

# Legacy of a Citizen-Activist: Florence LaRiviere and the First Urban National Wildlife Refuge in the Country

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

by Meagan Racey

For environmental advocate Florence LaRiviere, it all started at a worn-down picnic table.

It was 1951 in Palo Alto, California. The nurse and her husband, Philip, a Navy navigator and physicist, had just moved into an affordable post-war home. To escape the heat, the young couple would pack up their children and dinner, and ride a few miles over to the breezy edge of the San Francisco Bay.

"I will tell you there is nothing so lovely as the marsh in the evening. The only sound is the birds jumping into the air and crying as they fly," said LaRiviere, who is now 95.

LaRiviere and her husband would spend the next half-century ensuring future generations could play in the pickleweed at the end of the road. That – and more. Indeed, in extension of their efforts, most of the bay south of the San Mateo Bridge is in public ownership.

But there were obstacles along the way. For instance: dredging. From their treasured picnicking spot, the LaRivieres noticed that the city was "scooping out a bucket of mud from the bottom of the bay, swinging the arm around and dropping all that mud on live, beautiful tidal marsh" to maintain the harbor, she said. "And we knew something was wrong there."

Not only that, but developers were floating a \$30-million plan to transform the marsh. LaRiviere poked around and discovered the local Audubon chapter. "It was a bunch of women that would go to the council meetings, planning committee



Florence LaRiviere on the land she helped save for endangered species and wildlifeoriented recreation, the Don Edwards San Francisco Bay National Wildlife Refuge. (Photo: Judy Irving)

meetings, and make a scene about what they saw happening that shouldn't be," she said.

The chapter's first victory came in the early 1960s when their petition stopped potential development until creation of a land-use plan. That Palo Alto marsh later became the 1,940-acre Baylands Nature Preserve, managed by the city on the southwest side of the San Francisco Bay.

While three women – Sylvia McLaughlin, Kay Kerr and Esther Gulick – took up the charge in the Berkeley area, creating the association now called Save The Bay, LaRiviere was becoming the center of a network that would establish the nation's

first urban national wildlife refuge – right along the eastern fringe of the bay.

That effort started in 1965, not at a picnic table but at LaRiviere's kitchen table, where she read the local newspaper. In it was an invitation: "If you're worried about what's happening to the shores of the San Francisco Bay, come to my office in the morning at 10 o'clock," she recalled.

She, and a couple dozen others, showed up at the office of Santa Clara County planner Art Ogilvie. He wanted Congress to establish a national wildlife refuge in the bay.

continued next page

#### from page 1

Out of that gathering grew a grassroots committee that met with garden clubs, environmental groups, agencies, women's clubs, fraternal clubs – you name it.

"We would speak anywhere anyone would have us," LaRiviere said.

It worked. Three years later, the committee approached U.S. Rep. Don Edwards with the request to establish the national wildlife refuge. In 1972, his bill passed and was signed by President Richard Nixon.

The San Francisco Bay National Wildlife Refuge, later renamed to honor the Congressman, would soon stretch from Dumbarton Bridge south to Alviso.

In 1985, LaRiviere brought people around that same kitchen table. They felt they'd made a big mistake, she said. "We were not ambitious enough."

The group had focused on protecting and restoring salt evaporation ponds, but they now saw development encroaching the neighboring areas, the seasonal wetlands. Together, the marshes and wetlands are home to more than 750 wildlife and plant species, including shorebirds, ducks, and the endangered salt marsh harvest mouse and Ridgway's rail.

The Citizens' Committee to Complete the Refuge was born, an all-volunteer organization that meets monthly to this day. Their near-term goal was to expand the refuge boundary, but they remain in pursuit of restoring and protecting every open acre of bay shoreline and salt pond.

They developed brochures and pamphlets. Safeway even printed their material on paper grocery bags.

"Then it was about time, and we went to Mr. Edwards again," LaRiviere said.

She estimates that about 400 people showed up at the congressman's hearing. Most were supporters, waving the committee's "Save the Wetlands" auto shades, mimicking a flock of the herons illustrated on them.

After a long campaign, the congressman's bill passed in 1988 and was signed by President Ronald Reagan. It gave the U.S. Fish and Wildlife Service the green light to acquire up to 20,000 additional acres.

"The Fish and Wildlife Service is what we chose to protect our bay years ago, and I Page 2



An aerial view of the wetlands and winding sloughs of the Don Edwards SF Bay National Wildlife Refuge.
(Photo: USFWS)

have never regretted that," LaRiviere said.

The committee had secured permission to protect more land, but "then there's the battle to keep the lands from being destroyed before they can be purchased," LaRiviere said.

One of those battles had long been underway – around yet another table, in the home of Ralph and Carolyn Nobles. The Nobles and their organization, the Friends of Redwood City, had defeated a Mobile Oil plan to develop the 3,000-acre Bair Island along the bay.

But the island was still at risk, LaRiviere said. The bay's environmental groups once again joined forces. The committee and Friends of Redwood City recruited bay Audubon chapters – spurred by Arthur Feinstein – and enlisted the help of Sacramento consultant Bill Rukeyser to convince Japanese developer Kumagai Gumi to sell the island.

Rukeyser was advised to get the owner's name "out in public" with his photo,
LaRiviere said.

The two-year effort culminated with a provocative full-page advertisement in The New York Times' west coast October 8, 1996, edition.

The Nobles and LaRivieres wrote the text, Feinstein said, which asked the company's owner to let Bair Island go back to nature. It also listed the Japanese environmental organizations supporting the effort – a lasting benefit from LaRiviere's earlier role as a wetlands ambassador to Japan.

Less than a month later, "my phone rang, and it was the head of refuges around here, Rick Coleman," LaRiviere said.
Coleman told her that Kumagai called and said, "Let's talk."

Within a year, Bair Island was purchased and deeded to the refuge. In 2003, the refuge acquired 9,000 acres of former salt ponds for restoration. A multi-partner effort to restore these acres and an additional 6,000 acres in state ownership has become the largest wetland restoration project west of the Mississippi River.

The refuge's latest complex manager, Anne Morkill, places LaRiviere among her personal conservation heroes – Rachel Carson, Margaret Murie and the women who started Save The Bay.

"These women are incredible community leaders," Morkill said. "They go to D.C. to lobby, work with regulators, work with citizens, review tedious documents that we agencies put out there. It's amazing... That's what's always inspiring to me."

Within the refuge's 30,000 acres is a 100-acre marsh and former salt pond. Now flush with native plants and wildlife, it was named LaRiviere Marsh in 2013.

"The Fish and Wildlife Service has given us the greatest honor by naming that beautiful, lovely, endangered-species-rich marsh after my husband and me," she said. "But it should be named for about 20 or 30 people, all of whom gave so much of their time and energy and their love to this land and the creatures."

The dedication illustrates the fervor with which the LaRivieres pursued bay protection as a team. Florence's husband, Phillip, who died in 2012, would pore over environmental documents and "with withering accuracy, contradict and correct developers' consultants' statistical analyses," said Audubon's Feinstein.

"She and Phil were just such a force to be reckoned with," said Carin High, co-chair of the Citizens' Committee to Complete the Refuge.

The committee, together with Save the Bay, Audubon, the Sierra Club, and dozens of other environmental organizations and agencies, kindled what some have called an environmental renaissance in the bay. High



A Ridgway's rail, one of the endangered species the Don Edwards SF Bay National Wildlife Refuge was created to protect. (Photo: Judy Irving)

said their group aims to add another 10,000 acres to the refuge.

"The thing Florence has really taught us is that you have to be in it for the long haul. It's good to be passionate and 'rah-rah' and fight a fight, but you can't get discouraged. You have to be willing to pick yourself up and dust yourself off and get back into it."

On a day last November, LaRiviere's daughter Ginny took her back to where it

all started. They rode in an old gray Honda Civic, LaRiviere's curled white hair barely rising above the passenger seat. She wore fish-shaped earrings, a matching blouse and fleece, crisp trousers, and flats. That day, black-necked stilts poked around the marsh, and wintering ducks sailed the ponds.

Visitors walked and biked the road along the marsh. Some sat on benches and looked out over the water. A photographer sought a perfect angle on shorebirds.

LaRiviere and her daughter moseyed down the boardwalk, a light breeze ruffling their hair. While, LaRiviere, now legally blind, no longer sees where the bay touches the sky, it lives in her mind's eye.

"If you care enough, and if you have staying power, you can bring about great things," she said.

Meagan Racey is a Public Affairs Specialist with the U.S. Fish & Wildlife Service's Northeast Region.

## **Tideline** Going Digital

This will be our last print issue of the *Tideline* newsletter. Following trends in the business community and across government, the Service transitioned from print to digital newsletters and reports several years ago. We have been a bit slower in this transition, but we now find ourselves at a crossroads and decided to follow a new path! The reasons are various, ranging from staff changes and realigned priorities, to new technologies and ever-present budget challenges.

Going digital is not free, but it is less expensive than print. The savings on printing and postage are substantial, and we'd rather re-allocate those funds toward a more multi-faceted communications strategy, as well as on-the-ground resource conservation and public engagement projects. I want to especially recognize the support of the San Francisco Bay Wildlife Society for funding the layout and printing of *Tideline* for many years. We will continue to collaborate with the Society on developing and distributing the next generation of the publication.

Communication plays a vital role in our efforts to inspire and educate visitors, by building awareness, understanding, and engagement. As we have with the printed *Tideline* for nearly 40 years (the first issue was published in 1981!), we want to bring you the stories you want to read and the information you find most valuable. The Refuge and the Wildlife Society are envisioning a digital strategy that employs and integrates the latest media platforms and products (website, social media, etc.). We will deliver user-friendly information to our traditional readers while striving to engage a broader base of current and new supporters.

With a new digital platform, we hope to bring you more timely news, feature stories, and event announcements in a format that can be easily shared. A digital version will give us the ability to provide links to more in-depth stories and related information sites. You'll be

able to simply click on a link to sign up for an event or volunteer for an activity; share stories instantly through email or social media; or print for later reading or future reference. Based on our recent survey, one of the most popular features is the Activity Schedule, so we will post complete and up-to-date activity listings on the refuge website (https://www.fws.gov/refuge/don\_edwards\_san\_francisco\_bay/) and provide digital copies of the schedule for those who wish to opt in. The schedules will be formatted for easy printing, whether to post on your own refrigerator, pass along to friends and co-workers, or pin on an activity board at your local community center or school. And we will continue to host past issues of *Tideline* on the refuge webpage for



## Refuge Reflections

by Anne Morkill, Refuge Complex Manager

your reading pleasure.

We don't yet know exactly what the next generation of *Tideline* will look like, but stay tuned. Visit the Wildlife Society's website, http://sfbws.com/, to opt in to receive the new digital version when it emerges!

# Happy Retirement & Thank You to Our Harbor Seal Hero!

By Rachel Tertes

After more than 20 years of service, long-time Refuge volunteer Norton Bell is retiring. In 1996, Norton learned how to conduct surveys when he apprenticed under local harbor seal expert, Dianne Kopec. Then in 1998, Norton approached Joelle Buffa, Supervisory Biologist of the Refuge Complex at the time, to ask if there were unmet needs in the Biology Program that he could fill. Joelle suggested surveying two very important, but understudied harbor seal pupping and haul out sites on the Don Edwards San Francisco Bay National Wildlife Refuge: Mowry and Newark Sloughs. Norton started surveying that year and has conducted close to 600 surveys at each of the two locations, contributing over 6,000 volunteer hours. His efforts have highlighted the importance of these South San Francisco Bay locations to both local and regional harbor seal populations. Norton enjoys outdoor activities so much that instead of hopping in his car each week to get to the Refuge, he sometimes biked

or kayaked across the Bay. Stories from his hiking, camping, and biking trips throughout California, the U.S. and abroad with Elderhostel and Road Scholar kept conversations exciting for our interns, volunteers, and staff that joined him on surveys. In 2004, Norton received our Volunteer of the Year Award for his contributions to the harbor seal surveys, as well as his volunteering at other Refuges throughout our Complex. Norton's dedication, active lifestyle, thirst for knowledge, and contribution to science have been an inspiration to those who have been fortunate to make his acquaintance. Thank you Norton!

Rachel Tertes is a Wildlife Biologist at the Don Edwards San Francisco Bay National Wildlife Refuge

Top Right: Long-time volunteer Norton Bell conducting one of his harbor seal surveys for the Don Edwards SF Bay National Wildlife Refuge (Photo: USFWS) Right: Harbor seals along a slough of the Don Edwards SF Bay National Wildlife Refuge (Photo: Aric Crabb, Bay Area News Group)





## **Comings & Goings**

#### We Bid Goodbye ...

... to **Jared Underwood**, Refuge Manager for the Don Edwards San Francisco Bay National Wildlife Refuge (NWR), who set sail and left us April 26, 2019 to start a new leadership adventure as the Superintendent for the Papahanaumokuakea Marine National Monument. We are excited to see him take what he learned at the Don Edwards refuge and apply it in his new role working with other agencies to protect the Monument, a vast, wild and unique place. See the following link for a short video on the Monument: https://www.youtube.com/watch?v=6ZG2Q-B6LvQ.

On behalf of all of the Refuge Complex staff, our conservation partners and volunteers, we wish to thank Jared for all of his contributions over the last two years!

#### We Say Hello to...

... **Matt Brown**, the new Refuge Manager for the Don Edwards San Francisco Bay NWR. Matt had previously worked for the







From left: Jared Underwood, departing manager of the Don Edwards refuge; Matt Brown, new manager of the Don Edwards refuge; Miguel Marquez, new Urban Refuge Ranger at the refuge complex.

USFWS as the Superintendent of the Papahanaumokuakea Marine National Monument; Chief of Resource Management for the Haleakala National Park; Refuge Manager for Midway Atoll NWR; and Refuge Manager for Guam NWR. Most recently, Matt worked for the U.S. Forest Service in Vallejo, CA. We are excited to welcome him back home to the USFWS!

**Miguel Marquez** also joined the Refuge Complex in May as our new Urban Refuge Ranger. A native of Oakland, CA, Miguel comes to us from the National Park Service, where he worked at Juana Bautista de Anza National Historic Trail; Hot Springs National Park; and National Capital Parks-East. We look forward to benefitting from the skills Miguel brings with him to the position, which will help us increase our community engagement and foster relationships with existing and new audiences!

#### San Francisco Bay Wildlife Society Quarterly Message

**TIDELINE**: As Refuge Complex manager Anne Morkill describes in her column (pg. 3), changes are afoot for the *Tideline* newsletter. As a result, the Wildlife Society is considering several new approaches and formats for our outreach and communication with members, volunteers, and the public. Those wishing to continue receiving our regular communications can find out how at sfbws.com. As always, your feedback is also welcome! Meanwhile, stay tuned....

**UPCOMING EVENTS:** See this issue's calendar (pg.7-9) for a full list of upcoming activities and events. Watershed Watchers, funded by the Santa Clara Valley Urban Runoff Pollution and Prevention Program, continues to host public programs focused on decreasing the amount of pollution that enters and impacts the Refuge. Other programs include nature walks, hands-on discovery experiences, holiday programming, and interpretive programs that introduce visitors to the habitats, plants and animals on the Refuge. Hope Presley, our Watershed Watchers interpretive specialist, works with groups such as the Boy Scouts and Girl Scouts, doing activities

focused on litter and pollution prevention or reduction. The Marsh-In summer camp is also coming up soon (see the display ad below)!

**ON THE TRAIL:** As a persistent birder, but no expert, I am always trying to learn more about these enchanting species. San Francisco Bay Bird Observatory offered a workshop in February, Listen and Decipher: Bird Language in the Field, led by Jeff Caplan. If you ever can take this workshop, it's quite enjoyable. Recently, I explored another place to take a small walk, right in the middle of Silicon Valley: Ulistac Natural Area in Santa Clara, not too far from Levi's Stadium or the Refuge's Environmental Education Center in Alviso. I always enjoy the hallmark notes of a Western Meadowlark or Northern Mockingbird, but I never really thought about them as part of a language: calling to members of the flock, alerting other birds about a threat, singing to attract a mate, or sometimes just chirping, "I'm here." I highly recommend, on your next bird walk, just stopping, listening, observing, and making those connections to try to understand what

birds are telling each other, and us.

We need you!

CRITICAL Volunteer NEED: we TRULY need support – please consider helping. Join the Wildlife Society Board of Directors. Currently, for a variety of reasons, our Board of Directors is down to four members, instead of nine. We need people to join Renée, Chris, Aaron, and me on the board. Interested in learning more? Write me at Ceal.Craig@SFBWS.com PLEASE!

Also: volunteers are vital to assisting with our nature store operations at the Fremont and Alviso locations on the Refuge. Reach out to Mary Deschene at Mary.

Deschene@SFBWS.com or 510-792-0222 ext. 364 for more information, including what days volunteers are needed.

Check out our website: <u>sfbws.com.</u> You can also visit the National Wildlife Refuge Association site, <u>refugeassociation.org.</u> to learn more about the challenges facing National Wildlife Refuges today.

Hope to see you at the Refuges this summer!

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



#### 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 January 1 and March 31, 2019. These gifts will be used for publishing a Society newsletter, environmental education, habitat restoration, and interpretive programs at the Don Edwards San Francisco Bay National Wildlife Refuge.

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### Help Us Protect Your San Francisco Bay Wetlands!

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

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

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

**YES!** I want to support San Francisco Bay Wildlife Society and its programs. Enclosed is my donation of:

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Thank you for your support!

## The San Francisco Bay Wildlife Society has:

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

And much more ...

## Become a Supporting Member of the Society. Benefits include:

- Emailed newsletter and program schedule updates
- Tax deduction to the extent permitted by law
- 15% off at our nature stores
- Free book *Exploring Our Baylands*
- The joy of helping protect this important environment

## Summer 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.

## **June**

#### Saturday, June 1

#### Tai Chi & Refuge Nature Walk Environmental Education Center, Alviso 9:30 a.m. – 11:00 a.m.

Morning Crane founder Chris Shelton is a certified Tai Chi and Qigong practitioner and instructor with 20 years of experience. Chris Shelton has helped thousands of people around the world reclaim their health and enjoy lives free from chronic pain. Join us for a short nature walk afterwards to learn about the refuge. Program may be led by any of Morning Crane's instructors. All ages welcome. Sponsored by Morning Crane, San Francisco Bay Wildlife Society, and Santa Clara Valley Open Space Authority. Located in the open-air Pavilion, rain or shine. No registration necessary.

#### Drawbridge Van Excursion Environmental Education Center, Alviso 9:30 a.m. – 12:00 p.m.

An abandoned town in the San Francisco Bay? 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 scrabbling out a living? How long did it exist? Find out at this program, led by Ceal Craig, our Drawbridge expert. Start with a slide show, and then take a short van excursion to view Drawbridge across Coyote Creek. Program will be of most interest to adults interested in history or nature; children 13 and over with an adult are welcome. Space is very limited. RESERVATIONS REQUIRED. Go to: https://drawbridgetoursummer.eventbrite.com Questions? Hope: 408-262-5513 ext. 104. (Note: we do not visit the town itself - we go to the closest spot that one can legally view Drawbridge.)

#### Stewardship Saturday Visitor Center, Fremont 9:30 a.m. – 12:00 p.m.

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

## The Intersection of Land, Bay and Outer Space Sunnyvale Baylands

Sunnyvale Baylands 10:00 a.m. - 11:30 a.m.

This easy bicycle ride along San Francisco Bay Trail offers views of not only sloughs and distant hills but also salt ponds, Moffett Field runways and hangars, and NASA Ames research facilities (including the air intake for the 80x120 foot wind tunnel). Docent Laurel Stell will stop occasionally to describe how these sites reflect humans' changing relationship with Earth and far, far beyond. Wildlife sightings may include herons, egrets, ducks, swallows, turtles and more. Distance is 7 miles roundtrip; cycling speed will be roughly 10 MPH. Trail is flat with packed dirt surface suitable for road or mountain bikes. Bring water, binoculars, sunscreen. Meet at the Sunnyvale Water Pollution Control Plant: parking instructions will be provided upon registration. Registration Required. Go to: https://sunnyvalebikerefuge.eventbrite.com Questions? Call 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 approximately one mile walk traverses

and hear what makes this National Wildlife Refuge unique. The approximately one mile walk traverses through endangered species habitat and offers great views of south San Francisco Bay. Led by Rick Arellano.

#### Family Yoga (5-week session) Environmental Education Center, Alviso 1:30 p.m. – 2:30 p.m.

Bonnie Hasson presents Family Yoga at the Refuge. Bring the whole family to participate in a onehour yoga class held outside surrounded by nature. Join us for a short nature walk afterwards to learn about the Refuge. This is a 5-week session, and all classes are held on the following Saturdays: June 1, 8, 15, 22, and 29. The first class is mandatory, and ends at 3:00pm. More information will be given upon registration. A limited number of yoga mats are available for use during the class, please plan accordingly. Ideal for children ages 5-10 and their caregivers. Sponsored by San Francisco Bay Wildlife Society and Santa Clara Valley Open Space Authority. Reservations Required. For additional information and to register, go to: https://familyyogasummer.eventbrite.com. Ticket registration ends Wednesday, May 29. Questions? Call: 408-262-5513 ext. 100 or 104.

#### Saturday, June 8

#### Jr. Refuge Ranger Environmental Education Center, Alviso 10:00 a.m. – 12:30 p.m.

Does your child have a love and fascination for the outdoors, nature, and wildlife? Come join our professional Refuge Rangers on a guided habitat hike and stewardship activity. Children will earn their very own Jr. Refuge Ranger badge and become part of our team that helps protect and educate others about wildlife. Our Jr. Refuge Ranger program creator, Lynnea Shuck, will be joining us to share the history of the program and what she has planned for the future. Bring a picnic lunch to enjoy afterwards. Great for families and scout groups. Best for ages 7 and up, but all are welcome. Registration Recommended. Go to: https://jrrefugerangereec.eventbrite.com Questions? Call 408-262-5513 ext. 104.

## Exploring the Dunes Antioch Dunes NWR, Antioch 10:00 a.m. – 11:00 a.m.

Antioch Dunes National Wildlife Refuge is home to three endangered species: two gorgeous flowering plants (Antioch Dunes Evening Primrose and Contra Costa Wallflower) and a delicate butterfly found nowhere else on the planet - Lange's Metalmark butterfly! Generally, this refuge is closed to the public to protect them. However, once a month we have docent-led walking tours to explore and learn about this incredible refuge and its importance in the Delta. This guided walk lasts 1-1.5 hours on a relatively flat, sandy road. Wear sturdy shoes for the sandy walk along the dunes. All ages welcome. No reservations required. Please note that there are no facilities on the property. Refuge address is 501 Fulton Shipyard Road, Antioch 94509. Contact 510-521-9717 for questions.

#### Hike the Mallard Slough Environmental Education Center, Alviso 10:00 a.m. – 12:00 p.m.

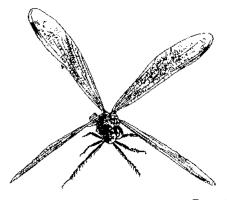
Look for birds, mammals, and animal tracks as we explore along the water's edge on this 3.7-mile nature walk. Bring binoculars and your favorite field guide to help enjoy the views. Have at least one liter of water, snacks, and appropriate clothing. Rain will cancel this hike due to possibly muddy trail. Led by Steve Stolper, certified California Naturalist. Reservations are recommended. Go to: https://hikeeectrail.eventbrite.com Questions? Call Hope: 408-262-5513 ext. 104.

#### Geology Rocks on the Hills Visitor Center, Fremont 10:30 a.m. – 12:00 p.m.

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

#### Twilight Marsh Walk Visitor Center, Fremont 7:00 p.m. – 8:45 p.m.

Experience the salt marsh at twilight on an easy stroll along Tidelands Trail (1.3 miles). 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. Go to https://donedwardstwilight.eventbrite.com or call 510-792-0222 ext. 363. Led by Mary and Gene Bobik.



## Summer 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, June 15

## \*Restoring Inner Bair Island Walking Tour

Inner Bair Island, Redwood City 10:00 a.m. – 11:30 a.m.

Join Peninsula Open Space Trust and the Don Edwards SF Bay National Wildlife Refuge for a beautiful walking tour of Inner Bair Island. There will be two groups - a volunteer-led 2.5 mile stroll, or an interpretive 1.5 mile walk. The interpretive walking tour will highlight the wetlands and the marine life that live within, such as the endangered Ridgeway's rails and the salt marsh harvest mouse. You may also spot cottontail rabbits, peregrine falcons, pelicans, egrets, terns, and stilts. Make sure to bring binoculars to catch sight of some of the beautiful birds at Bair Island. Directions: Take Highway 101 and exit at Whipple Ave in Redwood City. Head west toward the bay. The road winds 0.5 mile becoming East Bayshore, then Bair Island Road. The Don Edwards National Wildlife Refuge Bair Island parking lot is on the right. Meet by the restrooms. Reservations required. Go to https://www.eventbrite.com/e/inner-bair-island-interpretive-walking-tour-tickets-60140581097.

#### Volunteer Orientation Environmental Education Center, Alviso 11:00 a.m. – 12:00 p.m.

Interested in volunteering at our Alviso location, but not sure what you want to do? This will provide a brief overview of the various opportunities we have available. Please RSVP by emailing Hope at watershedwatchers@sfbws.com.

#### Saturday, June 22

#### \*Family Bird Walk Visitor Center, Fremont 1:00 p.m. – 3:00 p.m.

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

#### Wheels and Wildlife Bike Tour Environmental Education Center, Alviso 1:00 p.m. – 4:00 p.m.

Did you know you could ride your bike on the Refuge trails in Alviso? Join us for a bicycle tour around

the levee. We will stop along the way to learn about the Refuge, the wildlife and habitats they use, the importance of Coyote Creek watershed, and the history of the area. The ride is 4.5 miles on a level trail, and there is no shade along the way. Must provide your own bikes, gear, and water bottles. Helmets are required for children. Water and snacks will be provided at a stop. Children ages 10+ recommended, please use your best judgement on skill level for the distance. Sponsored by San Francisco Bay Wildlife Society, Keep Coyote Creek Beautiful, and San Francisco Bay Bird Observatory. Registration Recommended. Go to: https://190622-bike.eventbrite.com Questions? Call 408-262-5513.

#### Saturday, June 29

## Visitor Center Desk Training – Fremont

Held on three successive Saturdays: June 29, July 6, and July 13 10:00 a.m.-12:00 p.m.

The refuge is seeking volunteers to staff the Visitor Center information desk in Fremont. Once trained, volunteers will work a minimum of two shifts a month for a minimum of four months. This training is six hours and is broken up over three Saturdays. We will walk the trails, discuss the history of the refuge and its mission, find out more about the wildlife that lives here, learn about working at the VC desk, and go over standard visitor questions. To volunteer at the information desk, you must be able to attend all of the sessions. This training may in part be helpful to individuals interested in becoming program docents in the future. To apply for the position and register for the training, contact Paul\_Mueller@fws. gov or call 510-792-0222, ext. 476.

#### DIY Sea Flow Filter Environmental Education Center, Alviso 10:00 a.m. – 12:00 p.m.

Did you know urban runoff pollution is one of the greatest threats to our beloved San Francisco Bay? Urban runoff pollution is what travels down streets, into storm drains, out into our creeks and ultimately the bay. Join us to learn about what you can do at home to help prevent this type of pollution and make your own Sea Flow Filter for the storm drain in your neighborhood. Great for families. All ages welcome. Presented by Girl Scout Ambassador Kami, from Troop 61448. Reservations Recommended. Go to: https://diyseaflowfilter.eventbrite.com

#### Tiny Drifters

## Environmental Education Center, Alviso 1:00 p.m. – 2:30 p.m.

Questions? Call 408-262-5513 ext. 104.

Did you know there are tiny floating creatures that live in our Bay? They are called plankton. Learn about the different characteristics of plankton, how they have adapted to survive, and their importance in the food chain. We will become Planktologists for a day, collecting water samples and using microscopes to identify these incredible organisms. All ages are welcome. Great for families and scouts. Reservations Recommended. Go to: https://eectinydrift.eventbrite.com Questions? Call 408-262-5513 ext. 104.

## Fox Stories: Indicators that Fox are in Your Area

Visitor Center, Fremont 2:00 p.m. – 3:15 p.m.

Do you sometimes see paw prints in mud or scat (poop) on the trails and assume that a dog left it? It could be from something else. Come along with me

and I will show you how to distinguish and identify the markings of a gray fox. Gain some insights into the fox's nature and their behavior during the walk. By the time we are through, you will have a set of "tools" you can use to identify the presence of foxes in any area that you are in. Bring a hat, binoculars, and good walking shoes. Led by Bill Leikam from the Urban Wildlife Research Project. Register at http://donedwardsfox.eventbrite.com.

## July

#### Saturday, July 6

Nature Walk for Health Visitor Center, Fremont 10:30 a.m. – 11:30 a.m.



See June 1 for program description and registration information.

#### Saturday, July 13

#### Tai Chi & Refuge Nature Walk Environmental Education Center, Alviso 9:30 a.m. – 11:00 a.m.

See June 1 for program description and registration information

#### Drawbridge Van Excursion Environmental Education Center, Alviso 9:30 a.m. – 12:00 p.m.

See June 1 for program description and registration information.

## Crafts in the Outdoors: Beginning Leatherwork Environmental Education Center, Alviso

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

## Exploring the Dunes Antioch Dunes NWR, Antioch

10:00 a.m. – 11:00 a.m.

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

See June 8 for program description and registration information.

#### Geology Rocks on the Hills Visitor Center, Fremont

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

See June 8 for program description and registration information.

#### Saturday, July 20

#### **Stewardship Saturday**

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

See June 1 for program description and registration information.

#### \*Family Bird Walk Visitor Center, Fremont 1:00 p.m. - 3:00 p.m.

See June 22 for program description and registration information.

#### **Twilight Marsh Walk** Visitor Center, Fremont 7:00 p.m. - 8:45 p.m.

See June 8 for program description and registration information.

#### Saturday, July 27

#### Paint with a Ranger **Environmental Education Center, Alviso** 10:00 a.m. - 11:30 p.m.

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

#### Fox Stories: Indicators that Fox are in Your Area

**Visitor Center, Fremont** 2:00 p.m. - 3:15 p.m.

See June 29 for program description and registration information.

## **August**

#### Saturday, August 3

#### **Nature Walk for Health** Visitor Center, Fremont 10:30 a.m. - 11:30 a.m.

See June 1 for program description and registration information.

## Saturday August 10

#### Tai Chi & Refuge Nature Walk **Environmental Education Center, Alviso**

9:30 a.m. - 11:00 a.m.

See June 1 for program description and registration information.

#### **Exploring the Dunes** Antioch Dunes NWR, Antioch 10:00 a.m. - 11:00 a.m.

See June 8 for program description and registration information.

#### **Insect Exploration**

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

Insects have been on this Earth for hundreds of millions of years. Come learn about the many different insects that call the San Francisco Bay Area home. We will examine insects and learn how they have adapted to survive. Join us as we dig in the dirt and crawl through the plants, in search for our six-legged friends. Be prepared to get dirty. All ages are welcome. Reservations recommended. http://eecinsect.eventbrite.com. Questions? Call 408-262-5513 ext. 104.

#### Geology Rocks on the Hills

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

See June 8 for program description and registration information.

#### \*Family Bird Walk Visitor Center, Fremont 1:00 p.m. – 3:00 p.m.

See June 22 for program description and registration information.

#### Friday, August 16

#### **Night Sky Party**

**Environmental Education Center, Alviso** 8:30 p.m. - 10:30 p.m.

Meet the stars of summer and view the moon and maybe some planets. Join our amateur astronomers as we learn about constellations. Make a star chart and then venture outside to view the night sky through a telescope. Afterwards, warm up with some hot chocolate. Dress warmly, as it gets cold in the evening. Fun for the whole family. Great for Scout groups. Reservations are recommended. Go to: https://nightskysummer19.eventbrite.com Questions? Hope: 408-262-5513 ext. 104.

#### Saturday, August 17

#### Why Tides Matter

**Environmental Education Center, Alviso** 10:00 a.m. - 11:00 a.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 1-mile hike. Binoculars will be provided. All ages are welcome, bring your whole family. Reservations recommended. Go to: https:// eectides2019.eventbrite.com Questions? Call Hope: 408-262-5513 ext. 104.

#### Wheels and Wildlife Bike

#### Tour - Sunset

**Environmental Education Center, Alviso** 4:00 p.m. - 7:00 p.m.

Did you know you could ride your bike on the Refuge trails in Alviso? Join us for a sunset bicycle tour around the levees. We will stop along the way to learn about the Refuge, the wildlife and habitats they use, the importance of Coyote Creek watershed, and the history of the area. The ride is 4.5 miles on a level trail, and there is no shade along the way. Must



# Summer 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.

provide your own bikes, gear, and water bottles. Helmets are required for children. Water and snacks will be provided at a stop. Children ages 10+ recommended, please use your best judgement on skill level for the distance. Sponsored by San Francisco Bay Wildlife Society, Keep Coyote Creek Beautiful, and San Francisco Bay Bird Observatory. Registration is recommended. Go to: https://190817-bike. eventbrite.com Questions? Call 408-262-5513.

#### Saturday, August 24

#### **Drawbridge Van Excursion Environmental Education Center, Alviso** 9:30 a.m. - 12:00 p.m.

See June 1 for program description and registration information.

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

See June 1 for program description and registration information.

#### **Crafts in the Outdoors:** Beginning Leatherwork

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

See July 13 for program description and registration information.

#### Twilight Marsh Walk **Visitor Center, Fremont**

6:30 p.m. - 8:15 p.m.

See June 8 for program description and registration information

#### Saturday, August 31

#### Fox Stories: Indicators that Fox are in Your Area

**Visitor Center, Fremont** 2:00 p.m. - 3:15 p.m.

See June 29 for program description and registration information.



## Field Trips to the Refuge

# Wetland Round – Up (Kinder - 4th grade) Program\*

Wetland Round-Up field trip programs, designed for Kinder - 4th grade students, are offered at our Headquarters in Fremont, and at the Environmental Education Center in Alviso. This program actively involves 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 introduce endangered species, migratory birds, and wetland habitats to the students. All programs have been correlated to the appropriate State of California Education Standards. We are piloting new and modified activities that support Next Generation Science Standards.

Educators and adult leaders conduct their own field trips after attending a Field Trip Workshop. We provide easy to follow "scripts" for each station, but both "leaders" and "chaperones" are strongly encouraged to attend a Field Trip Workshop. New teachers must attend a Field Trip Workshop.

## Field Trips at Learning Center in Fremont

Wetland Round-Up Field Trips

Registration information for the 2019/2020 school year will be announced on the Refuge's website in August 2019.

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

Registration information for the 2019/2020 school year will be announced on the Refuge's website in August 2019. For questions contact Genie Moore, 408-262-5513 x100, genie\_moore@fws.gov.

## Wetland Round-Up Field Trip Workshops

The workshop dates will be announced on-line with the Field Trip Registration information (see above).

#### Watershed Watchers Program

Habitat Restoration Service Learning Field Trips (5-12th)

The Watershed Watchers program is excited to announce the addition of Habitat Restoration Service Learning Field Trips for grades 5-12h! Students have the opportunity to learn about the important habitats that surround the Bay, the wildlife that depend on them and how they help on site and at home! Watershed Watchers is an interpretive program offered at no cost though the cooperative efforts of the Santa Clara Valley Urban Runoff Pollution Prevention Program, U.S. Fish and Wildlife Service, and the San Francisco Bay Wildlife Society.

Field trips include a Habitat Hike; going on the boardwalk and levee trails, seeing all five habitats at the Refuge; Restoration Work, improving Upland habitat in the Butterfly Garden and surrounding areas by removing invasives and planting natives; and an optional trash pickup, using the Litterati app to document the types of trash found. Field Trips are limited to a max of 35 students, and a min of 10. The time frame is 10:00am – 1:00pm, including time for lunch.

Program Offerings: Programs will be offered from September – May on Tuesdays and Thursdays at the Environmental Education Center in Alviso. \*Due to funding restrictions, program numbers are limited and first priority will be given to schools located within Santa Clara County.

Please contact Hope Presley, Watershed Watchers Program Coordinator, at hope. presley@sfbws.com or (408) 262-5513 ext. 104 to set up your field trip!



## College and University Field Trips

Staff-led Field Trips

Guided field trips by staff are 2 hours and include a PowerPoint presentation, followed by a Habitat Hike at the Environmental Education Center in Alviso. Reservations must be made at least eight (8) weeks in advance of the desired field trip date. Please contact Hope Presley at hope.presley@sfbws.com or (408) 262-5513 ext. 104.

#### Instructor-led Field Trips

Instructors from local colleges can lead their own field trip excursions at the Environmental Education Center in Alviso. All instructors planning this type of excursion must make a reservation at least 8 weeks in advance of the desired field trip date. If your group size is over 25, you will need to acquire a special use permit from our headquarters office in Fremont. Please contact Hope Presley at hope.presley@sfbws.com or (408) 262-5513 ext. 104.

Due to funding restrictions, program numbers are limited and first priority will be given to colleges located within Santa Clara County.

## Programs for Scout Groups

Programs are offered for Boy and Girl Scout Groups at the Environmental Education Center in Alviso and are sponsored by the Watershed Watchers Program. \*Please note: Programs are 1.5 hrs, and are offered Sept - May only. Must be scheduled 8-12 weeks in advance, and badges are not provided (group leaders are responsible for fulfilling badge requirements).

Visit https://www.fws.gov/refuge/ Don\_Edwards\_San\_Francisco\_Bay/Scouts. html for additional information and to choose desired program.

Please contact Hope Presley at hope.presley@sfbws.com to schedule.

Due to funding restrictions, program numbers are limited and first priority will be given to groups located within Santa Clara County.

#### Application for 2019/2020 Blue Goose Bus Fund

The Blue Goose Bus 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 2018/2019 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 and schools with proven hardships to access the Wetland Round-Up 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 Blue Goose Bus Fund Application Form. Please follow these steps and we will contact you as soon as possible with a response. You may also contact Genie Moore at 408-262-5513 ext 100 or at genie\_moore@fws.gov

Please refer to our website for more information: https://www.fws.gov/refuge/Don\_Edwards\_San\_Francisco\_Bay/Environmental\_Education.html

\*All of our programs are offered FREE of charge. Location of activities and trail conditions may vary. Please call for accessibility information.



Bringing young visitors to our Refuges, through programs like the Blue Goose Bus Fund, Wetland Round-Up and Marsh-In Summer Camp, helps engage future generations with the importance of conservation and the preservation of wild lands. (Photo: USFWS)

#### **TIDELINE**

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Editor: ...... Doug Cordel

To receive *Tideline*, email paul\_mueller@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 & 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 Islands NWR, Marin Islands NWR, Salinas River NWR, and San Pablo Bay NWR.

#### Tideline is On-Line Visit our web sites at

https://www.fws.gov/refuge/antioch\_dunes
https://www.fws.gov/refuge/don\_edwards\_san\_francisco\_bay
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San Francisco Bay Wildlife Society P.O. Box 234, Newark, CA 94560



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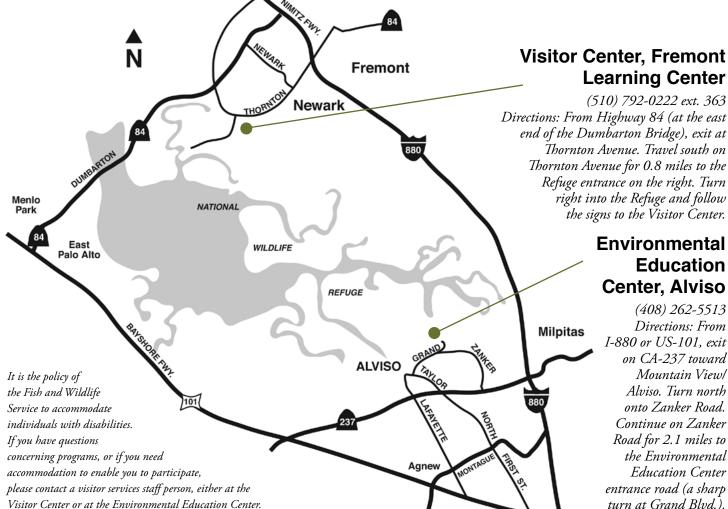
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Antioch Dunes / Don Edwards / Ellicott Slough / Farallon Islands / Marin Islands / Salinas River / San Pablo Bay



#### **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.).