

Tideline



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

The Story of Bair Island

By Doug Cordell

“Never doubt that a small group of thoughtful, committed citizens can change the world,” Margaret Mead wrote. “Indeed, it is the only thing that ever has.”

Nothing illustrates the point better than the story of Bair Island. Thanks largely, in fact, to the efforts of a small, dedicated group of Bay Area citizens, the island – 3,000 acres of former wetlands in the southwest reaches of the San Francisco Bay, twice the size of the Presidio – is protected today from development and poised for a major restoration that will provide critical wildlife habitat, improve public access and offer new opportunities for environmental education.

On July 14, the U.S. Fish and Wildlife Service recognized the local heroes who fought so long and hard to save Bair Island. In a morning ceremony on the island, with scores of their partners and supporters in attendance, Mendel Stewart, manager of the San Francisco Bay National Wildlife Refuge Complex, dedicated a plaque honoring the Friends of Redwood City—and, in particular, Carolyn and Ralph Nobles—for “igniting the spark that saved these baylands for future generations.”

The work of the Nobles and their colleagues to save Bair Island—work that spanned several decades—is a valuable lesson in perseverance and the enduring power of grassroots environmentalism.

The History

Like most of the land around the San Francisco Bay, Bair Island was once a wetland habitat teeming with life. At one time,

the Bay held the largest inter-tidal, wetland habitat on earth—an ecosystem that is exceeded only by coral reefs in the volume of life forms it supports. Today, though, the Bay is a third smaller than it was when wetlands were first filled to create dry land. Surveys have found that only 10 percent of its original 195,000 acres of wetlands still exist.

as Inner, Middle and Outer Bair. For the next 20 years, the company used the area for salt evaporation ponds.

In 1973, Leslie Salt sold the land to Mobil Oil, which began to plan a large-scale development for the island. Meanwhile, however, there was a growing environmental awareness, in the Bay Area and beyond, of the critical value of wetlands, not only as



Left to right: Ralph Nobles, Doris Dahlgren, Philip LaRiviere, Florence LaRiviere, Robin Smith.

As was the case with many of those original wetlands, Bair Island was diked and drained years ago for agriculture. The island got its name in the 1920s from Fred Bair, who owned a house and raised cattle on the land. In the 1940s, the Leslie Salt company acquired the property and built levees that divided it into three sections—known today

vital wildlife habitat, but as natural filters of water and buffers against flooding.

Things came to a head in 1982, when Mobil Oil’s real estate arm won approval from the Redwood City City Council to build what it proposed to call South Shores,

continued next page

a development of 20,000 homes, a shopping center and a corporate office complex on the island. At the time, Ralph Nobles was a nuclear physicist at the Lockheed laboratories in Palo Alto. He was also an avid boater, a hobby that had given him an appreciation and concern for the wildlife and natural habitats of the South Bay. Driven by that concern, he and his now late wife, Carolyn, joined other citizen-activists to fight the South Shores development project. They called themselves the Friends of Redwood City.

With little money, and despite being outspent by opponents more than 5-to-1, the Friends of Redwood City—joined by

Victory was short-lived, however. Seven years after the referendum on the South Shores project, Mobil Oil sold Bair Island to a Tokyo-based developer, Kumagai Gumi, raising fears of another development proposal.

Mobilizing once more, the Friends of Redwood City and their allies tapped oil spill compensation money administered by the Audubon Society to hire a public relations firm. The firm, in turn, placed a large ad in the western edition of the *New York Times*, knowing that the edition also appeared in Japan. The ad took the form of an open letter to Kumagai Taichiro, the head of Kumagai Gumi. It also featured a rare photo

example, the new wetland would more than double much-needed habitat available to the endangered California clapper rail, improving the odds for this shorebird's long-term survival.

The letter urged Mr. Kumagai to sell the property at a fair price to land preservationists and, “return Bair Island to the Bay’s natural ecosystem.” It also asked readers to join the fight by clipping an attached coupon and mailing it to the developer.

Within three weeks of the appearance of the open letter in the *Times*, Kumagai Gumi’s attorneys contacted agencies in the area and signaled a willingness to sell the land. At that critical juncture, the Peninsula Open Space Trust (POST), a non-profit land preservation organization, stepped in to purchase the property for \$15 million. POST then turned the land over to the U.S. Fish and Wildlife Service (FWS) and the California Department of Fish and Game, with an agreement that the land would be managed by FWS as part of the Don Edwards San Francisco Bay National Wildlife Refuge.

The Restoration

Today, Bair Island is in the midst of a historic and full-scale restoration that will return the area to tidal marsh and aid the recovery of endangered species like the clapper rail and the salt marsh harvest mouse. It will also provide significant opportunities for wildlife-oriented public access.

Because of the substantial subsidence of land on Bair Island, dating back to its salt pond days, the restoration requires the importation of almost 1.5 million cubic yards of clean soil. The new soil will serve as a foundation for salt marsh plants that, in time, will take root on the island. Almost 300,000 cubic yards of soil have come from the dredging of the Port of Redwood City’s shipping channel—a beneficial re-use that not only aided the restoration but kept the dredged material out of the Bay and the ocean. More dirt is now being trucked to the island by the construction firm, Pacific States, through a public-private partnership with FWS that will save taxpayers millions of dollars.

Once the massive dirt fill is complete, the Refuge will breach the existing levees at strategic spots on Inner and Middle Bair Islands to restore natural tidal action. Over 400 acres of Outer Bair Island have already been restored to tidal flow by a breaching



Christine Padilla from Congresswoman Anna Eshoo’s office presenting a certificate recognizing the Friends of Redwood City to Ralph Nobles

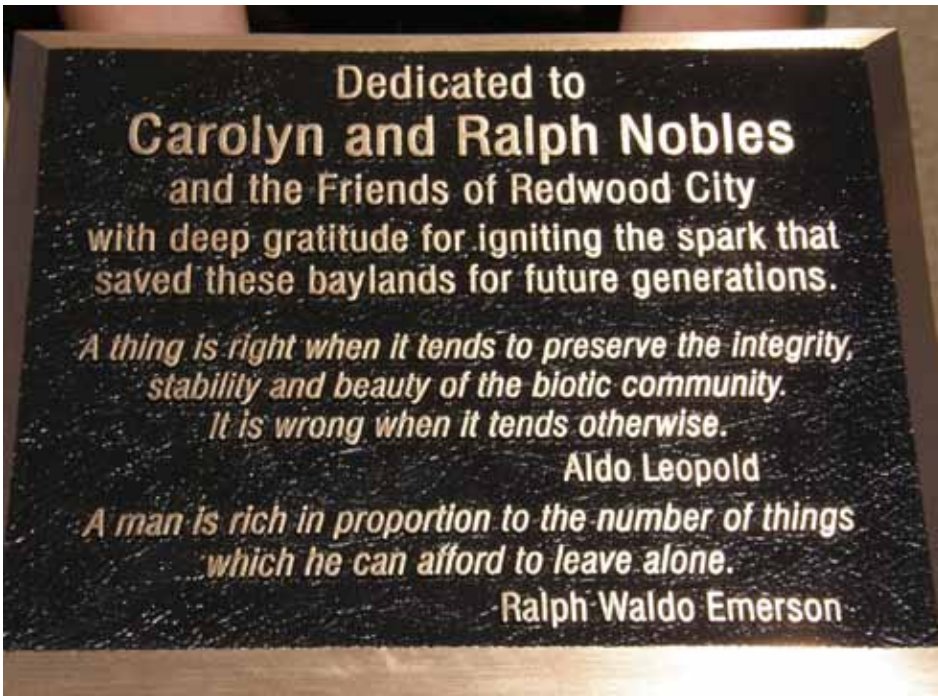
Save the Bay, the Citizens Committee to Complete the Refuge, the Bay Area chapters of the Audubon Society, and others—managed to lead a voter referendum drive that overturned the City Council’s approval of the proposed development on the island. Out of almost 18,000 votes cast, the measure to stop the development passed by a scant 42 votes.

“We pounded the pavement and walked the precincts,” says Sandra Cooperman, one of the original Friends of Redwood City, explaining how she and her allies were able to eke out a victory. “We were fighting with everything we had.”

of Mr. Kumagai, who had until this point managed to keep a low public profile both in the United States and Japan.

The open letter in the *Times* described Kumagai Gumi as, “a giant Japanese company headquartered in Tokyo [that] controls the fate of Bair Island, the single largest potential addition to the San Francisco Bay’s natural wetlands.” It advised Mr. Kumagai that:

If you agree to sell, the island would be added to the San Francisco Bay National Wildlife Refuge. It would be restored to its natural state and again provide some of the best marsh for wildlife around the Bay. For



and a restroom facility will be added. A pedestrian bridge will also be constructed to connect the parking lot to the levee trail on the island. Funding for the bridge was recently approved by the California State Coastal Conservancy and Redwood City.

As a whole, the restoration project presents a model for other cooperative efforts elsewhere in the Bay Area—a unique partnership among federal, State and local agencies, together with non-profit organizations and the private sector, to realize an ambitious vision of conservation.

None of the impressive work already underway on Bair Island would have been possible, however, without the vision of a small band of hardy individuals. When the restoration is complete, and visitors can stroll across the pedestrian bridge and along the levee trail that borders flourishing wetlands, they will pass a plaque that tells them, in words set into bronze, about those intrepid souls: Carolyn and Ralph Nobles and the Friends of Redwood City.

Doug Cordell is the Public Affairs Officer for the San Francisco Bay National Wildlife Refuge Complex.

and ditch blocking operation managed by Ducks Unlimited—a 2009 project that returned the flow to historic slough channels.

As for public access, the levee trail route will be configured to extend around Inner Bair Island from one observation plat-

form to another, overlooking the breaches that will allow reconnection of tidal flow to the channel. The Refuge's parking lot on Bair Island Road will be expanded to allow more room for buses, to encourage field trips by local schools and other groups,

SPOOKY SLOUGH

Friday, October 22, 2010
6:00 ~ 8:30 PM



At the Don Edwards San Francisco Bay National Wildlife Refuge
Environmental Education Center in Alviso



FREE ACTIVITIES

TWILIGHT WALKS

FACE PAINTING

LIVE ANIMALS

HANDS-ON ACTIVITIES

Come
in costume and
bring a reusable bag
for trick-or-
treating!



For more information and directions, visit

<http://www.fws.gov/desfbay> or call 408-262-5513

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

New Refuge Managers Welcomed into the San Francisco Bay National Wildlife Refuge Complex

by Mieke Griffin



Don Brubaker

When I first asked Don Brubaker what he had been doing before coming to the Bay Area, he shot back “time.” Reading the email, my jaw dropped for a moment, but, as anyone who has worked with Don knows, Don’s sense of humor and playfulness can bring fun to all aspects of work. This past June, after Christy Smith accepted a position in Iowa, Don took the post for Refuge Manager of the North Bay Refuges which are comprised of San Pablo Bay, Marin Islands, and Antioch Dunes National Wildlife Refuges.

As a California native who had visited the Bay Area as a child, Don Brubaker knew what to expect when he joined the San Francisco Bay National Wildlife Refuge Complex. Don grew up traveling to Death Valley in the winters, where his father led campfire programs and nature walks, and Yosemite National Park during the summers, where his father worked as an interpretive naturalist. It is no wonder that Don would end up working in the National Wildlife Refuge system!

Prior to coming to the San Francisco Bay NWR Complex, Don had worked as the Coastal Sub-Complex Manager at Tijuana Slough and San Diego Bay National Wildlife Refuges.

Don plans to continue shepherding the on-going programs at San Pablo Bay. He is looking forward to working with the staff.

Val Urban

Imagine moving to the San Francisco Bay Area from the tiny community of Cold Bay, Alaska. You may be asking “from where?” Cold Bay is the last stop on the Alaska Peninsula, a town of about 65 people. The name Cold Bay is somewhat of a misnomer since daytime high temperatures usually hover between the 30s and 50s year round – which isn’t all that cold for Alaska.



Val was looking for a change in scenery after serving four years in Cold Bay as Deputy Manager of the Izembek National Wildlife Refuge. Needless to say, moving to California from an Alaskan town having no restaurants, stores or paved roads has been quite the change. In addition, he is also looking forward to once again working with Mendel Stewart, who was his supervisor in San Diego from 2001-2006.

Val will be helping other staff managers on a variety of projects. First will be the installation of a new administrative sub-headquarters at Ellicott Slough NWR. For sure, there will be more projects to come.

Don Edwards San Francisco Bay National Wildlife Refuge and REI present

Coastal Cleanup Day

Dumbarton Fishing Pier Parking Lot, Marshlands Rd, Fremont
Saturday, September 25, 2010 • 8:30 a.m. - 12:00 p.m.

Help wildlife and the environment! 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.

Free swag from REI while supplies last!

RESERVATIONS REQUIRED! Call 510-792-0222 ext. 363 to sign up.

For more information, contact Mieke Griffin at 510-792-0222 ext. 362

Children under age 18 must have parental approval. To expedite the registration process, log on to <http://www.fws.gov/desfbay/ccforms.htm> to download the forms and bring to the registration table. Forms are also available at the registration table.



2010 Federal Duck Stamp Art Contest Comes to Berkeley, California

by Scott Flaherty, Region 8 External Affairs

The Pacific Southwest Region and its conservation partners are pleased to announce the 2010 Federal Duck Stamp Art Contest will be held October 15-16 at the David Brower Center in Berkeley, California. This is the first time in the prestigious contest's 61-year history that the event has been held in the West, and for only the second time west of the Mississippi River.

"Having this prestigious contest in the heart of the urban Bay Area provides a unique opportunity to introduce new, non-traditional audiences to the importance of wetlands and wildlife conservation," said

Traditionally supported by waterfowl hunters, duck stamps are also popular with collectors, birders and other fans of conservation. Proceeds from the \$15 stamp are used to acquire wetlands and associated habitat for National Wildlife Refuges. Since the program began in 1934, more than \$700 million have been raised and more than five million acres of wetlands and associated habitats have been purchased, including wetlands for San Pablo Bay National Wildlife Refuge. Federal Duck Stamps are also considered "miniature pieces of art" and collectible items. A \$1 stamp purchased in 1934 may bring in as much as \$750 today.

"The Duck Stamp fundamentally is about the conservation of wetlands and the bird species and wildlife that depend on wetlands," said Graham Chisholm, executive director for Audubon California at a recent First Day of Sale Event at the Don Edwards San Francisco Bay National Wildlife Refuge in June. "It's important that it shouldn't just be the hunting community buying these stamps. Every Californian should be investing

in conservation by buying duck stamps"

A derivative of the Federal Duck Stamp contest is the Federal Junior Duck Stamp Conservation and Design Program. This program, which began in 1989 through a grant from the National Fish and Wildlife Foundation, encourages conservation through the arts. One of its goals is to teach the importance of conserving our Nation's wetlands.

Jake Messerli, vice president of conservation programs for California Waterfowl Association, told the gathering at the same First Day of Sale event about the Junior



2009-2010 winning artist Robert Bealle's portrayal of an American Wigeon.

Duck Stamp Program and its role in connecting youth with the natural world.

"Roughly 250,000 youths in California have a better understanding of biology, conservation and our outdoor heritage because of the junior duck stamp program," he said.

Approximately 28,000 art entries are submitted each year to the national junior duck stamp program and hundreds of thousands of students participate in the environmental education curriculum in schools across the U.S., according to Messerli.

Federal Duck Stamps may be purchased at the Don Edwards San Francisco Bay National Wildlife Refuge Visitor Center, or at your local post office.

Take part in this year's Federal Duck Stamp Art Contest in Berkeley. More information about the Federal Duck Stamp and this year's art contest is available at: <http://www.fws.gov/cno/duckstamp.html>

If you cannot make it to Berkeley, join us at the Don Edwards San Francisco Bay National Wildlife Refuge on October 16 for National Wildlife Refuge Week where we will be hosting several events with a ducky theme! Join us for a duck drawing workshop, a ducky Amazing Race game, or for a small donation to the San Francisco Bay Wildlife Society, a tasting workshop where wine is paired with duck.

For more information on how to take part in these activities, look for the ads in this issue of *Tideline*, or log on to <http://www.fws.gov/desfbay>



Regional Director Ren Lohofener shows off the 2010-2011 Federal Duck Stamp following his purchase of the stamp June 25, 2010 at Don Edwards San Francisco Bay National Wildlife Refuge. (photo: Courtney Ashe, California Waterfowl)

Ren Lohofener, Regional Director of the Service's Pacific Southwest Region. "Never has it been more important to conserve and restore wetland habitat, especially as we search for methods to minimize the effects of climate change, for waterfowl and the multitude of other species that depend on wetlands."

The annual contest is the only art contest sponsored by the federal government and typically draws more than 200 entries from the nation's top wildlife artists. The top entry is used for the next annual Federal Duck Stamp.



**National
Pollution
Prevention
Week**

**September
20-26, 2010**



Water Wizards will be offered 3 times at the Don Edwards San Francisco Bay National Wildlife Refuge in Alviso in celebration of National Pollution Prevention Week.

When: Saturday, September 25, 2010

Where: Environmental Education Center, Alviso

Times: 10 a.m. - 11:30 a.m.

1 p.m. - 2:30 p.m.

3 p.m. - 4:30 p.m.

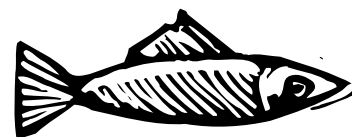
Come enjoy the many unique properties of earth's most precious natural resource – WATER! Participants will hear from a speaker, get wet with hands-on activities, and take a guided walk through New Chicago Marsh while learning how to promote pollution prevention activities in your home. Space is limited. Call Eric at (408) 262-5513 x104 to reserve your spot!

Be part of the green solution!

Resource Fairs:

- Drop-off expired or unwanted medicines for FREE
- Receive a FREE digital thermometer in exchange for your old mercury thermometers
- Learn how to keep pollutants out of our waterways.
- Bring in this ad and receive a FREE reusable shopping bag.

To find your nearest Resource Fair location, visit <http://www.sanjoseca.gov/esd/calendar.asp> or call (408) 945-3000.



**Connections to
Pier Fishing**

Don Edwards San Francisco Bay
National Wildlife Refuge in Fremont

Saturday, October 9

8:00 a.m. - noon

Learn how to fish on the Dumbarton Fishing Pier! Space is Limited to the first 50 people. All equipment will be provided. Please come on time. Call 510-792-0222 ext. 363 for reservations. For more information, see page 11.



2010-2011 USFWS Jr. Duck Stamp winner, Rui Huang

**Duck
Drawing
Workshop**

**Saturday October 16
11:00 a.m. - 12:00 p.m.**

Learn the basics of drawing ducks from Travis Turner and hear how youths can enter the US Fish & Wildlife Service's Jr. Duck Stamp Contest!

Paper and pencils will be provided. Suitable for all ages. For more information call Carmen Minch at 510-792-0222 ext. 476

Workshop will be held at the Newark Slough Learning Center (down the hill from the Visitor Center) on 2 Marshlands Rd, Fremont.

**Don Edwards San Francisco Bay National Wildlife Refuge
and REI Outdoor School
present**

The Amazing Refuge Race 2

October 16, 2010 • 2:30 p.m.

In celebration of National Wildlife Refuge Week, Don Edwards San Francisco Bay National Wildlife Refuge is hosting another Amazing Refuge Race!

Armed with GPS units, you and your team will “race” against other teams by attempting to complete required tasks on the refuge first. Teams will be given a set of coordinates where they must try to locate using a GPS unit. Once at that location, teams must work together to complete a task. When that task is completed, teams will receive the next set of coordinates. Those who complete all tasks and arrive at the finish first wins!



Intrigued? Log on to <http://www.fws.gov/desfbay> or call Carmen at 510-792-0222 ext. 476 for additional information and rules. Don't have a GPS unit? Borrow one from REI Outdoor School the day of the race at the refuge.

Registration is required! You may register up to 5 people for your team. A minimum of 2 people per team. The refuge may place individuals on teams containing fewer than 5 people to ensure maximum participation. Registration deadline is October 9, 2010. Call 510-792-0222 ext. 363 to register. There is no cost to enter.

Introduction to GPS Workshop

REI Outdoor School's Steve Wood will demonstrate how to use hand-held Global Positioning Units and will have limited number of units to practice on. No reservations necessary.

When: October 16, 2010

Where: Newark Slough Learning Center
2 Marshlands Rd

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

Fremont, CA 94536

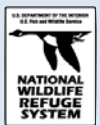
Cost: FREE!

No reservations necessary.

Don Edwards San Francisco Bay National Wildlife Refuge

2 Marshlands Road, Fremont, CA 94560

510.792.0222 ext. 363



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, 2010 and June 30, 2010. 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.

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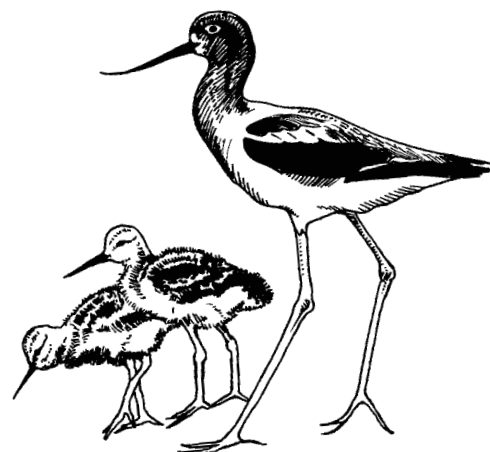
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Help Us Help the Refuge

Mail your donation to: San Francisco Bay Wildlife Society, P.O. Box 234, Newark, CA 94560. You may also fax your membership donation using a Visa or MasterCard number to (510) 792-5828.

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

San Francisco Bay Wildlife Society is a nonprofit 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* and 15% discount at the Don Edwards SF Bay National Wildlife Refuge bookstore. 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 Visa or MasterCard # _____ Exp. Date _____

Signature _____

Name _____

Address _____ City _____ State _____ Zip _____

Phone _____ **Thank you for your support!**

National Wildlife Refuge Week
October 9-16

at Don Edwards
San Francisco Bay
National Wildlife Refuge



Annual Sale of Native Plants

Saturday, October 16, 2010
10:00 p.m. - 4:00 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 a list of plants for sale, log on to
<http://www.fws.gov/desfbay> in September.

Don Edwards San Francisco Bay National Wildlife Refuge and San Francisco Bay Wildlife Society present

A Toast to Ducks

Saturday, October 16, 3 p.m. - 5 p.m.

Don Edwards Refuge and the San Francisco Bay Wildlife Society are offering a duck and wine pairing workshop in recognition of the Federal Duck Stamp Art Contest held in Berkeley, CA. For a \$10 donation, taste duck prepared in different ways, sip one flight of wine, and take home the recipes.

Where: 2 Marshlands Rd, Fremont, CA in the Newark Slough Learning Center.

Tickets: \$10 donation. You must have a ticket to participate. Tickets must be obtained in advance. Donations accepted **September 1 – October 8**, or until all tickets are distributed. **SPACE IS LIMITED** to 50 adults 21 years and over!

IDs will be checked the day of the event.

Call the Visitor Center at 510-792-0222 ext. 363 for credit card donations, or stop by Tuesday-Sunday from 10 a.m. – 5 p.m. The Visitor Center is closed on federal holidays.

Proceeds benefit environmental education, habitat restoration, and interpretive programs at the Don Edwards San Francisco Bay National Wildlife Refuge.



Autumn Activity Schedule

September

Saturday, September 4

*Marshlands of Dreams

Visitor Center, Fremont

10:30 a.m. – 11:30 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. There are opportunities for bird watching as well.

*Family Bird Walk

2:30 p.m. – 4:30 p.m.

Visitor Center, Fremont

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. Call 510-792-0222 ext. 363.

Saturday, September 11

Bird Photography Van Safari

Environmental Education Center, Alviso

8:30 a.m. – 11:30 a.m.

Photograph the birds of the salt ponds with docent Alex Baranda. Participants will travel by van to several locations to photograph waterfowl, shorebirds and wading birds. If you've taken one of our bird photography classes, this is a great way to practice your skills! For ages 12 and over. Reservations essential. 408-262-5513 x106.

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 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. Call 510-792-0222 ext 363. Led by Mary and Gene Bobik.

Sunday, September 12

Excellent Estuaries

Environmental Education Center, Alviso

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

Did you know you live near one of the largest estuaries in the country? What is an estuary? Join us to learn more about this fascinating ecosystem and

how it functions. Take a guided walk through the New Chicago Marsh afterwards. RESERVATIONS RECOMMENDED – All ages are welcome. Call Eric 408-262-5513 ext. 104.

*The Salt Marshes: Then and Now

Learning Center, Fremont (Near Visitor Center)

2:00 p.m. – 3:30 p.m.

Approximately 85% of San Francisco Bay's wetlands have disappeared over the last 200 years due to industry and development, impacting the wildlife that lived in and around them. Some of the plants and animals have made a comeback. Learn the history of the salt marshes and the plant and animal life affected by the changes. The presentation includes a slide show followed by a 45-minute walk to view a salt marsh and the remains of a salt evaporation pond. Led by Gregg Aronson. Call 510-792-0222 ext. 363 for reservations.

Saturday, September 18

Exploring the Refuge by Bike

Alviso Marina County Park, Alviso

10:00 a.m. – 1:00 p.m.

Bring your bike and join docent Steve Dill on a 9-mile journey to learn about the history, biology and restoration of the refuge's salt pond landscape. This trail will appeal to both bicyclists and birders. Ride is moderately strenuous over unpaved but level levees. Helmets and water requested. Binoculars and camera encouraged. Reservations required at 408-262-5513 x106. Rain cancels.

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. Hear about the on-site salt production, railroads, and homes that were located on the refuge grounds until the 1950s. Using a collection of old photographs, the last vestiges of a way of life can be traced back to the 1850s that led to the construction of the town of Newark in 1876.

Wetland Safari

Environmental Education Center, Alviso

10:00 a.m. – 12:15 p.m.

Take a 1-hour van tour around our former salt ponds. Bird life is generally more abundant on little-used portions of the trail. We will make several stops for better viewing and photography (if desired) plus a look at what is left of Drawbridge. Due to limited van seating, a second tour will head out at 11:15 a.m. if needed. Call Debra at 408-262-5513 ext. 102 for reservations.

Sunday, September 19

Intro to Nature Drawing for Adults

Visitor Center, Fremont

10:30 a.m. – 12:30 p.m.

Learn the basics of sketching nature. We will learn how to draw with negative shapes and shadows, and how to use color and light to add dimension. We will discuss how the changing horizon lines can offer depth. There will be opportunities to practice these techniques on the trail. Paper and pencils will be provided. A hat and water bottle is recommended. Call for reservations at 510-792-0222 ext. 363. Led by Travis Turner.

In Search of: Endangered Salt Marsh Harvest Mouse

Learning Center, Fremont (Near Visitor Center)

2:00 p.m. – 3:30 p.m.

Come learn about the tiny (about the size of your thumb) endangered Salt Marsh Harvest Mouse. What do they look like? What do they eat? What's in our habitat that makes them unique to the bay area? The program will be comprised of a 45-minute slide show followed by a walk. Led by Roy Sasai.

Saturday, September 25

Coastal Cleanup – Fremont

Dumbarton Fishing Pier, Fremont

8:30 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 if you have them. Space is limited. Children under 18 must have parental approval. For reservations call the Visitor Center at 510-792-0222 ext. 363.

Coastal Cleanup – Alviso

Environmental Education Center, Alviso

9:00 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 the City of San Jose, we'll pick up trash and tidy up a wetland area near the refuge. Come with a hat, sunscreen, a great attitude, and we'll provide the rest! Space is extremely limited, so please call Debra at 408-262-5513 ext. 102 for reservations.

Stevens Creek East Trail – 3 miles Roundtrip

Meet at the Trailhead in Mountain View.

Directions Below

9:00 a.m.

**Let's Go
Outside!**

Meet new people while getting fit and healthy! This trail in Mountain View is three miles, flat, and level. There are no restroom facilities at this trailhead. The walk is self-paced and you may turn back at anytime. No reservations are needed. Hats, water, and sunscreen are recommended. Ranger Jennifer Heroux will be there to greet you at 9 a.m. Directions: From Hwy 101, take the Shoreline Blvd exit and drive north 0.9 miles to Crittenden lane. Turn right on Crittenden Lane and drive 0.4 miles until the road ends. Walk past the sign for A&Z Tree Movers and up to the Stevens Creek levee to the paved trail on the west side of the creek. Cross the bridge to the east side of the creek and turn left to the brown metal gate.

Sunday, September 26

Nature Drawing for Kids

Learning Center, Fremont (Near Visitor Center)

10:30 a.m. – 12:00 p.m.

Learn the basics of sketching nature in this workshop by Travis Turner. We will learn how to draw what we see by incorporating common shapes, and learn about color value. We will then head out onto the trail and practice the various techniques. Paper and pencils will be provided. Recommended for ages 5-10. Bring a hat and water. Call for reservations at 510-792-0222 ext. 363.

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

Visitor Center, 2 Marshlands Road, Fremont – (510) 792-0222 ext. 363 • Environmental Education Center, 1751 Grand Blvd, Alviso – (408) 262-5513

October

Saturday, October 2

Exploring the Refuge by Bike Alviso Marina County Park, Alviso

10:00 a.m. – 1:00 p.m.

Bring your bike and join docent Steve Dill on a 9-mile journey to learn about the history, biology and restoration of the refuge's salt pond landscape. This trail will appeal to both bicyclists and birders. Ride is moderately strenuous over unpaved but level levees. Helmets and water requested. Binoculars and camera encouraged. Reservations required at 408-262-5513 x106. Rain cancels.



Saturday, October 9

Connections to Pier Fishing Dumbarton Fishing Pier, Fremont

8:00 a.m. – 12:00 p.m.

Have you ever wanted to try fishing but didn't know how to begin? Learn the fundamental basics of catch and release fishing at the Dumbarton fishing pier! Discover the types of wildlife living in the San Francisco Bay, learn the safety and ethics of fishing, and then try your luck out on the pier with our fishing poles. All participants receive free box with tackle. No fishing license needed! Space is limited to the first 50 people! You must arrive at 8 a.m. to participate. RESERVATIONS REQUIRED. Call the Visitor Center at 510-792-0222 ext. 363.

Cruisin' Towards Restoration Environmental Education Center, Alviso

9:30 a.m. – 12:30 p.m.

The salt ponds of the South Bay are undergoing an amazing transformation! We'll journey by van out into this unique landscape to discover the rebirth of the Bay's edge through wetlands restoration. For ages 12 and over. RESERVATIONS REQUIRED. Call 408-262-5513 ext. 106.

Sunday, October 10

Drawbridge Van Excursion Environmental Education Center, Alviso

9:30 a.m. – 12:00 p.m.

There's a ghost 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 a rip-roaring town full of two-fisted rowdies? We'll start with a slide show, and then take a short van excursion to view Drawbridge across Coyote Creek. Program is intended for adults and space is very limited. RESERVATIONS ARE ESSENTIAL. Call Debra at 408-262-5513 ext. 102. Led by Ceal Craig. (Note: we do not visit the town itself – we go to the closest spot that one can legally view Drawbridge.)

Scary Sketches

Learning Center, Fremont (Near Visitor Center)
10:30 a.m. - 12:00 p.m.

Add creepy embellishments to your nature drawings, just in time for Halloween! We will learn how to draw fangs, scary eyeballs, claws, etc. to add to your creatures. We will then head out onto the trail and practice the various techniques. Paper and pencils will be provided. Recommended for ages 7 and up. Bring a hat and water. Call for reservations at 510-792-0222 ext. 363.

Water Wizards

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

Life on the 'Blue Planet' would not be possible without

our most precious resource-water. Join us at the EEC to learn more about the unique properties of water through a presentation, hands-on activities, and a guided wetlands walk. We will investigate what makes water such an important resource for people and wildlife. RESERVATIONS RECOMMENDED – All ages are welcome. Call Eric 408-262-5513 ext. 104.

In Search of: Endangered California Clapper Rail Learning Center, Fremont (Near Visitor Center) 2:00 p.m. - 3:30 p.m.

Come learn about the endangered and rarely-seen California Clapper Rail. What do they look like? What do they eat? How many are left? We will share information about this secretive bird to optimize your chances of capturing a glimpse of them. The tour will be comprised of a 45-minute slide show followed by a 45-minute walk. Led by Art Garibaldi.

Saturday, October 16

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

Help our native plant garden by removing non-native plants, pruning, mulching, or various other jobs that help protect wildlife and clean up our gardens. We'll be starting preparations for planting native species. Bring your own gloves or borrow a pair of ours – tools are provided. Dress in layers and bring water and sunscreen. Be prepared to get dirty! Ages 9 and up. Participants 18 and under must be accompanied by a chaperone. Call Debra for reservations at 408-262-5513 ext. 102.

Duck Drawing Workshop Learning Center, Fremont (Near Visitor Center) 11:00 a.m. – 12:00 p.m.

Learn the basics of drawing ducks and hear how youths can enter the US Fish & Wildlife Service Jr. Duck Stamp contest! Suitable for all ages. Paper and pencils will be provided. Led by Travis Turner. Workshop will be held at the Newark Slough Learning Center on 2 Marshlands Rd, Fremont. Follow the signs.

Autumn Activity Schedule

Tidelands Trail/LaRiviere Marsh Walk – 1.5 miles roundtrip Visitor Center, Fremont 1:00 p.m.

Let's Go
Outside!

This is the eighth and final walk featured in the Refuge Rambler club. If you've completed seven out of eight walks in the series, congratulations! Be sure to bring

your passport to the Visitor Center for your free All-Star T-shirt! This trail is 1.5 miles. The walk is self-paced and you may turn back at anytime. You do not need to be a Refuge Rambler to join this walk. No reservations are needed. A refuge representative will be there to greet you at 1:00 p.m.

Native Plant Sale Visitor Center, Fremont 10:00 a.m. – 4:00 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. Sale will take place at the Visitor Center in Fremont.

REI Outdoor School Presents: Introduction to GPS Workshop Learning Center, Fremont 1:00 p.m. – 2:00 p.m.

The San Francisco Bay National Wildlife Refuge Complex and REI Outdoor School has teamed up once again to bring an Introduction to Global Positioning System (GPS) demonstration to the Refuge for National Wildlife Refuge Week. Learn how to use a hand-held GPS unit. REI Outdoor School will have a limited number of units to practice. No reservations necessary.

Amazing Refuge Race II Visitor Center, Fremont 2:30 p.m. – about 4:00 p.m.

Sign up to participate in the Amazing Refuge Race! Using a GPS unit, teams of five will "race" to the coordinates given and perform specific tasks. Once the tasks are completed, teams will be given another set of coordinates. First team to the finish line wins! Prizes will be awarded. Teams may use their own GPS unit, or borrow one from REI Outdoor School at the refuge. Form your own teams or one can be assigned to you. For more information, log on to <http://www.fws.gov/desfbay>, or call Carmen at 510-792-0222 ext. 476. REGISTRATION IS REQUIRED. Call 510-792-0222 ext. 363 to register.

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

Visitor Center, 2 Marshlands Road, Fremont – (510) 792-0222 ext. 363 • Environmental Education Center, 1751 Grand Blvd, Alviso – (408) 262-5513

Autumn Activity Schedule

Saturday, October 16 cont.

*Discover Ohlone Uses of Plants Environmental Education Center, Alviso 1:30 p.m. – 3:00 p.m.

Explore the plants that were traditionally used by the original inhabitants of this area, the Ohlone Indians. Then enjoy a guided walk around our native plant garden. Fun for the whole family! Led by Pat Hartinger. Reservations required. Call Debra at 408-262-5513 ext. 102.

Good-bye Salt Ponds, Hello Wetlands

Ravenswood Unit (SF2,) Menlo Park 2:30 p.m.

Docent Jane Moss will lead you on a 1-mile hike through the fascinating changes taking place at former salt pond SF2. Learn about the surprising ways this area is being reshaped as wildlife habitat. Trail is easy and level. All are welcome. Call 408-262-5513 x106 for information and directions.

A Toast to Ducks – a Duck and Wine Pairing Event

3:00 p.m. – 5:00 p.m.

Learning Center, Fremont (Near Visitor Center)

Learn which types of wine goes well with duck. A \$10 donation to the San Francisco Bay Wildlife Society offers participants a chance to taste duck and sip the wine that pairs well with it. Ticket includes duck tasting and one flight of wine. Space is limited to 50 adults 21 years and over. Donations accepted beginning September 1. Call 510-792-0222 ext. 363 for your ticket.

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 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. Call 510-792-0222 ext. 363. Led by Mary and Gene Bobik.

Sunday, October 17

*The Salt Marshes: Then and Now Learning Center, Fremont (Near Visitor Center) 2:00 p.m. – 3:30 p.m.

Approximately 85% of San Francisco Bay's wetlands have disappeared over the last 200 years due to industry and development, impacting the wildlife that lived in and around them. Some of the plants and animals have made a comeback and a few have adapted to the changes. Learn the history of the salt marshes and the plant and animal life affected by the changes. The presentation includes a slide show followed by a 45-minute walk to view a salt marsh and the remains of a salt evaporation pond. Led by Gregg Aronson. Call 510-792-0222 ext. 363 for reservations.

Friday, October 22

*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 and learn about nocturnal wildlife! Kids are encouraged to come in costume. 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 more information, call 408-262-5513 ext. 102 for Debra or ext. 104 for Eric.

Saturday, October 23

*Bird Photography Ravenswood Unit (SF2,) Menlo Park 8:00 a.m. – 11:00 a.m.

Explore through your camera the newly restored wetlands in our Ravenswood Unit. Docent Alex Baranda will lead you on a hike to several locations to photograph shorebirds and waterfowl. Call 408-262-5513 x106 for reservations and directions.

Salt Pond Restoration 101: An Introduction to the Project

Environmental Education Center, Alviso

1:00 p.m. – 2:00 p.m.

Restoration of 15,100 acres of South San Francisco Bay salt ponds to wetlands habitats has begun. Please join us for overview of this incredible project happening in our backyard. Program will begin indoors but will move outside via an easy 0.25-mile trail to a view of the salt ponds. All are welcome!

Living Wetlands

Environmental Education Center, Alviso

1:30 p.m. – 3:00 p.m.

Our refuge consists of salt marsh, salt ponds, and tidal and non-tidal sloughs that are teeming with life. Why are our wetlands important to us and how do they affect ocean fisheries? Learn about the life and death struggles of our wetland inhabitants through a slide show. Open to all ages but best suited to 3rd grade and up. Led by Ed Kantack. Please call Debra at 262-5513 ext. 102 for reservations.

*Family Bird Walk

2:30 p.m. – 4:30 p.m.

Visitor Center, Fremont

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. Call 510-792-0222 ext. 363.

Sunday, October 24

*Chompers & Stompers

Environmental Education Center, Alviso

1:00 p.m. – 2:30 p.m.

Ever wondered why birds come in so many shapes, sizes, and colors? Find out why some birds exhibit wacky behaviors. We will examine different bird specimens we have collected over the years to see how birds have adapted some extraordinary features. Come admire the wonders of the bird kingdom and then take a guided walk to see these marvelous creatures in action! RESERVATIONS REQUIRED – All ages are welcome. Call Eric 408-262-5513 ext. 104.

Saturday, October 30

A Trip Back in Time

Visitor Center, Fremont

10:30 a.m. – 12:00 p.m.

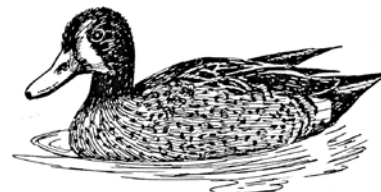
Revive the vanishing knowledge of the history of the Don Edwards San Francisco Bay National Wildlife Refuge grounds by strolling the trails with docent Ray Studer. Hear about the on-site salt production, railroads, and homes that were located on the refuge grounds until the 1950s. Using a collection of old photographs, the last vestiges of a way of life can be traced back to the 1850s that led to the construction of the town of Newark in 1876.

*Why Tides Matter

Environmental Education Center, Alviso

2:00 p.m. – 3:00 p.m.

Docent Laurel Stell will talk and walk you through all things tides. What are they? How do they affect wildlife? How have humans reshaped the Bay's tidal lands? Program starts indoors but will move outside for an easy 0.5-mile walk. All are welcome.



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

Visitor Center, 2 Marshlands Road, Fremont – (510) 792-0222 ext. 363 • Environmental Education Center, 1751 Grand Blvd, Alviso – (408) 262-5513

November

Saturday, November 6

*Marshlands of Dreams

Visitor Center, Fremont

10:30 a.m. – 11:30 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. There are opportunities for bird watching as well.

*Why Tides Matter

Environmental Education Center, Alviso

1:00 p.m. – 2:00 p.m.

Docent Laurel Stell will talk and walk you through all things tides. What are they? How do they affect wildlife? How have humans reshaped the Bay's tidal lands? Program starts indoors but will move outside for an easy 0.5-mile walk. All are welcome.

Sunday, November 7

Intro to Nature Drawing for Adults

Visitor Center, Fremont

10:30 a.m. – 12:30 p.m.

Learn the basics of sketching nature. We will learn how to draw with negative shapes and shadows, and how to use color and light to add dimension. We will discuss how the changing horizon lines can offer depth. There will be opportunities to practice these techniques on the trail. Paper and pencils will be provided. A hat and water bottle is recommended. Call for reservations at 510-792-0222 ext. 363. Led by Travis Turner.

Saturday, November 13

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 in Fremont for a community service project. We will do either a trash pickup or a planting/weeding project. Dress appropriately for the task and for the weather. Gloves and tools will be provided. Bring your own water bottle. Meet in the parking lot at the Visitor Center. Driving an additional 2.5 miles may be required if project takes place at a different location. For more information, or to make reservations, call 510-792-0222 ext. 363.

*Good-bye Salt Ponds,

Hello Wetlands

Ravenswood Unit (SF2,) Menlo Park

1:00 p.m.

Docent Jane Moss will lead you on a 1-mile hike through the fascinating changes taking place at former salt pond SF2. Learn about the surprising ways this area is being reshaped as wildlife habitat. Trail is easy and level. All are welcome. Please call 408-262-5513 x106 for information and directions.

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 Tideland (1 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. Call 510-792-0222 ext 363. Led by Mary and Gene Bobik.

Sunday, November 14

*The Salt Marshes: Then and Now Learning Center, Fremont (Near Visitor Center)

2:00 p.m. – 3:30 p.m.

Approximately 85% of San Francisco Bay's wetlands have disappeared over the last 200 years due to industry and development, impacting the wildlife that lived in and around them. Some of the plants and animals have made a comeback and a few have adapted to the changes. Learn the history of the salt marshes and the plant and animal life affected by the changes. The presentation includes a slide show followed by a 45-minute walk to view a salt marsh and the remains of a salt evaporation pond. Led by Gregg Aronson. Call 510-792-0222 ext. 363 for reservations.

Saturday, November 20

Beginning Birding Clinic for Adults

Environmental Education Center, Alviso

9:00 a.m. – 11:30 a.m.

If you can't tell your egrets from your cormorants this class is for you! We'll learn about binoculars, identification books, and other birding basics through hands-on activities and conversation. Then we'll go out into the field to practice our new skills. Binoculars and books provided during the class. Be prepared to be outdoors in the weather for about an hour. Reservations Required. 408-262-5513 ext.106.

Beginning Bird Watching for Families

Environmental Education Center, Alviso

9:30 a.m. – 11:00 a.m.

Ever wonder what birds we have in our very own community? This is a great way to learn about local and migratory birds. We'll start with a slide show indoors to learn how to recognize the regulars, then borrow a pair of binoculars and take a walk to try out your new skills. Program is led by Ceal Craig. All ages welcome. Call Debra at 408-262-5513 ext. 102 for reservations.

Seasons and Weather

Environmental Education Center, Alviso

1:30 p.m. – 3:00 p.m.

Why is it summer in San Jose, California when it's winter in Sidney, Australia? How are clouds made? Why does it rain? What is the difference between a hurricane and a tornado? Learn some interesting facts about weather and how it affects people and wildlife. Suitable for ages 7 and up. Led by Ed Kantack. Call Debra at 408-262-5513 ext. 102 for reservations.

Sunday, November 21

Intro to Nature Drawing for Adults

Visitor Center, Fremont

10:30 a.m. – 12:30 p.m.

Learn the basics of sketching nature. We will learn how to draw with negative shapes and shadows, and how to use color and light to add dimension. We will discuss

Autumn Activity Schedule

how the changing horizon lines can offer depth. There will be opportunities to practice these techniques on the trail. Paper and pencils will be provided. A hat and water bottle is recommended. Call for reservations at 510-792-0222 ext. 363. Led by Travis Turner.

Astonishing Owls

Environmental Education Center, Alviso

1:00 p.m. – 2:30 p.m.

A small variety of owls frequent the habitats of the EEC. We will explore the unique adaptations of these birds of prey that make them one of the most feared hunters of the sky. After a short presentation, participants will go on a guided walk and dissect owl pellets to see how owls feed and digest. RESERVATIONS RECOMMENDED – All ages are welcome. Call Eric 408-262-5513 ext. 104.

In Search of: California Grey Fox Learning Center, Fremont (Near Visitor Center)

2:00 p.m. - 3:30 p.m.

Come learn about the California Grey Fox, the only canine that can climb trees. What do they look like? Where do they live? What do they eat? We will share information about this fox to optimize your chances of capturing a glimpse of them. The tour is comprised of a 45-minute slideshow, followed by a 45-minute walk. Led by Roy Sasai.

Saturday, November 27

*Family Bird Walk

2:30 p.m. – 4:30 p.m.

Visitor Center, Fremont

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. Call 510-792-0222 ext. 363.

Sunday, November 28

Mysteries of Wastewater Treatment

Environmental Education Center, Alviso

2:00 p.m. – 3:30 p.m.

The San Jose-Santa Clara Water Pollution Control Plant treats hundreds of millions of gallons of wastewater from millions of people every day using some of the most advanced treatment technologies available. Learn about what it takes to make this interesting process happen through a slide show and hands-on activities. A tour of the Water Pollution Control Plant is not included as a part of this program. RESERVATIONS RECOMMENDED – All Ages are welcome. Call Eric 408-262-5513 ext. 104.

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

Visitor Center, 2 Marshlands Road, Fremont – (510) 792-0222 ext. 363 • Environmental Education Center, 1751 Grand Blvd, Alviso – (408) 262-5513

Field Trips to the Refuge

General Field Trip 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 refuge headquarters in Fremont, and Wetland Round-Up and Slow the Flow field trip programs 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 Orientation Workshop. The Orientation Workshop allows 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 Orientation Workshop. It is our policy that lead educators must attend training every two years. Location of activities and trail conditions may vary. Please call for accessibility information.

Field Trips at the Learning Center in Fremont

Wetland Round-Up

Explore the habitats of the refuge! Investigate creatures of the mud flats, collect plankton from the slough, and taste pickleweed from the salt marsh. This field trip is designed for grades K-6, for up to 65 students. Wetland Round-Up will be offered Tuesday – Friday from October to mid-December, 2010.

NEW MAIL-IN RESERVATION PROCEDURES
can be found on our web site at
http://www.fws.gov/desfbay/EE_Registration.htm.

Field Trip Orientation Dates at the Learning Center in Fremont

All orientations are from 4:00 p.m. - 7:30 p.m.

Thursday, September 30

Wednesday, October 13

Tuesday, November 2

Call the Environmental Education Intern at **510-792-0222 ext. 475** for further information.

Field Trips at the Environmental Education Center in Alviso

Wetland Round-Up

Investigate the butterflies in the butterfly garden, taste pickleweed in the salt marsh, or discover the creatures that live in the slough water on a Wetland Round-Up field trip. This field trip program is designed for up to 65 students in grades K-6. Wetland Round-Up is offered Monday – Thursday from October to December, 2010.

We will begin scheduling Fall 2010 field trips on Thursday, September 9 from 4:00 p.m. – 5:00 p.m. For more information, call the Environmental Education Intern at 408-262-5513 ext. 103.

Field Trip Orientation Workshop Dates at the Environmental Education Center in Alviso

All Orientations are from 4:00 p.m. – 7:30 p.m.

Thursday, October 7

Wednesday, October 27

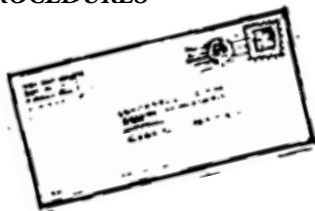
Tuesday, November 16

Call the Environmental Education Intern at 408-262-5513 ext. 103 to attend an orientation. ** Please note: The cut off date to make a reservation is the Friday before each orientation date.

The Slow the Flow Program

Slow the Flow provides an experiential learning environment for students and educators to explore the topics of water use, wastewater treatment, and habitat preservation. Activities and presentations focus on the relationship between personal habits and their effects on local habitats. Slow the Flow is an environmental education program offered at no cost through the cooperating efforts of the City of San Jose, U.S. Fish and Wildlife Service, and the San Francisco Bay Wildlife Society. Slow the Flow programs are available to educators and groups located in San Jose, Alviso, Milpitas, Santa Clara, Saratoga, Monte Sereno, Los Gatos, Campbell, and Cupertino.

Programs are offered to 5th – 12th grade students. A modified field trip is available for college groups. Educators are encouraged to contact us to discuss options for customizing field trips and classroom presentation activities and schedules. **Reservations for the Slow the Flow program are on a first-come basis. For more information or to make a reservation, call Eric McKee, the Slow the Flow Program Coordinator at 408-262-5513 ext. 104 or email at sfbay.slowtheflow@gmail.com.**



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. *Badges are not provided.*

Below are the names, dates, and descriptions of the programs. 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

Reservations for fall programs begin on **Thursday, September 9 between 3-4 p.m.** and will continue until program is full. Call Debra at 408-262-5513 ext. 102.

Note: Ratio of 1 adult per 5 children maximum. Space is limited to 20 people, including siblings (no siblings under 5 yrs-old). Once the program is full there will be a waiting list.

Saturday, September 18

Brownies Eco-Explorer Patch
Environmental Education Center, Alviso
2:00 p.m. – 4:00 p.m.

Calling all Brownies! Come and learn about habitats, food chains, and how you can help wildlife. Then take a walk to explore the habitats at the south end of the bay. Space is limited to 20 people and program fills quickly.

Saturday, October 2

Webelos Naturalist Badge
Environmental Education Center, Alviso
2:00 p.m. – 4:00 p.m.

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.

Saturday, October 30

Junior Girl Scout Wildlife Badge
Environmental Education Center, Alviso
10:00 a.m. – 12:00 p.m.

Calling all Junior Girl Scouts of Santa Clara County! Anyone out there need to earn a Wildlife badge? We've got the program just for you! Come to the Wildlife Refuge and learn about features of different creatures, observe animal behavior, and see how you can help. Take a walk to explore the habitats at the south end of the bay. Space is limited to 20 people and program fills quickly.

Youth Group Programs at the Refuge Headquarters in Fremont

The Refuge Headquarters offer Webelos programs for up to 15 Webelos. Call 792-0222 ext. 363 for reservations. All programs are led by June Smith.

Sunday, October 3 and 30; Saturday, November 20

Webelos Naturalist Program
10:00 a.m. – 12:00 p.m.

Attention Webelos! Earn your naturalist badge in just two hours. During this hike, learn about birds, flyways, food chains, and the importance of wetlands. Bring your binoculars, or borrow one of ours.

TIDELINE

Published quarterly by San Francisco Bay National Wildlife Refuge Complex, with funding from San Francisco Bay Wildlife Society.

Volume 31, Number 3

Editor: Carmen Minch

To receive *Tideline*, email carmen_leong-minch@fws.gov, or write to: Tideline, San Francisco Bay National Wildlife Refuge Complex, 9500 Thornton Ave, Newark, CA 94560.

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.

Project Leader: Mendel Stewart

Deputy Project Leader: John Bradley

Wildlife Refuge Specialist: Val Urban

Don Edwards Refuge Manager: Eric Mruz

Don Edwards Wildlife Specialist: Melisa Helton

Don Edwards Warm Springs Unit Manager: Ivette Loreda

Farallon Refuge Manager Gerry McChesney

Farallon Refuge Wildlife Specialist: Zach Coffman

North Bay Refuges Manager: Don Brubaker

North Bay Wildlife Specialist: Louis Terrazas

South Bay Refuges Manager: Diane Kodama

Public Affairs Officer: Doug Cordell

Refuge Planner: Winnie Chan

Outdoor Recreation Planners: Jennifer Heroux
and Carmen Minch

Environmental Education Specialists: Tia Glagolev,
Genie Moore, and Kimby Wells

Volunteer Coordinator: Paul Mueller

Law Enforcement Officers: Jared Klein
and Scott Neumann

Biologists: Joy Albertson, Giselle Block, Susan Euing,
Meg Marriott, Cheryl Strong, and Rachel Tertes

Administrative Staff: Lucinda Ballard, Patricia
Compton, Ellen Tong, and Lauren Hupp

Maintenance Staff: Juan Flores, James Griffin,
Calvin Sahara, Michael Springman and Ed Van Til

San Francisco Bay Wildlife Society

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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Education Specialist: Eric McKee

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Tideline is On-Line

Visit our web site, which features past issues of *Tideline*, at <http://www.fws.gov/desfbay>

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 DEPARTMENT OF THE INTERIOR
 FISH AND WILDLIFE SERVICE
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 NATIONAL WILDLIFE REFUGE
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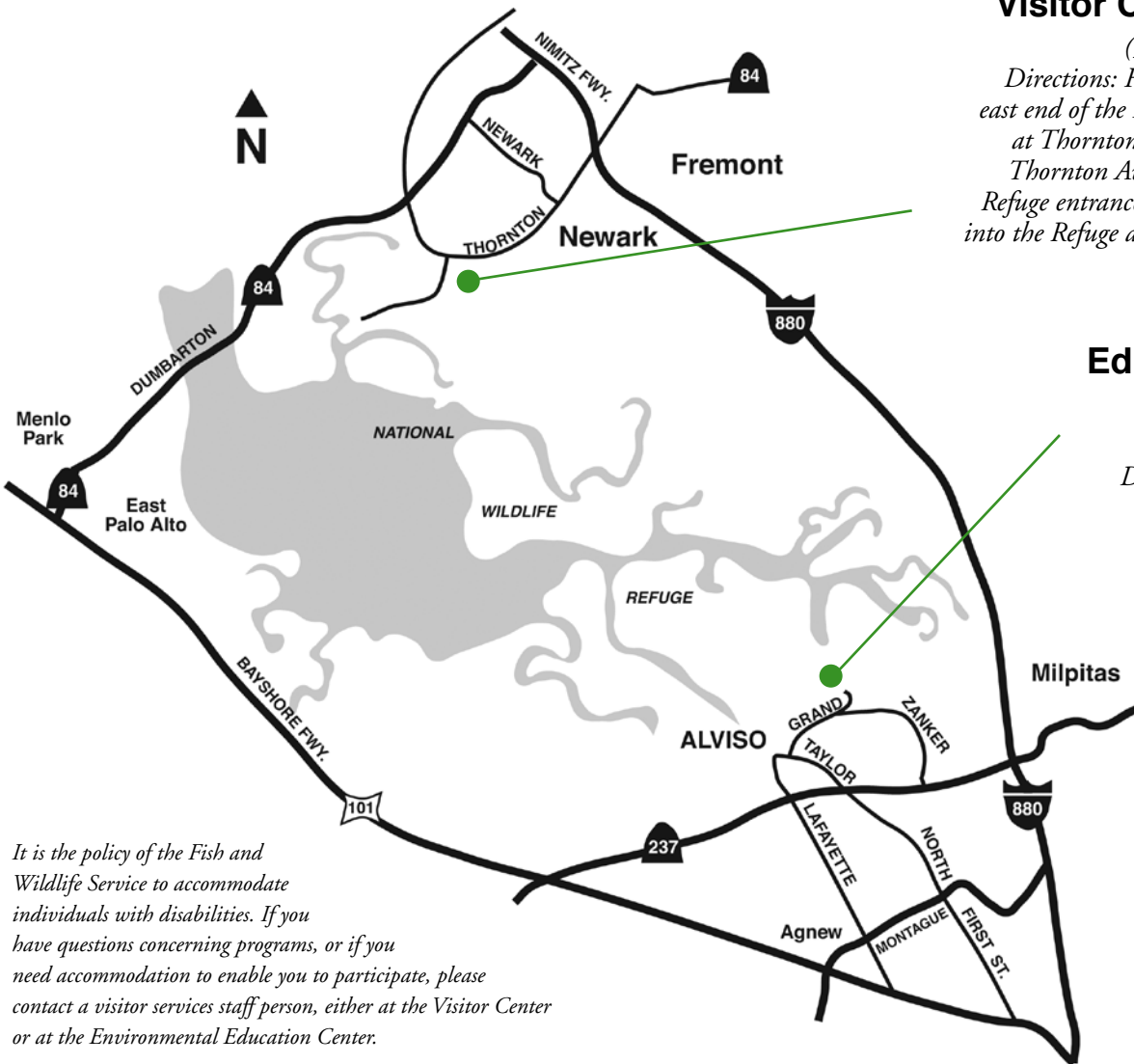
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Don Edwards / Antioch Dunes / Ellicott Slough / Farallon Island / Marin Islands / Salinas River / San Pablo Bay



Visitor Center, Fremont

(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 Highway 101, exit on Highway 237 toward Mountain View/Alviso. Turn north onto Zanker Road. Continue on Zanker Road to the Environmental Education Center entrance road (a sharp right turn at Grand Blvd.) The distance from 237 to the entrance road is 2.1 miles.

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.