lifecycle of plants and animals. Ages 9 and up. RESERVATIONS REQUIRED. Go to <http://eecs.eventbrite.com> Questions? Call Julie: 408-262-5513 ext.104.

Sunday September 7

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 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 ages and abilities welcome. Reservations are required. Rain cancels. Go to <https://donedwardsyoga1.eventbrite.com> or call 510-792-0222 ext. 362. Led by Carmen Minch.

Nature Drawing for Families and Adults

Environmental Education Center, Alviso
11:00 a.m. – 12:30 p.m.

Increase your confidence in drawing while exploring natural objects from the refuge and beyond. We will carefully observe all manner of cool objects and learn skills to translate these observations into realistic

drawings. Appropriate for ages 8 to adult. Children, please bring an adult with you who would like to participate. Adults without children are welcome. Bring a sketch pad and pencil or use ours. All skill levels welcome. Led by Kathy Kleinstreiber. RESERVATIONS REQUIRED. Go to <http://eecnd.eventbrite.com> Questions? Call Julie: 408-262-5513 ext.104.

Saturday, September 13

Drawbridge Van Excursion

Environmental Education Center, Alviso
9:30 a.m. – 12:00 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 scrambling out a living? How long did it exist? Find out at this program led by Ceal Craig. 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 <http://eecdraw.eventbrite.com> (Note: we do not visit the town itself – we go to the closest spot that one can legally view Drawbridge.) Questions? Call Julie: 408-262-5513 ext.104.

Going Green - Restoration of the South Bay Salt Ponds

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

Join an interpretive walk to photograph the wildlife and wetlands in the South Bay Salt Pond Restoration Project. Learn and be part of history of the wetlands restoration. Knowing the area will both increase your appreciation for the baylands and the ability to see them in whole new way. Discover plants and animals in its habitat and the best time to see them. Digital or film welcome. Led by Joseph Garcia. Call 510-792-0222 ext. 141 for more information.

*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://donedwardsfamilybird1.eventbrite.com> or call 510-792-0222 ext. 362.

Sunday, September 14

Insect Exploration

Environmental Education Center, Alviso
11:00 a.m. – 12:30 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. Open to all ages, but best suited for ages 5 and up. Register at <http://eecinsectexploration.eventbrite.com>.

*Living Wetlands Walking Tour

Environmental Education Center, Alviso
2:00 p.m. – 3:30 p.m.

Our refuge consists of salt marshes, salt ponds, tidal and

non-tidal sloughs. How do humans and wildlife depend on our wetlands? Come enjoy a slideshow depicting the life and death struggles of our marsh inhabitants, followed by a 0.5 mile walk through the wetlands. Open to all ages but best suited for ages 7 and up. Register at <http://eecwetlandswalkingtour.eventbrite.com>.

Story Hunters

Visitor Center, Fremont
2:00 p.m. - 3:30 p.m.

Discover what stories lie hidden on the Don Edwards Refuge in this series by Art Garibaldi. After a brief introduction on how to use our GPS units, we'll give you a new set of coordinates that will lead you to the landmarks that embody the rich human history that helped shaped refuge lands. GPS units are available for loan. Register at <http://donedwardsstory1.eventbrite.com>

Saturday, September 20

Coastal Cleanup –Fremont

Meet at the Dumbarton Fishing Pier, Fremont
9:00 a.m. – 12:00 p.m.

Join thousands of people around the world for International Coastal Clean-Up Day. Bring a hat, sturdy shoes, water, sunscreen, and gloves and a refillable water bottle if you have them. Children under 18 must have parental approval. Speed up the registration process by downloading and completing the Volunteer Agreement Form at http://www.fws.gov/refuge/don_edwards_san_francisco_bay and bring it to the event. For more information, call Paul Mueller at 510-792-0222 ext. 361.

California Coastal Cleanup Day – Alviso

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

Come help out as we join others around the world in an effort to keep our coastal areas clean! Together with other courageous Californians, we'll pick up trash and tidy up the wetland areas near the refuge. Come with a hat, sunscreen, a great attitude, and we'll provide the rest! RESERVATIONS REQUIRED. Go to <http://ecccleanup.eventbrite.com> Questions? Call Julie: 408-262-5513 ext.104.

*A Walk Around the Alviso Ponds

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

Help celebrate the first days of fall with a morning hike on the Mallard Slough Trail. All levels of hiking ability are welcome and you can turn back at any time. In case you have any questions hike leaders will be versed in the plants, animals and history of the refuge. Best suited for ages 8 and up. RESERVATIONS REQUIRED. Go to <http://eecwalk.eventbrite.com> Questions? Call Julie: 408-262-5513 ext.104.

Sunday, September 21

Return of Shorebirds to Restored Salt Pond in South SF Bay

Ravenswood Unit (SF2), Menlo Park
11:00 a.m. – 1:00 p.m.

Come greet the shorebirds as they return by the thousands to San Francisco Bay every autumn. Docent Jane Moss will lead you on a 1.5.-mile round trip hike and discuss the South Bay Salt Pond Restoration Project, now in its sixth year. Trail is easy and level. All ages and abilities welcome. For more driving directions and information call 510 792-0222 ext 141.

Saturday, September 27

Fossils and Flumes

Environmental Education Center, Alviso

11:00 a.m. – 12:30 p.m.

Fossils and flumes are used to teach children about the South Bay Salt Pond Restoration Project. Park Ranger Jose Garcia brings fossils from Triassic wetlands he collected in eastern Montana to show the similarities to today's wetlands, and to explain their function in nature. Interactive flumes allow for a hands-on experience of how wetlands protect the surrounding area from flooding. Children must be accompanied by an adult. Call 510-792-0222 ext. 141 for reservations.

Alviso Slough Cleanup

Alviso Marina through the Alviso Slough

12:30 p.m. – 4:00 p.m.

Love to kayak? Love to clean up the environment? Why not combine the two and partner with Slough Keepers as they clean up Alviso Slough. Bring a kayak out to the upper lot's launch ramp at the Alviso Marina and be prepared to paddle through the slough and some reeds to clean up our neighborhood waters. Due to the reeds, this is recommended for those who have some kayaking experience. Slough Keepers will provide garbage bags and even some garbage barges. To sign up, contact Eric Norris at sloughkeepers@gmail.com and visit www.sloughkeepers.org for more information. Space is limited to 25 kayakers.

World of Butterflies

Environmental Education Center, Alviso

1:30 p.m. – 3:00 p.m.

There are numerous types of flies including BUTTERFLIES. Join us for a lively discussion about butterfly lifecycles, mating and eating habits. Learn the difference between butterflies, moths and skippers. Then take a leisurely walk through our butterfly garden to observe these amazing creatures. Open to all ages. RESERVATIONS REQUIRED. Go to <http://eecbutter.eventbrite.com> Questions? Call Julie at 408-262-5513 ext.104.

5 Tools You Can Use to Find the Elusive Gray Fox

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.

Twilight Marsh Walk

Visitor Center, Fremont

6:30 p.m. – 8:00 p.m.

Experience the salt marsh at twilight on an easy stroll along Tidelands (1.3 mile) Trail. At the setting of the sun we will observe the beginning of nature's night shift. Come discover the sights, sounds, and smells of the refuge as night descends. Not suitable for young children. RESERVATIONS REQUIRED. Go to <https://donedwardstwilight1.eventbrite.com> or call 510-792-0222 ext 362. Led by Mary and Gene Bobik.

October

Saturday, October 4

Team Citizen Scientists! – Community Service

Environmental Education Center, Alviso

10:00 a.m. – 12:00 p.m.

Become a citizen scientist! Are you interested in plants and want to learn about native plant monitoring and bird monitoring at the EEC? We'll go out in the field and learn firsthand the effects of restoration and climate change in the lifecycle of plants and animals. Ages 9 and up. RESERVATIONS REQUIRED. Go to <http://eeccs2.eventbrite.com>. Questions? Julie: 408-262-5513 ext.104.

***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.

A Trip Back in Time

Visitor Center, Fremont

10:30 a.m. – 12:00 p.m.

Revive the vanishing knowledge of the history of the Don Edwards San Francisco Bay National Wildlife Refuge grounds by strolling the trails with docent Ray Studer. Using a collection of old photographs, the last vestiges of a way of life such as salt production, the old railroads, and homes can be traced back to the 1850s that led to the construction of the town of Newark in 1876.

Bird Migration Walk

Ravenswood Unit (SF2), Menlo Park

1:00 p.m. - 3:00 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 the 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. For information and directions, call 510 792-0222 ext. 141.

***Marshlands of Dreams**

Visitor Center, Fremont

1:30 p.m. - 2:30 p.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, October 11

Community Service

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 community service 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.

Celebrate National Wildlife Refuge Week!

Environmental Education Center, Alviso

2:00 p.m. – 3:00 p.m.

The nation's 561 national wildlife refuges protect wildlife habitat while cleaning our air, filtering our water and pollinating our crops. They also provide world-class hunting and fishing and hiking. Come with us on a walking tour as we explore the 1st urban national wildlife refuge and learn about the unique habitats that are in your very own backyard. RESERVATIONS REQUIRED. Go to <http://nwrw.eventbrite.com> Questions? Call Julie: 408-262-5513 ext.104.

NATIONAL WILDLIFE REFUGE WEEK IS OCTOBER 12-18!

Below are some of the programs scheduled for National Wildlife Refuge Week. For a complete schedule, go to our website at http://www.fws.gov/refuge/don_edwards_san_francisco_bay October 1.

Saturday, October 18

Bird Banding Demonstration

Visitor Center, Fremont

7:00 a.m. – 9:00 a.m.

Start your day early with Biologist Cheryl Strong as we survey neotropical migrants by using mist nets. Why do we band birds and what valuable information can be gained from it? Learn the proper way to handle songbirds as Cheryl explains. Space is limited. Register at <http://donedwardsbb.eventbrite.com>.

Mammal Trapping

Visitor Center, Fremont

9:00 a.m. – 10:00 a.m.

What mammals roam the refuge at night while the rest of us are sleeping? Traps set by US Department of Agriculture biologists may yield some interesting finds. Meet the biologists, discover tools of the trade, and learn why the mammals are trapped. And, you may see a wild mammal up close.

Microbe Sampling: Life at the Bottom of the Food Chain

Visitor Center, Fremont

10:00 a.m. – 12:00 p.m.

Wetlands microbes are often called "the lungs of the earth." Explore the dynamics of microbial communities in LaRiviere Marsh ponds. Join microbiologist Wayne Lanier, PhD for a brief presentation; then a microscope hike to LaRiviere Marsh where we will sample and view the most ancient creatures on earth. See how they produce the oxygen we breathe and take up the carbon dioxide we produce. Discover how tides shape these vital communities. Easy short hiking level. Ages 9-90 years. Register at <http://donedwardsbacteria.eventbrite.com> or call 510-792-0222 ext. 362.

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.

Saturday, October 18 cont.

Native Plant Sale

Visitor Center, Fremont

10:00 a.m. – 2:00 p.m.

Native plants are drought-tolerant and in some cases, require only the rain water it receives. Now is the time to replace the lawn, or just to beautify your garden. Ideal for native pollinators and wildlife, browse through our native plant collection and take one home today!

*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. Register at <https://donedwardsfamilybird.eventbrite.com> or call 510-792-0222 ext. 362.

Twilight Marsh Walk

Visitor Center, Fremont

5:30 p.m. – 7:00 p.m.

Experience the salt marsh at twilight on an easy stroll along Tidelands (1.3 miles) Trail. At the setting of the sun we will observe the beginning of nature's night shift. Come discover the sights, sounds, and smells of the refuge as night descends. Not suitable for young children. RESERVATIONS REQUIRED. Go to <https://donedwardstwilight2.eventbrite.com> or call 510-792-0222 ext. 362. Led by Mary and Gene Bobik.

Sunday, October 19

Shorebirds Return

Ravenswood Unit (SF2), Menlo Park

11:00 a.m. – 1:00 p.m.

Three years ago we opened the flood gates to restore a former salt pond to tidal action. Learn what has happened over the past three years as we welcome the return of the shorebirds. Docent Jane Moss will lead you on a 1.5 mile round-trip walk along this interpretive trail. Trail is easy and level. All ages and abilities welcome. For more information and reservations call 510 792-0222 ext. 141.

*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. Go to <https://donedwardsmarsh1.eventbrite.com> or call 510-792-0222 ext. 362.

* Tiny Drifters

Environmental Education Center, Alviso

1:30 p.m. – 2:30 p.m.

There's plankton in our Bay! Learn about the different characteristics of plankton and how they have adapted to survive. We will become planktologists for a day, collect water samples and identify these incredible organisms under a microscope! All ages are welcome. Register at <http://eectinydrifters.eventbrite.com>.

Saturday, October 25

5 Tools You Can Use to Find the

Elusive Gray Fox

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.

Spooky Slough!

Environmental Education Center, Alviso

6:00 p.m. – 8:30 p.m.

What types of creatures lurk about and fly around at night at the refuge? Find out at Spooky Slough! Kids are encouraged to come in costume. Learn about nocturnal wildlife and what they can do to help. Enjoy hands-on activities, live animals, a twilight trek, games, story time, and so much more. Be prepared for cold weather, and bring a reusable bag for trick-or-treating. Fun for all ages! For directions or information, call 408-262-5513 ext. 102 for Aja or ext. 104 for Julie.

Sunday, October 26

Mallard Slough Trail Hike - 4.3 miles Roundtrip

Environmental Education Center, Alviso

10:00 a.m.

Join Find Your Trail's founder Paul Salemme on another hike - this time on the Mallard Slough Trail. If you have not been on the recently re-aligned trail before, now's your chance. This flat, level, trail surrounds a former salt pond slated for restoration, and the islands constructed in the middle of the pond attracts hundreds of wild birds. Don't forget your binoculars! Register at <http://donedwardsmallard.eventbrite.com> or call 510-792-0222 ext. 362.

Story Hunters

Visitor Center, Fremont

2:00 p.m. – 3:30 p.m.

Discover what stories lie hidden on the Don Edwards Refuge in this series by Art Garibaldi. After a brief introduction on how to use our GPS units, we'll give you a new set of coordinates that will lead you to the landmarks that embody the rich human history that helped shaped refuge lands. GPS units are available for loan. Register at <http://donedwardsstory.eventbrite.com> or call 510-792-0222 ext. 362.

November

Saturday, November 1

*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.

*Jr. Refuge Ranger Program

Environmental Education Center, Alviso

1:00 p.m. – 2:30 p.m.

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

*Bird Migration Walk

Ravenswood Unit (SF2), Menlo Park

12:00 p.m. - 1:30 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 the 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. For information and directions, call 510 792-0222 ext. 141 for more information.

Sunday, November 2

*Bird Watching for Beginners

Visitor Center, Fremont

8:30 a.m. – 10:30 a.m.

Thousands of birds winter on the Don Edwards Refuge every year. In this beginner's program, we will go over the use of binoculars, how to use a bird guide, and identify the birds we see on the trail. Recommended for ages 10 and up. Dress for the weather and wear comfortable shoes. Heavy rain cancels. Led by Carmen Minch.

Saturday, November 8

Habitat Under Construction in Bedwell Bayfront Park

Bedwell Bayfront Park, Menlo Park
10:00 a.m. - 11:00 a.m.

The Salt Pond Restoration Project is entering Phase 2 of the management plan. Take a nature trail walk with Park Ranger Jose Garcia, and enjoy the abundant wildlife. Come see and be a part of the exciting transition. Cameras welcome. Location: Bayfront Expy and Marsh Rd in Menlo Park, CA 94025. An adult must accompany children. Call 510 792-0222 ext. 141 for more information.

*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.

Twilight Marsh Walk

Visitor Center, Fremont
4:00 p.m. - 5:30 p.m.

Experience the salt marsh at twilight on an easy stroll along Tidelands (1.3 mile) Trail. At the setting of the sun we will observe the beginning of nature's night shift. Come discover the sights, sounds, and smells of the refuge as night descends. Not suitable for young children. RESERVATIONS REQUIRED. Go to <https://donedwardstwilight3.eventbrite.com> or call 510-792-0222 ext 362. Led by Mary and Gene Bobik.

Saturday, November 15

Community Service

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 community service 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.

Jr. Refuge Manager Program

Visitor Center, Fremont
1:00 p.m. - 3:00 p.m.

Become an honorary Jr. Refuge Manager by completing activities on the refuge. We will guide you in some of the activities that will help you earn the Refuge Manager 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 Manager button. More information about the Jr. Refuge Manager program in Fremont can be found at <http://go.usa.gov/khTh>

Sunday, November 16

*Bird Watching for Beginners

Visitor Center, Fremont
8:30 a.m. - 10:30 a.m.

Thousands of birds winter on the Don Edwards Refuge every year. In this beginner's program, we will go over the use of binoculars, how to use a bird guide, and identify the birds we see on the trail. Recommended for ages 10 and up. Dress for the weather and wear comfortable shoes. Heavy rain cancels. Led by Carmen Minch.

*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. Go to <http://donedwardsmarsh2.eventbrite.com> or call 510-792-0222 ext. 362.

*Ohlone in the Marshes - Staves

Environmental Education Center, Alviso
1:00 p.m. - 2:30 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 and games the Ohlone might have used. Play Ohlone games and take home your own customized staves. Refuge volunteer Roy Sasai will demonstrate how to make fire without using matches or a lighter. Best suited for ages 8 and up. Register at <http://eecohloneertoolsandgames.eventbrite.com>.

Saturday, November 22

*Beginning Bird Watching

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

Ever wonder what birds we have in our very own community? This will be a great way to learn about many local and migratory birds. Ceal Craig will start with a slideshow indoors to show you how to recognize the regulars, then you can borrow binoculars and take a walk to try out your new skills. All ages welcome. Reservations required. Go to <http://eecebeg.eventbrite.com> Questions? Call Julie at 408-262-5513 ext.104.

Story Hunters

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

Discover what stories lie hidden on the Don Edwards Refuge in this series by Art Garibaldi. After a brief introduction on how to use our GPS units, we'll give you a new set of coordinates that will lead you to the landmarks that embody the rich human history that helped shaped refuge lands. GPS units are available for loan. Register at <http://donedwardsstory.eventbrite.com> or call 510-792-0222 ext. 362.

Fossils and Flumes

Environmental Education Center, Alviso
11:00 a.m. - 12:30 p.m.

Fossils and flumes are used to teach children about the South Bay Salt Pond Restoration Project. Park Ranger Jose Garcia brings fossils from Triassic wetlands he collected in eastern Montana to show the similarities to today's wetlands, and to explain their function in nature. Interactive flumes allow for a hands-on experience of how wetlands protect the surrounding area from flooding. Children must be accompanied by an adult. Call 510-792-0222 ext. 141 for reservations.

*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. 362.

Saturday, November 29

5 Tools You Can Use to Find the Elusive Gray Fox

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.



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. Location of activities and trail conditions may vary. Please call for accessibility information.

Field Trips at Learning Center in Fremont

Wetland Round-Up Field Trips – WE WILL NOT BE OFFERING THE WETLAND ROUND-UP PROGRAM IN THE FALL 2014. Details about scheduling a Spring 2015 field trip will be posted on our website on November 17, 2014 and in the Winter issue of *Tideline*.

Contact the Environmental Education Staff at Fremont:
Office: (510) 792-0222 x 475
Cell: (510) 377-7269
E-mail: 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-6. This fall, Wetland Round-Up is offered mid-October, November, and in early December 2014.

Mail-In Registration

Mail-in registration for Fall 2014 (October - December) will begin on Monday, August 18, 2014. Here's how it works:

- Registration Forms will be available on-line at http://www.fws.gov/refuge/Don_Edwards_San_Francisco_Bay/WetlandRoundUp_Alviso.html
- You will be able to choose from a list of available dates and indicate your 1st, 2nd and 3rd choices on the form. Please make sure ALL these dates are good ones as availability may be more limited this year.
- PLEASE NOTE! Completed field trip registration forms should be mailed to our office in the following manner:
U.S. Fish and Wildlife Service
P.O. Box 411
Alviso, CA, 95002
WRFT Registration/ EE attn: Genie
You can also email your electronic form to: Genie_Moore@fws.gov
- All forms must be received by Tuesday, September 9. All forms that we receive by this date will be opened on Wednesday, September 10, 2014.
- Every effort will be made to accommodate your requests. However, we may need to offer alternative dates if we cannot assign you your preferred dates.
- Selections will be made in a timely fashion. You will be notified by your preferred method as indicated on your form.
- We will continue to take requests after September 10, 2014 until all available dates for the Fall season (October - December) have been filled.
- Details about Spring 2015 registration will be in the Winter issue of *Tideline* and also posted on our website by November 17, 2014.

Wetland Round-Up Field Trip Training Workshops

New Teachers who have not yet attended a field trip orientation must attend the training. The workshops are offered from 4 p.m. – 6:45 p.m. on select 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 p.m. – 6 p.m. on select 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

Living Wetlands provides a first-hand 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 and Wildlife Service, and the San Francisco Bay Wildlife Society.

Program Offerings:

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. For the Integrated Program, participating classes must be from the following cities: San Jose, Alviso, Milpitas, Santa Clara, Saratoga, Monte Sereno, Los Gatos, Campbell, and Cupertino. There is a limitation to 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.

Other Schools, Colleges, Universities, and related organizations: - Field Trip and Guided Tours – General field trips and guided tours are available and generally last 1.5 hrs. in length.

Educators are encouraged to contact us to discuss options for customizing field trips and classroom presentations. Reservations for the Living Wetlands program are on a first-come basis. For more information, or to make a reservation, call the Living Wetlands Program Coordinator at 408-262-5513 ext 102 or email at livingwetlands@sfbws.com.

Application for 2014-2015 Transportation Funds

The Yellow School Bus Field Trip Transportation Fund was started with funding from the U.S. Fish and Wildlife Service's Connecting People with Nature Program. The San Francisco Bay Wildlife Society has provided additional funding for the 2014-2015 school year. The program will be administered by the U.S. Fish and Wildlife Service and San Francisco Bay Wildlife Society Staff.

The fund was created to help Title 1 schools 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.

The San Francisco Bay Wildlife Society will pay up to \$700 for transportation for a field trip. If you are awarded funding for a bus you will be expected to hire the bus and mail a copy of the invoice to the San Francisco Bay Wildlife Society. Once they receive the invoice they will send the check for up to \$700 either to the bus vendor directly (school district or local vendor) or to the school/school district for

the reimbursement, whichever method is preferred by the school.

PLEASE NOTE: If your school is in need of transportation to a field trip **you will need to reserve a field trip date first and then fill out a Bus Fund Form**. Please follow these steps and we will contact you as soon as possible with a response.

Please refer to our website for more information: <http://go.usa.gov/5Ea5>

You may also contact Genie Moore at 408-262-5513 ext. 100 or email genie_moore@fws.gov

TIDELINE

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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.

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Don Edwards Warm Springs Unit Manager: Ivette Loreda
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A nonprofit 501(c)(3) cooperating association established in 1987 to promote public awareness and appreciation of San Francisco Bay and fund education and outreach programs at San Francisco Bay National Wildlife Refuge Complex.

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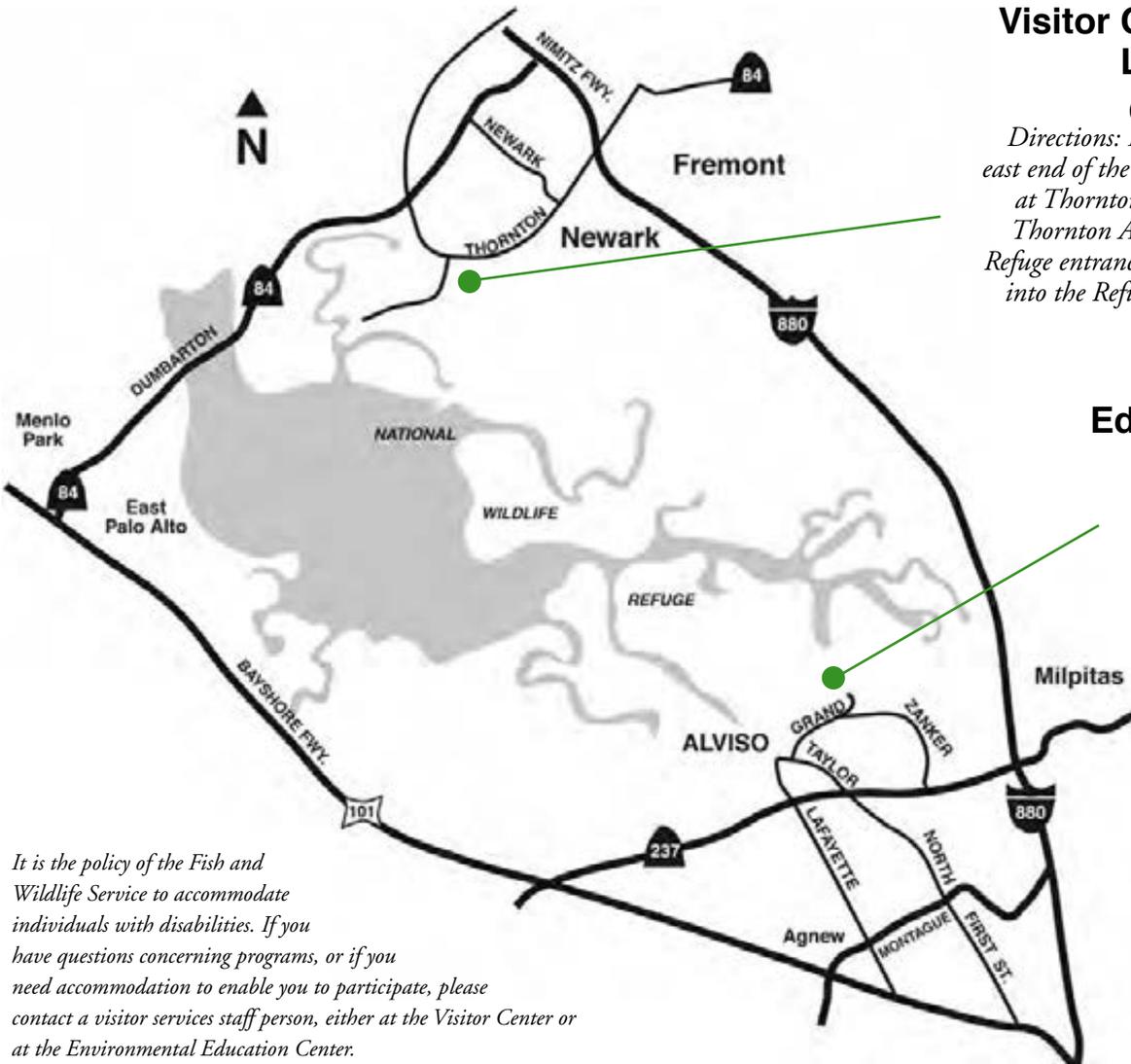
Tideline



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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.