



## Capacity. Capability. Character.

## West Coast Leader In Aggregates, Dredging, and Marine Construction Services







Call 415-258-6876 or visit our website at www.dutragroup.com





## DO YOU KNOW WHO CAUGHT YOUR FISH? ... SCOMA'S DOES!

Local fishermen help Scoma's to achieve our goal of providing the freshest fish possible to our guests; from our PIER to your PLATE Scoma's is the only restaurant in San Francisco where fisherman pull up to our pier to sell us fish!

Whenever our own boat cannot keep up with customer demand, Scoma's has always believed in supporting the local fishing community. On any given day, Scoma's knows which boat and what captain caught not only our salmon, but any other species of fish we serve as well.

#### **SCOMA'S RESTAURANT**

1965 AL SCOMA WAY, SAN FRANCISCO, CA 94133 415 771 4383 SCOMAS.COM

**WE OFFER COMPLIMENTARY VALET PARKING** 







**ScomasSF** 

### **Great food to celebrate life in the City!**

Enjoy a ten minute walk from the Ferry Building or a short hop on the F-Line

#### **Crab House at Pier 39**

- ✓ Voted "Best Crab in San Francisco"
- Sizzling Skillet-roasted Mussels, Shrimp & Crab
- Romantic Cozy Fireplace
- Stunning Golden Gate Bridge View

Open Daily 11:30 am - 10 pm 2nd Floor, West Side of Pier 39 Validated Parking

crabhouse39.com

415.434.2722



#### Franciscan Crab Restaurant

Open Daily 11:30 am - 11 pm • Pier 43 1/2 • Validated Parking

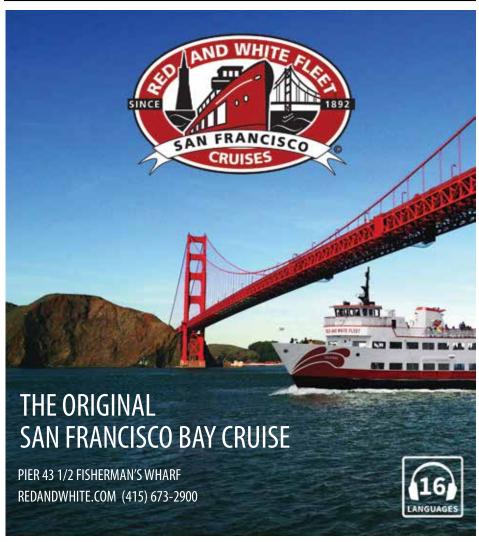
- Whole Roasted Dungeness Crab
- Breathtaking Views
- · Bay Side of Historic Fisherman's Wharf

415.362.7733

franciscancrabrestaurant.com







# BAYCROSSINGS

"The Voice of the Waterfront"

## columns

- 08 WHO'S AT THE BAR? Tori Anna by Matt Larson
- **16** CULTURAL CURRENTS Boxing, Sculpture and Bygone Barracks by Paul Duclos
- **17** ENDANGERED ART Sumatran Tiger by Anke Fachmann

## **BAYCROSSINGS**

Bobby Winston, Proprieto Joyce Aldana, President Joel Williams, Publisher Patrick Runkle, Editor

**ADVERTISING & MARKETING** 

Joel Williams, Advertising & Marketing Director

**GRAPHICS & PRODUCTION** 

Francisco Arreola, Designer / Web Producer

**ART DIRECTION** 

Francisco Arreola; Patrick Runkle; Joel Williams

COLUMNISTS

Paul Duclos; Patrick Burnson; Sejal Choksi-Chugh; Matt Larson; Mallory Johnson; Captain Ray Wichmann; Anke Fachmann

WRITERS & PHOTOGRAPHERS

Bill Picture; Joel Williams

**ACCOUNTING** 

Cindy Henderson

**Advertising Inquiries:** (707) 556-3323, joel@baycrossings.com

**Bay Crossings SF Ferry Building Store** 

(415) 362-0717 Clipper customer service center

(877) 878-8883 For Transit Information – Dial 511

> Bay Crossings Ferry Building, #22 San Francisco, CA 94111

www.baycrossings.com A Division of Nematode Media, LLC

## **features**

12 COVER STORY Hydrogen Ferry, Supported by Red and White Fleet, Passes Feasibility Study by Bill Picture

**14** GREEN PAGES Rockefeller Foundation Gives \$4.6 Million to Tackle Climate Change by BC Staff

### news

- **WATERFRONT NEWS** Cal Maritime Touts the "Academy" Advantage by Patrick Burnson
- **07** WETA Brings Ferry Service to Mare Island
- **07** Port of Oakland Commits \$600 Million to Growth by BC Staff
- **BAYKEEPER** The Bay Is Under Threat From Washington D.C. by Sejal Choksi-Chugh
- **IT CAME FROM BENEATH THE SEA** Sharks a Plenty by Mallory Johnson



## guides

- WATERFRONT ACTIVITIES Our recreational resource guide
- **BAY AREA FERRY SCHEDULES** 20 Be on time for last call
- AROUND THE BAY To see, be, do, know



This month's cover is a drawing of the hypothetical "SF-BREEZE" hydrogen ferry based on an engineering model provided by Sandia National Laboratories. According to a feasibility study completed last fall, hydrogen fuel cells can generate the power needed to move a fully-loaded passenger ferry across the San Francisco Bay—and they can do so without sacrificing speed or impacting the region's air quality.

#### **Corrections & Letters**

We appreciate the opportunity to publish our readers' comments, letters or requests for corrections, which can be sent to joel@baycrossings.com.

### **WE'RE EXCITED TO ANNOUNCE** THE RELEASE OF





MyRide gives you real time bus location and estimated bus stop arrival times. It's easy. Download the myStop Mobile app for free OR text "MR" + bus stop ID to 321123.

> Visit our website for details. www.SolTransRide.com





**BAY CRUISES • ROCKETBOAT • FERRIES • TOURS** 



## ESCAPE FROM THE ROCK

90-minute cruise around the bay and Alcatraz that reveals the untold stories of life on The Rock



Get your tickets at PIER 39 415.773.1188 • blueandgoldfleet.com

## **Cal Maritime Touts the** "Academy" Advantage

#### BY PATRICK BURNSON

cademies are traditionally small, focused, structured educational institutions. These characteristics all describe California State University Maritime Academy (Cal Maritime) in Vallejo, whose 1,075 students study one of only six majors. Personalized teaching is emphasized, with a student-to-faculty ratio of 13 to 1 and an average class size

Some people assume Cal Maritime is a military academy because its students wear uniforms, but this is not accurate. In fact, 92 percent of its graduates go directly into for-profit companies, nonprofit organizations, government agencies or graduate schools, while eight percent graduate as commissioned officers in the military.

"We do stress some similar values as the military academies such as leadership and accountability—but our students have no obligation to join the military when they graduate," said spokespeople. "Our reputation among the many corporations, industries, agencies and graduate schools filled with Cal Maritime alumni is that of a school preparing professional, responsible and successful graduates."

#### Free Maritime Lecture Series in San Francisco

Cal Maritime professors will be among those examining maritime history, science and art at a free lecture series at the San Francisco Maritime National Historical Park beginning this month.

The Blue Room Lectures are presented in a partnership of the National Park Service and California State University. All the programs take place at the Maritime Museum's Blue Room at 900 Beach Street, San Francisco. A question-and-answer session follows each talk.

Saturday, March 25: Artists Lauren Hartman and Martin Machado will present "Onshore Winds and Offshore Accounts," a conversation focusing on capturing the sights and subjects at ports of call all over the world in artistic works.

Saturday, May 20: Dr. Alex Parker will discuss "Urban Oceans: The Remarkable Changing Ecology of the San Francisco Estuary."

Saturday, July 29: Kate Sammler will discuss "Measurement and Mean-



California State University Maritime Academy (Cal Maritime), located on Vallejo's waterfront, is one of only seven degree-granting maritime academies in the United States—and the only one on the West Coast.

ing: Rising Sea Levels and Sinking Elevations." From the local San Francisco tide gauge—the nation's oldest continually operating tidal observation station—to the concept of global mean sea level, this lecture will examine the historical development of sea level and the geopolitical and geophysical implications of rising seas.

All programs begin at 1 p.m. For more information, contact (415) 561-7177.

#### Middle Harbor Project Brings **Efficiency to Long Beach**

Many Cal Maritime grads go on to develop successful careers in seaport terminal management as well. For example, academy alumni from a variety of backgrounds are pushing the maritime industry to even greater efficiencies as part of the Middle Harbor Redevelopment Project in Long Beach.

project employs as well as sophisticated control, navigation and terminal operations software, and it challenges the norms of terminal operations with its zeroemissions footprint, advanced software technologies, use of automation and cutting-edge engineering technology.

Middle Harbor is unique among all the terminals in the world, including other terminals that incorporate automation. In fact, it is the greenest and most technologically-advanced terminal in the world today.

Among the many contractors and subcontractors who are working on the project, there are many Cal Maritime alumni. And the project operator, Long Beach Container Terminal, employs

academy alumni who are performing feats of operational magic driven by automated machines.

#### **NavisWorld Conference Returns**

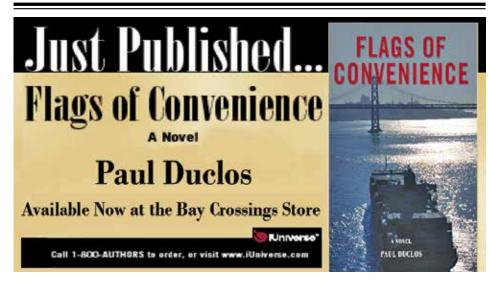
Finally, Cal Maritime students and grads may well be among those working waterfront professionals attending this year's NavisWorld in San Francisco this

For Oakland-based Navis, this is its 11th biennial event, and it will once again provide a forum for participants to learn best practices in business and operations management from an international group of terminal and supply chain industry professionals.

Industry and technology product experts from Navis, ports and terminals, partners and other industry associations will present sessions and deliver information on the latest technologies and process improvements that are being used today to optimize terminal and supply chain processes.

Navis World 2017 is an invitation three-day Navis customer conference that brings together more than 300 marine terminal executives, directors, managers and IT personnel from around the world. Every other year, leaders in supply chain operations gather at NavisWorld to network and learn about the latest and most innovative solutions that are helping to improve operational efficiencies.

Patrick Burnson is the Executive Editor of Logistics Management. (www.logisticsmgmt.com)



## San Francisco Bay Ferry Adds Mare Island Ferry Service

he Water Emergency Transportation Authority (WETA) will begin ferry service between Mare Island and the Vallejo Terminal on March 6. Passengers boarding at Mare Island may stay onboard and continue on to San Francisco, paying only the standard Vallejo-to-San Francisco fare; they will not be charged the additional Mare Island-to-Vallejo fare.

The new passenger boarding facility is next to WETA's North Bay Operations and Maintenance Facility, located within the area of the former Mare Island Naval Shipyard. The facility has three fullservice waterside berths to accommodate maintenance and passenger activities for up to six vessels and also serves as the northern anchor of WETA's San Francisco Bay Ferry region-wide operations.

Please note that vessels from Mare Island wait up to 15 minutes after arriving at the Vallejo Terminal before departing for San Francisco. Initially, there will be no parking fee at Mare Island. Ferry riders may park in designated areas at the Mare Island Ferry Terminal.

Mare Island weekday service will consist of seven trips between Mare Island and Vallejo; the weekend schedule provides four trips (see page 20 for updated schedule).

Mare Island and the Vallejo Ferry Terminal is \$1.60—the same as current

short-hop fares elsewhere in the WETA The standard fare for a trip between system. The Mare Island short-hop fare for seniors and disabled passengers will be \$.80.



Passengers can now take the ferry from Mare Island to Vallejo, and they can go from Mare Island to San Francisco for the standard Vallejo-to-S.F. fare.

## **Port of Oakland and Partners Commit \$600 Million to Growth**

#### **BY BC STAFF**

ast month at a conference in Tampa, Port of Oakland • Maritime Director John Driscoll outlined a \$600 million spending plan for growth. Driscoll said the Port of Oakland would increase trade volume by investing in new facilities and better infrastructure, with the objective of more containerized cargo.

"We're building for growth in a shipping industry that is becoming more and more competitive," Driscoll said at an American Association of Port Authorities conference. "By investing with partners who share our vision, we can deliver services that will be of great value to the global supply chain."

Driscoll said the port would team with private developers and public agencies to modernize infrastructure. He said investment from all three sources would be used to create new logistics capabilities in Oakland. It will also help eliminate bottlenecks that inhibit cargo flow, he said. Among the proposed investments:

- million, mostly government grants, to separate railroad tracks from major port roadways:
- A \$90 million, privately built refrigerated warehouse called "cool port" to increase chilled beef and pork exports;
- A \$50 million expansion, also privately financed, of the port's second-largest marine terminal.

Driscoll said the port has just completed a \$100 million railyard near marine terminals and a proposed logistics complex. The proximity of the new developments should be a drawing card for shippers, he said, noting that it will enable cargo to be quickly shifted between rail, road and ocean transport—a critical feature for timesensitive international shipments. At most gateways, transferring of cargoknown as transloading—takes place away from the port.

Driscoll also said construction on the cool port could begin this month. Terminal expansion is already underway. The truck-rail grade separation still awaits government funding.



#### Support San Francisco Baykeeper.

San Francisco Baykeeper is the pollution watchdog for San Francisco Bay. Since 1989, we have been patrolling the Bay for pollution, strengthening clean water laws, and holding polluters accountable. Baykeeper is dedicated to restoring the Bay to a healthy, thriving estuary.

We rely on the support of people like you who care about the health of the Bay and its wildlife. Visit us online at www.baykeeper.org and become a member today.

SAN FRANCISCO BAYKEEPER. www.baykeeper.org

## **Tori Anna**

#### BY MATT LARSON

fter riding the Vallejo ferry for four years to get to school in San Francisco, commuting from her home in Napa, Tori Anna has taken her affinity for the ferries to a whole new level—in May 2016 she became a ferry employee. Today, you can find her as a bartender on the very Vallejo ferries that helped her earn her degree from the Academy of Art University.

Getting started was easy, because by the time she started working, the ferry was a home away from home. And she still gets to see all the friends she made while commuting. "I see them all the time! Except I'm the one serving them drinks now," she said. Suffice it to say it's been an easy transition. "I already knew and loved everyone, a lot of the bartenders were like my family."

As a passenger, Tori managed to make a whole new circle of friends just from riding the ferry. "If you want to socialize after work, you have all your friends that ride the ferry regularly. Get your drinks and just have a good time," she said. "There's even people who play games regularly. I ended up learning how to play Settlers of Catan because of the ferry."

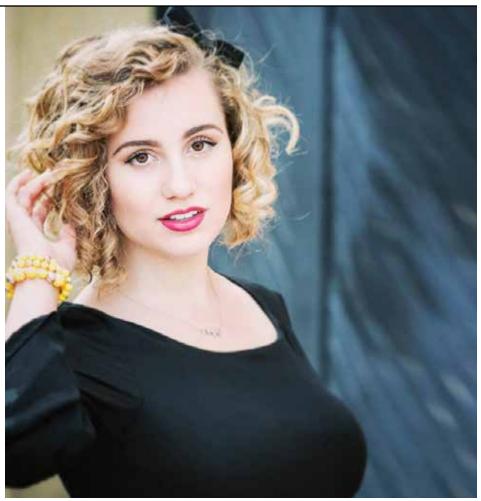
In addition to her beloved staff and regular customers, Tori loves the tourists

as well because she gets to play tour guide. Her primary recommendation for tourists is to head to Local Edition, a "subterranean hideaway" underneath one of the old newspaper buildings on Market Street. "It's filled with typewriters and old newspapers; it's like a step back in time when you go down there," said Anna. "I'm super into jazz so I love to go to Local Edition."

By "super into jazz," what Anna means is that she's an actual jazz singer, guitarist and pianist, and is busy at work on her album. "I've been singing since age two, performing since age seven and recording since age eight," she said. "I've got a lot of experience under my belt, but I need something to show for it!" Hence, her album is coming soon. She did, however, make it to Hollywood on season 12 of *American Idol*. Search YouTube for "Tori Anna" to get a sample of her work, or just head to Silo's in Napa on April 29 to see her perform live.

Tori's musical stylings are based in modern jazz; however, she also likes tradition and is very into the Great American Songbook. "I like to always stick to those roots, but I always put a modern spin on things because, of course, we're in 2017," Anna said. "Not everyone is as passionate about old music as I am." She's basically like Ryan Gosling in *La La Land*.

So she lives in Napa, works on the ferry and performs live jazz, but you still



Longtime ferry rider and accomplished singer Tori Anna can now be found serving drinks and snacks to the people who used to be her fellow passengers on the Vallejo ferry route.

think you've seen Tori Anna somewhere else? It could be at The Coffee Curb, her family's coffee shop in Vallejo. They've owned it for 15 years now, since it was a Caffino back in the day—which, by the way, was the first Caffino franchise ever. But they changed the name to make it truly their own. "I grew up in that store," Anna said. "The community in Vallejo is just so wonderful." Many customers come and support their employees' kids' softball games, and many employees

have regular customers' drink orders ready to go before they even pull up.

Helping the public has been part of Anna's life from a very early age. Whether it's serving up a drink or providing a stunning performance, she wants people to be happy. That's why she recommends you take the ferry. "I couldn't think of a reason not to," she said. "You're not stuck in traffic, not paying tolls, not worried about parking—the ferry is pretty much the best way to do it."

#### 



## Earn Your Captain's License

Maritime Institute has a course near you! From *Alameda* to *San Diego* or *On-Line* at your own pace.

Call Today 888-262-8020 or Visit www.MaritimeInstitute.com

Stop By Our Booth #L14

SAIL & POWER BOAT SHOW

April 6 - 9, 2017

Craneway Marina
Richmond, Ca

### Captain's License OUPV/Master up to 100GT

Monterey, CA Alameda, CA So. Lake Tahoe, CA March 20 - 31, 2017 April 17 - 28, 2017 May 15 - 26, 2017 STCW - Basic Safety Training San Diego, CA March 20 - 24, 2017 License Renewal Alameda, CA May 1, 2017 It's more fun on the ferry...

SF Ferry Building
Farmers' Market
Exploratorium

**Pier 41**PIER 39 Shops & Dining
Fisherman's Wharf

AT&T Park
Giants Game
Service

Follow. Connect. Share.









For Ferry Route, Schedule, Ticket and Terminal Information

www.SanFranciscoBayFerry.com (415) 705-8291





# The Bay is Under **Threat from** Washington D.C.

#### BY SEJAL CHOKSI-CHUGH

mid the drama of alternative facts and security leaks, the new administration has been unpredictable. And as its anti-environment agenda becomes clearer, Baykeeper's attorneys and scientists are evaluating how best to protect San Francisco Bay from looming threats.

One imminent threat is the administration's short-circuiting of environmental protections in order to facilitate greater use of oil and coal. If the United States opens more oil pipelines and mines more coal, not only will pollution increase at extraction sites across the continent, pressure will intensify to transport much more oil to the Bay Area for refining. The pressure will also increase to export both oil and coal from Bay Area ports. The risk of oil spills and coal pollution will go up dramatically in the Bay—and in local communities, too.

That's why Baykeeper is doubling our efforts to stop local expansion of oil and coal. We recently sponsored a new state law that bans state funding for coal shipping terminals. Along with a coalition of groups, we succeeded in getting Oakland to ban coal exports from that city. Now the developer who wanted to export coal has challenged the ban, so Baykeeper attorneys are defending it in court. We are also opposing a development

project proposed for Vallejo that may include coal export. And we are working to strengthen state laws to prevent oil spills in the Bay.

With climate change deniers leading the country, the Bay's wetlands are also under threat. Ongoing efforts to restore the Bay's wetlands are needed to decrease pollution, increase habitat for wildlife and protect shorelines from sea level rise caused by climate change. But much of this wetland restoration is funded by federal grants that could vanish at the whim of the new Environmental Protection Agency head.

Baykeeper's legal victories over our last 27 years have resulted in over \$10 million in funding to groups that restore San Francisco Bay's shoreline. We'll continue to generate this important source of funds. We are also sponsoring new legislation to require that clean dredged sediment be used to restore Bay wetlands, not dumped far out in the ocean. And we're fighting in court to keep sand in the Bay for marshes and wetlands. Additionally, the administration has signaled that it wants more water to go to Big Agriculture in the Central Valley—and less fresh water to flow to the Bay and Delta. This could be a death knell for the Bay's salmon and other endangered fish.

Baykeeper has increased our efforts on behalf of fresh water for the Bay under state and local protections. Our scientists and attorneys are working with partner groups to



An oil train fire burns along the Columbia River in Oregon in June 2016.

educate the public, support new policies that would increase fresh water flows to the Bay and oppose the massive twin tunnels that would rob the Bay of fresh water.

Adding to the threats, federal environmental laws that protect the Bay are in the crosshairs of some Republicans in Congress. Since the 1970s, the federal Clean Water Act has been used by citizens nationwide to stop contamination of rivers, streams, lakes and bays. Baykeeper has used this law hundreds of times to reduce pollution in beautiful San Francisco Bay. Now, leaders in Washington have begun attempts to "reform" the law in ways that would thwart organizations that use it to stop pollution.

If local organizations are no longer able to enforce federal pollution laws, the federal Environmental Protection Agency could conceivably step in. But that won't happen if the EPA is abolished, which a new bill now proposed in Congress would do. An inactive or abolished EPA would also mean that if a developer wants to fill

in more Bay wetlands—to build a skyscraper or a condo complex—it will be much harder to stop.

Baykeeper is a founding member of the Waterkeeper Alliance, an organization of hundreds of local groups nationwide working for clean water. Together, we will advocate against—and mobilize the public to oppose—Congressional threats to national environmental protections. Moreover, California has strong environmental laws. On the local and regional level, Baykeeper will leverage our legal expertise to enforce the laws and make them even stronger.

You can help. You can thank your Congressional representatives, state legislators and local officials for strengthening clean water protections. You can stand up for the Bay by taking part in action alerts on Baykeeper's website. You can clean up trash from the shoreline, and report pollution to our hotline. And you can make a gift to support our work. To learn more, visit us online at baykeeper.org.

Sejal Choksi-Chugh is the Executive Director of San Francisco Baykeeper. Baykeeper uses on-the-water patrols of San Francisco Bay, science, advocacy and the courts to stop Bay pollution. To report pollution, call Baykeeper's hotline at 1-800-KEEP-BAY, e-mail hotline@baykeeper. org, or click "Report Pollution" at baykeeper.org.



## **Sharks a Plenty**

#### BY MALLORY JOHNSON

harks are easily one of the most awe-inspiring marine species, and there's no denying they have some fascinating traits that have earned them this status.

Sharks have been around for over 420 million years, predating even dinosaurs. Throughout that time, they evolved into amazing predators, adapting to changes in their environment and becoming some of the ocean's top hunters.

One such adaptation is the development of a sixth sense called "electroreception." Electroreception allows sharks to detect subtle muscular movements in other creatures—like a bluefish tuna's heartbeat—and gives them an extra advantage when seeking out their next meal. Another adaption is the tiny v-shaped scales called "dermal denticles" that conveniently cover sharks' skin. Dermal denticles, which are similar to tiny external teeth, create tiny vorticles (whirlpools) in the water around the shark and help reduce drag in the water, increasing their speed and agility underwater.

Did you know that there are multiple species of sharks living right here in San Francisco Bay? Although it's rare to see these creatures in the Bay's murky waters, you don't need to rely on luck because you can see six of these local species in person at Aquarium of the Bay.

Enjoy some quick facts about some of our local species here, and learn even more when you see them up close and personal at Aquarium of the Bay.

#### Sevengill Shark

Fun Fact: Sevengill sharks are the largest shark species that regularly inhabit the Bay, measuring in at a maximum of 9.8 feet and 236 pounds.

#### Tope Shark

Fun Fact: Female tope sharks can birth up to 52 pups in one litter.

#### Swell shark

Fun Fact: Swell sharks are named for their ability to expand their stomachs with water and swell up to appear larger than they are. This is a defense mechanism they use when they feel threatened.

#### **Angel Shark**

Fun Fact: Angel Sharks are ambush predators, meaning that they stay still and wait for their prey to pass by. These sharks can strike within a tenth of a second.

#### **Leopard Shark**

Fun Fact: Leopard sharks are the most common species in San Francisco Bay and along the California coast.



Female tope sharks can birth up to 52 pups in one litter.



Leopard sharks are the most common sharks in San Francisco Bay and along the California coast.

#### **Horn Shark**

Fun Fact: Females lay spiral egg cases, which they wedge into crevices for safe keeping while waiting for them to hatch.

Learn more about sharks at Aquarium of the Bay, or by visiting **www.aquariumofthebay.org**.

Mallory Johnson is the
Communications Manager
at Aquarium of the Bay,
a nonprofit dedicated to
protecting, restoring and
inspiring the conservation
of San Francisco Bay and its watershed.



## **Hydrogen Ferry Passes Feasibility Study**

#### BY BILL PICTURE

he notion of a high-speed, zero-emission passenger ferry has been dismissed by some as science fiction. But the prospects for hydrogen-powered clean ferries are now looking up, buoyed by a recent feasibility study and the support of Red and White Fleet, one of the Bay Area's ferry operators.

Smaller hydrogen-powered ferries for short trips already exist, but there were doubts about whether the technology could be exploited in a way that would permit large-scale, fast service over longer distances. According to a feasibility study completed last fall by Sandia National Laboratories, however, hydrogen fuel cells can generate the power needed to move a fully-loaded passenger ferry across the San Francisco Bay—and they can do so without sacrificing speed or impacting the region's air quality.

The researchers' specifications: a 150-passenger commuter ferry that would travel four 50-mile round-trip routes each day at a top speed of 35 knots (roughly 39 miles per hour) about 60 percent of the time. The ferry could refuel midday, between the morning and afternoon commutes.

"This kind of boat has never been built before," said mechanical engineer Curt Leffers, one of the project managers. "Hydrogen fuel cells are heavier than diesel engines for a given power output, so achieving the right power-to-weight ratio for the vessel was tricky."

The need for speed drove the design to a slightly longer catamaran. The engineers were able to save weight by consolidating the support equipment for the fuel cells. To achieve the necessary safety standoffs from the fuel cells, the designers placed the fuel cells on the main deck of the vessel in a separate compartment. The researchers explained that this provides physical separation between the fuel cells and passengers.



From left to right: Tom Escher, president of Red & White Fleet with Sandia National Laboratories researchers Lennie Klebanoff and Joe Pratt. Photo by Michael Padilla, Sandia National Laboratories.

rigorous criteria used to gauge the feasibility of this hypothetical vessel, a design dubbed the "SF-BREEZE"—an acronym for San Francisco Bay Renewable Energy Electric Vessel with Zero Emissions. By all accounts, the vessel passed each test with flying colors.

"SF-BREEZE sailed through them all," Sandia researcher Lennie Klebanoff told reporters last year.

The project's stakeholder team—including the Department of Transportation's Maritime Administration (MARAD), the American Bureau of Shipping, the U.S. Coast Guard, the Port of San Francisco and Red and White Fleet-strongly believed they were onto something from the start. Now after briefly celebrating the success of the feasibility study, the partners are back in the lab fine-tuning the vessel they imagined

two years ago and subjected to evaluation during the study.

"Now Sandia and MARAD are optimizing the boat, looking at the findings to figure out what makes the most economic sense," said Tom Escher, owner of Red and White Fleet. "Which is better—an 800-passenger ferry that goes 15 knots or a 600-passenger ferry that goes 22 knots? We don't know yet. Maybe for shorter runs, an all-electric boat is better. These are the things we need to figure out before we can move forward."

Escher expects to have these answers soon. "A follow-up report should be out in the next two months," he said. "And that report will basically say, 'We took the original findings, applied them, tried all the different variables we could think of; and from an economic point of view, this is the boat we recommend."

#### Unlikely beginnings

Escher was the first to come up with the idea for this iteration of a green ferry—even though the cost of adding a hydrogen-powered ferry to his fleet, aside from expected subsidies, will come largely out of Red and White's pocket. After all, a hydrogen-powered ferry is estimated to cost roughly twice as much to build as a traditional diesel-burning ferry, coming in between \$20 million and \$30 million.

But Escher said he's concerned enough by recent findings related to the impact of transportation-related pollution to search for ways to apply emerging green technologies to his own industry. While it's hard to determine exactly how big of a slice of the Bay Area's smog pie can be attributed directly

to ferry service, logic dictates that the impact of the diesel-burning vessels, which carry a reported 5,000,000 ferry riders each year, is significant enough to warrant Escher's concern.

Escher pointed to a 2013 study conducted by the Massachusetts Institute of Technology that showed some 53,000 Americans die each year as a result of transportation-related air pollution. That's 145 people each day, or six every hour.

"Ferry operator or not, business owner or not, we all breathe the same crap, right?" he said. "And what this will do is remove all those nasty greenhouse gases from ferry exhaust."

San Francisco has already agreed to make space at Pier 54 available to an energy provider for the installation of a hydrogen fueling station. Late last month, the Examiner reported that two applicants were being considered. While the fueling station's primary customers will be the owners of hydrogen-powered cars—every major car maker is expected to have a hydrogen-fuel-cell-powered model within the next five years—a simple modification will allow ferry operators to use the same station for fueling their vessels.

It's important to note that the hydrogen itself is derived from renewable sources such as wind or solar.



engineering model and were provided by Sandia National Laboratories

#### Fear of the unfamiliar

The version of SF-BREEZE featured in the initial study was made entirely of off-the-shelf components that could be purchased from the Internet. Escher expects the final version also to include Amazon-able components. Where he foresees the most variance is with pricing.

Sandia National Laboratories

"The pricing in the original study is already off," he said. "The batteries have gotten cheaper in the last two years. They've also gotten lighter and more efficient."

With every week that passes, Escher said his idea for a clean-running ferry gets more and more feasible. Stakeholders are also excited about the changes that SF-BREEZE promises in terms of promoting renewable fuel sources and creating jobs. The objections voiced thus far, Escher says, have been rooted in a lack of understanding.

"I get it," he said. "If you're like me and you have trouble just using your iPhone, this is a tough thing to wrap your head around. But like it or not, it's happening. It's like those people who didn't understand what Henry Ford was doing, and called him a nut. Look what happened with that. Not that I'm comparing myself to Henry Ford. This is not about me or Red and White Fleet. This is about the environment, and doing something that will benefit everyone."

Among the list of supporters that Escher makes sure to thank on behalf of his team are Governor Jerry Brown, San Francisco Mayor Ed Lee and the California Air Resources Board. "They get that this is a game-changer," he says. "And it's just the beginning. This will have a major impact on every shipyard in the country, mark my words."



## Rockefeller Foundation Gives \$4.6M to Bay Area Leaders to Tackle Climate Change

#### **BY BC STAFF**

he Rockefeller Foundation recently announced a \$4.6 million grant to a coalition of Bay Area leaders to create "Bay Area: Resilient by Design," a competition that will engage regional innovators, community members, developers and policy makers, as well as designers, architects, engineers from around the globe in developing creative, realistic and long-lasting infrastructure solutions for climate and seismic challenges confronting the San Francisco Bay Area.

"Across the Bay Area, increasingly frequent flooding is putting more and more strain on aging infrastructure, while continued sea-level rise is threatening coastal resources. These are real and serious challenges, and they require real and serious solutions," said Dr. Judith Rodin, president of the Rockefeller Foundation.

This innovative challenge is modeled after the award-winning Rebuild by Design Hurricane Sandy Design Competition, which was pioneered by the U.S. Department of Housing and Urban Development in partnership with the Rockefeller Foundation.

Bay Area: Resilient by Design will spur innovative infrastructure solutions for Bay Area communities, so they can withstand and thrive in the face



A \$4.6 million grant was issued to a coalition of Bay Area leaders to create a competition that will develop creative, realistic and long-lasting infrastructure solutions for climate change and seismic challenges confronting the San Francisco Bay Area.

of growing climate change-related and seismic threats, while also addressing housing and income disparity challenges. The Bay Area contest will officially kick off in March once the core staff team is in place.

Teams made up of designers, architects, ecologists, developers and infrastructure finance experts will be invited to apply this spring, and a jury made up of prominent leaders in design, science and community engagement ultimately will select 10 teams to develop visionary, realistic and replicable resiliency strategies for 10 different locations around the region. The final

designs are expected to be completed by summer 2018. Each solution must help communities in the nine counties touching the San Francisco Bay to adapt to the impact of rising sea levels, increasing storms and flooding and/or seismic vulnerabilities.

The Bay Area Regional Collaborative (BARC) provided leadership in securing the Rockefeller Foundation grant and serves on the Executive Committee for the effort. BARC's partner regional agencies are the Metropolitan Transportation Commission, Association of Bay Area Governments, the Bay Area Air Quality Management District and the Bay Conservation and Development Commission.

"Tackling our most pressing challenges requires all of us—policymakers, nonprofits, businesses and community leaders—to work together. This is the guiding principle behind Resilient by Design: to focus all of the best minds in the Bay Area on holistically building our resilience," said Zack Wasserman, chair of the San Francisco

Bay Conservation and Development Commission. "We look forward to not only seeing the forward-thinking design solutions these teams envision for our region, but also watching as they work with our communities and developers to implement their projects. Through this partnership, I know we can all effectively and efficiently adapt for the rising tides to come."

The \$5.8 million Bay Area: Resilient by Design competition will be funded primarily through the \$4.6 million contribution from the Rockefeller Foundation, which also provided financing for the Rebuild by Design competition that took place in the region around New York City. BARC and other partners will seek additional funding for the Bay Area competition from both public and private sector sponsors.

The 10 locations on which the Resilient by Design competition will focus will be selected from among some 30 Bay Area places identified as highly vulnerable to flooding and rising sea levels. The competing design teams'



The innovative challenge will seek solutions to adapt to the impact of rising sea levels in the Bay Area.

# GREEN PAGES

adaptation and protection strategies will serve as test cases for implementing tangible solutions around the Bay Area. Teams will tap into the wealth of local knowledge and resources that communities have already accumulated.

From there, they will develop innovative design solutions—from strengthening natural barriers to constructing new infrastructure. Ideally, these solutions can be implemented within the next few years, will provide other community benefits and can be replicated in other Bay Area locations. Each project must bring multiple benefits to these communities and the region while protecting vulnerable populations, enhancing the natural environment and bolstering critical infrastructure.

Bay Area: Resilient by Design will be divided into two phases: in the first phase, teams will participate in a three-month

exploratory research and community engagement period to develop initial design concepts for specific sites. Teams will organically form themselves and be comprised of applicants from around the world. Phase two of the challenge will be a collaborative five-month intensive design phase with teams working in partnership with residents, businesses, community-based organizations and political leaders to develop more detailed, replicable and implementable infrastructure projects.

Bay Area: Resilient by Design also will forge close ties with the Rockefeller Foundation's 100 Resilient Cities network, which is seeking to help 100 cities build resilience to thrive in the face of 21st-century challenges. Home to three cities in the 100 Resilient Cities Network, the Bay Area already is working to identify solutions to the

region's challenges. In 2016, Oakland, Berkeley and San Francisco released resilience strategies, each of which cited climate change as one of many stresses that — if not addressed — could put the region in jeopardy.

"In the wake of Hurricane Sandy,

Rebuild by Design surfaced some of the most ambitious and powerful resilience projects we have seen, and I believe that the result will be the same in the Bay Area," said Michael Berkowitz, president of 100 Resilient Cities.



Bay Area: Resilient by Design will spur innovative infrastructure solutions for Bay Area communities, so they can withstand and thrive in the face of growing climate change-related and seismic threats.



#### **BY PAUL DUCLOS**

he Bay Area once had a vibrant boxing scene, with matches attracting world-class champions contenders venues in some of the best (and diciest) neighborhoods. The "sweet science" has been eclipsed by the more brutal (and vulgar) sport of mixed martial arts, but you can still see splendid amateurs take to the ring for three-round bouts on our college campuses.

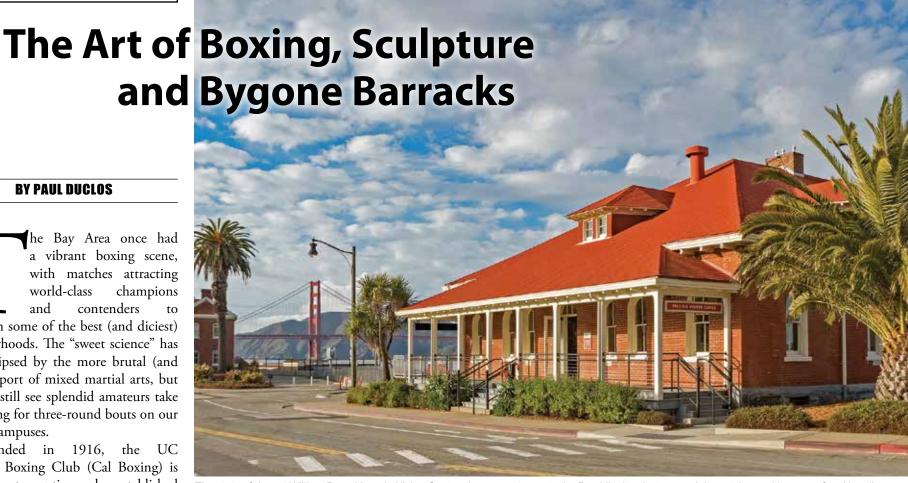
Founded in 1916, the UC Berkeley Boxing Club (Cal Boxing) is the longest continuously established collegiate boxing program in the nation. Cal Boxing athletes compete in intercollegiate boxing events as members of the National Collegiate Boxing Association (NCBA), sanctioned by USA Boxing. Cal Boxing welcomes new student athletes with or without experience and strives for its boxers to reach their full potential.

Its chief mission, say team spokespeople, is to inspire confidence and character through mastering the art of boxing, and to develop leaders and champions in and beyond the ring with respect, hard work and passion. Today, Cal Boxing is recognized as one of the top collegiate boxing programs in the nation.

Bay Crossing readers who wish to see the club in action are invited to attend the Northern California Boxing Association's West Regional Tournament at the University of Nevada-Reno Friday through Sunday, March 16 to 18. For more details, see calboxing.weebly.com.

#### **New Presidio Visitor Center**

What was once the nation's premier Army post, the Presidio, is now a vibrant 1,500-acre national park—but there



The state-of-the-art William Penn Mott, Jr. Visitor Center, the new gateway to the Presidio, has just opened. It contains a wide array of multimedia experiences and engaging exhibits for the public

hadn't been a front door to the Presidio experience until now.

The state-of-the-art William Penn Mott, Jr. Visitor Center, the new gateway to the Presidio, has just opened.

The center, filled with many engaging exhibits, is designed to be a destination for people of all ages. According to spokespeople, it is a "platform for discovery"—using video, engaging exhibits, interactive tools and knowledgeable staff to help visitors uncover a wide array of multimedia experiences.

The new visitor center is housed in a refurbished historic guardhouse in the heart of the park with views overlooking the Golden Gate Bridge.

#### **New Rodin Exhibit**

Marking the centenary of Auguste Rodin's death in 1917, the Legion of Honor now presents a completely new installation of its extraordinary Rodin holdings in Auguste Rodin: The Centenary Installation.

Approximately 50 objects in bronze, marble, and plaster—all from the

Fine Arts Museums of San Francisco's permanent collection—will be presented in a new context. The exhibition will examine the artist's celebrated life and influential work—from his early days courting controversy with sculptures that bore unexpected levels of naturalism to his later renown and lasting influence.

Auguste Rodin: The Centenary Installation is part of a worldwide series of major Rodin projects and will provide Bay Area audiences a significant opportunity to examine Installation is curated by Martin and recontextualize the legacy of the artist known as "the father of modern sculpture."

"Our Rodin holdings are one of the finest and most significant collections in the United States," said Max Hollein, director and CEO of the Fine Arts Museums. "This exhibition will surprise visitors and inspire dialogue about Rodin and his impact on artists working today. It is a must-see for anyone who thinks there is nothing left

to learn about this towering figure in the history of modern art."

Together with the bronzes and marbles, the Legion of Honor has one of the most comprehensive Rodin collections in the United States. On the occasion of this exhibition, an extensive scholarly catalogue—the first to document these collection highlights was produced by the Fine Arts Museums of San Francisco.

Auguste Rodin: The Centenary Chapman and will be on view at the Legion of Honor from January 28 to April 9. At a recent press reception, Chapman noted that Rodin "was first and foremost a keen observer. Perhaps that was because his vision was bad when he was growing up. He had to pay close attention to everything."

The artist was not only plagued by bad eyesight, said the curator: "His personal life was not always something to celebrate. He was a complicated man."

Follow Paul Duclos' Cultural Currents online with his blog at: paulduclosonsanfranciscoculture.blogspot.com

**Sumatran Tiger** 

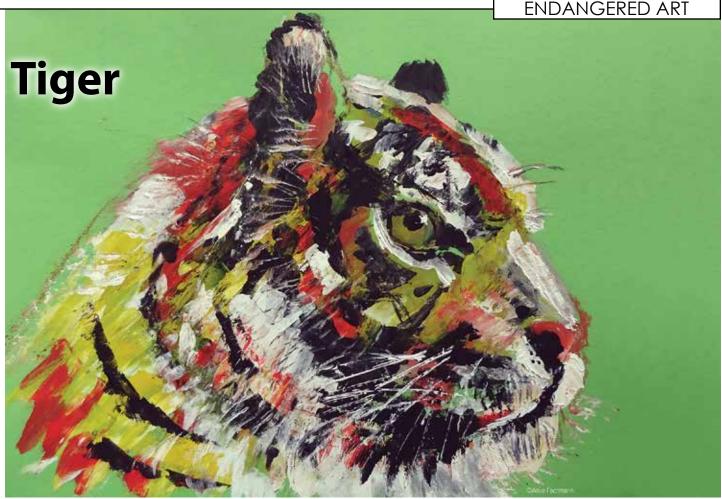
#### BY ANKE FACHMANN

he Sumatran tiger is one of the world's most distinctive, legendary and beautiful animals. It is also threatened by the world's love for palm oil.

Palm oil is found in roughly half of all packaged goods; everything from cookies, chips and instant noodles to lipstick, shampoo and detergent. As the cheapest vegetable oil in the world, the skyrocketing demand for this commodity has driven industrial-scale plantations deep into the rainforests of Indonesia.

The forests of the Leuser Ecosystem on the island of Sumatra in Indonesia are no exception and are increasingly being targeted for palm oil plantations. The Leuser Ecosystem is one of the richest remaining areas of tropical rainforest in Southeast Asia, and is remarkable for its biological diversity and unique species like the Sumatran tiger.

The Leuser Ecosystem is not only important for the plants and animals that call it home, but it's also necessary for millions of people who depend on it for a clean, steady water supply. Globally, we all depend on it: the Leuser Ecosystem plays a critical role in helping to regulate our global climate by absorbing carbon pollution and storing massive amounts of carbon in its lowland rainforests and peatlands. This region also literally gives



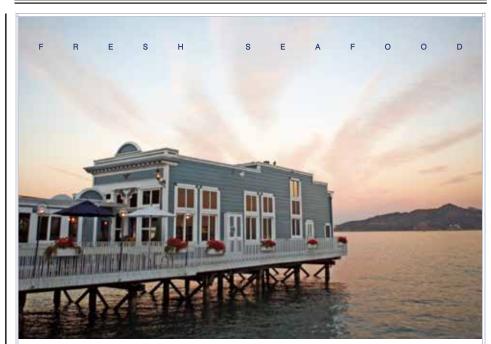
The distinctive Sumatran tiger is being threatened by the world's love for palm oil.

us life by producing vast amounts of

We all have a role to play in the palm oil story. We can #StartWith1Thing and demand that companies cut conflict palm oil from their products. Using our consumer power, we can drive a change in the way palm oil is produced.

Anke Fachmann is a graphic designer and artist who currently focuses on portraying endangered species. Transforming animals into artistic, colorful paintings and illustrations gives them a platform to be seen. Treehoppers, tarsiers, maleos and many more come to life on canvas and paper with the use of oil pastels, ink and acrylic paint, which the artist applies with her fingers. Follow her on www.instagram.com/daily\_plover or go to www.thoughtsbecomeimages.com.





From the Sausalito Ferry, take a left, two blocks south.

SCOMA'S

588 BRIDGEWAY 415.332.9551 SCOMASSAUSALITO.COM

## WATERFRONT ACTIVITIES

March 3 Radar Recertification 1 Day - Maritime Institute, Alameda, 888-262-8020, www.MaritimeInstitute.com

> This course is a renewal test for the Unlimited Radar Observer renewal for the advanced mariner that does radar plotting on a regular basis. Testing on the first and second triangles and practical plotting on the radar scope (2 tests each) Approximately four (4) hours. To register or view our complete schedule, visit www.MaritimeInstitute.com.

- March 11 6:30PM – 9PM - Tides: The Science and Spirit of the Ocean – OCSC Sailing, Berkeley, 510-843-4200, www.ocscsailing.com In this talk, writer, sailor and surfer Jonathan White will take us across the globe to discover the science and spirit of ocean tides. In the Arctic he shimmies under the ice with an Inuit elder to hunt for mussels in dark cavities left behind at low tide; in China he races a twenty-five foot tidal bore that crashes eighty miles up the Qiantang River; in France he interviews the monks that live in the tidewrapped monastery; in Chile and Scotland he investigates. Retail: \$25 Member: free.
- March 12 8:15AM - 11AM - Eco Sail out the Golden Gate to Point Bonita Lighthouse, Schooner Freda B, Sausalito, 415-331-0444 www.schoonerfredab.com

Sunday Morning Eco Sail with naturalist from Sausalito out the Golden Gate Bridge, along the Marin Headlands to Point Bonita Lighthouse. Learn about the marine life, sea birds and ecology of the SF Bay and the Pacific. \$75 per person.

- March 12 6:15PM - 8:30PM - Full Moon Sail-Schooner Freda B, Sausalito, 415-331-0444, www.schoonerfredab.com Enjoy the March Full Moon rise on the San Francisco Bay from the deck of a traditional tall ship. Napa/Sonoma Wines and California Craft Beers available for purchase on board. \$69 per person
- March 19 8:15AM – 11AM - Eco Sail out the Golden Gate to Point Bonita Lighthouse, Schooner Freda B, Sausalito, 415-331-0444 www.schoonerfredab.com

Sunday Morning Eco Sail with naturalist from Sausalito out the Golden Gate Bridge, along the Marin Headlands to Point Bonita

## Team Building & Private Events Available



Bocce Courts available for Corporate Team Building Events and Private Parties. All events include refreshments and a bocce "pro" on hand so no experience is required. Make your next event memorable and join us at beautiful Justin Herman Park in front of the Historic San Francisco Ferry Building with spectacular Bay and City views.





























## WATERFRONT ACTIVITIES

Lighthouse. Learn about the marine life, sea birds and ecology of the SF Bay and the Pacific. \$75 per person.

March 20-31 Captain OUPV (6-Pack/100GT) Course - Maritime Institute, Monterey, 888-262-8020 www.MaritimeInstitute.com

Why settle for just an OUPV license when our USCG approved Captain's course meets the requirement for not only the OUPV/6-PACK License; but also - OUPV up to 100 GT - Master or Mate Near Coastal less than 100 GT - Master or Mate Inland less than 100 GT. To register or view our complete schedule, visit www.MaritimeInstitute.com.

March 26 8:15AM – 11AM - Eco Sail out the Golden Gate to Point Bonita Lighthouse, Schooner *Freda B*, Sausalito, 415-331-0444 www.schoonerfredab.com

Sunday Morning Eco Sail with naturalist from Sausalito out the Golden Gate Bridge, along the Marin Headlands to Point Bonita Lighthouse. Learn about the marine life, sea birds and ecology of the SF Bay and the Pacific. \$75 per person.

March 26 9AM – 11AM - Outboard Engine Clinic – OCSC Sailing, Berkeley, 510-843-4200, www.ocscsailing.com

Our Outboard Engine Clinic provides a good base of knowledge in troubleshooting and maintenance of outboard engines. We will cover all the ins and outs of 2 and 4 stroke outboard engines. Retail: \$25 Member: free

March 26 9:30AM – 5PM - Electronics Course– OCSC Sailing, Berkeley, 510-843-4200, www.ocscsailing.com

Do you have a variety of navigation equipment on your boat, but don't know how to use it? Do you have an upcoming vacation abroad, and want to ensure you can use the equipment to have a safe journey? If so, this class is for you. Learn the fundamentals of Radar, GPS, course plotting, application use, and see it demonstrated on the Bay. Prerequisites, Basic Cruising Certification or equivalent experience. Max students 6. Retail: \$400 Member: \$300

March 30&31 6PM – 11PM - Battle of the Bay SF vs Oak Sail to McCovey Cove Schooner *Freda B*, Sausalito,

415-331-0444 www.schoonerfredab.com

Sail across the bay from Sausalito to McCovey Cove to enjoy the Battle of the Bay series from the deck of Schooner *Freda B*. Napa/Sonoma Wines and California Craft Beers available for purchase on board. \$99 per person.

Waterfront Adventures is an advertising sponsored section for activities on or around the water in the Bay Area. If you are interested in having your events or activities listed in this section contact Joel Williams at joel@baycrossings.com.







## All Bay Area Ferry Schedules in One Place!

## San Francisco Bay Ferry

#### **VALLEJO VALLEJO - SAN FRANCISCO**

### Travel time between Vallejo and

San Francisco is approximately 60 minutes.

Weekdays			
Depart Mare Island	Depart Vallejo	Depart S.F Ferry Bldg.	Depart Pier 41
5:10	5:30 a.m.		
5:40	6:00		
6:10	6:30	6:35 a.m.	
6:40	7:00	7:15	
	7:45	8:15	
	8:30	9:00	
	10:00	11:10	11:30
	12:00 p.m.	2:30 p.m.	
1:40 p.m.	2:00	3:30	3:10 p.m.
2:40	3:00	4:30	
3:40	4:00	5:15	
	4:45	5:30	
	5:45	6:00	6:55
	6:45	7:15	
		8:15	

#### Effective beginning March 6

Weekends & Holidays			
9:30 a.m.	10:00 a.m.	11:10 a.m.	11:30 a.m.
11:00	11:30	12:45	
2:10 p.m.	2:30 p.m.	3:40 p.m.	4:00 p.m.
3:10	3:30	4:40	
	5:15	7:00	6:30

#### Effective beginning March 11

FARES:	One-way	
Adult Adult (Clipper Only) Youth (5-18) Senior (65+)/Disabled/Medicare School Groups Child (under 5) Mare Island Short Hop5 Adult Mare Island Short Hop5 Youth, Senior (65+ yrs), Disabled, Medicare2	\$13.80 \$10.40 \$ 6.90 \$ 6.90 \$ 4.60 FREE \$1.60 \$0.80 \$0.80	Call (707) 64-FERRY or visit www. sanfranciscobayferry.com for updated information.

### Take the Ferry to GIANTS BASEBALL AT AT&T PARK

#### FROM VALLEJO

Weekday Day Games 12:45 PM Game Start Times				
Depart Vallejo	Arrive AT&T	Depart AT&T	Arrive Vallejo	
11:00 am	12:00 noon	* see below	60 min. later	
Weekend & Holiday Games 1:05 PM Game Start Times; Other Start Times**				
Depart Vallejo	Arrive AT&T	Depart AT&T	Arrive Vallejo	
11:00 am	12:00 noon	* see below	60 min. later	
Weekday Night Games - Return Service Only 7:15 PM Game				

**Return-Only Service** Depart AT&T Arrive Valleio \*see below 60 min. later

Ferry departs AT&T Park 30 minutes after the last out. Note that Weekday Night Return Service ferries cannot dock at the park prior to 9:30 pm. When there is a fireworks display, the ferry departs AT&T Park no earlier than 25 minutes after the conclusion of the display.

FARES:	One-way	Roundtrip
Adult	\$14.20	\$28.40
Youth (5-18)	\$10.60	\$21.20
Senior (65+)/Disabled/Medicare	\$10.60	\$21.20
Child (under 5)	FREE	FREE

### ALAMEDA/OAKLAND

	Weekdays to S	San Francisco		We	ekends and Holic	lays to San Franc	isco
Depart Oakland	Depart Alameda	Arrive S.F. Ferry Bldg.	Arrive S.F. Pier 41	Depart Oakland	Depart Alameda	Arrive S.F. Ferry Bldg.	Arrive S.F. Pier 41
	6:00 a.m.	6:20 a.m.		9:45 a.m.	10:00 a.m.	10:45 a.m.	10:25 a.m.
6:30 a.m.	6:40	7:00		11:25	11:10	11:50	12:10 p.m.
7:00	7:15	7:35		12:05 p.m.	11:50 p.m.	12:30 p.m.	12:50
7:35	7:45	8:05		1:50	1:35	2:20	2:40
8:10	8:20	8:40		2:50	2:35	3:20	3:40
8:40	8:50	9:10		4:40	4:25		5:10
9:15	9:25	9:45	10:00 a.m.	6:10	5:55	6:30	6:50
10:15	10:25	10:45	11:00	7:45	7:30		8:20
11:00	10:50	11:30	11:45				
11:45	11:35	12:15 p.m.	12:30 p.m.				
2:40 p.m.	2:25 p.m.	3:05					
3:50	3:35	4:20					
5:05	4:50	5:30					
5:55	5:40	6:20					
6:20	6:05	6:50					
6:55	6:45	7:20					
7:55	7:45	8:25					
8:55	8:45	9:25		Weel	kends and Holida	ys from San Fran	cisco
	Washdaya from	Can Eronaiana		Depart S.F.	Depart S.F.	Arrive	Arrive Oakland

	Weekdays from	San Francisco		Depart S.F. Pier 41	Depart S.F. Ferry Bldg.	Arrive Alameda	Arrive Oakland
Depart S.F. Pier 41	Depart S.F. Ferry Bldg.	Arrive Alameda	Arrive Oakland	9:00 a.m. 10:35 11:15	9:15 a.m. 10:50 11:30	9:55 a.m. 11:05 11:45	9:40 a.m. 11:20 12:00 p.m.
	6:25 a.m. 7:00	7:10 a.m. 7:45	7:00 a.m. 7:35	1:00 p.m. 2:00	1:15 p.m. 2:15	1:30 p.m. 2:30	1:45 2:45
	7:45 8:05 8:40	8:20 8:50 9:25	8:10 8:40 9:15	3:50 5:20 6:55	4:05 5:35 7:10	4:20 5:50 7:25	4:35 6:05 7:40
10:15 a.m.	9:40 10:30	10:25 10:50	10:15 11:00				
11:00 a.m. 1:45 p.m. 2:55	11:15 2:00 p.m. 3:15	11:35 2:20 p.m. 3:30	11:45 2:35 p.m. 3:45				
3:30 4:15	  4:30	4:10 4:40 4:45	4:20 4:55 5:00				
	5:20 5:40	5:40 6:00	5:50 6:15	FARES: Adult	One-way \$6.60		
	6:05 6:25 6:55	6:35 6:45 7:15	6:45 6:55 7:25	Adult (Clipper O Youth (5-18) Senior (65+) Dis	\$3.30	OND	RCHASE TICKETS BOARD THE FERRY
8:05	7:25 8:25	7:45 8:45	7:55 8:55	<ul> <li>Child under 5</li> <li>School Groups</li> <li>Short Hop - Adu Short Hop - You</li> </ul>	FHEE \$2,20		for information (MON. to FRI.) (415) 705 8291
	9:30	9:50	10:00	Short Hop - You Short Hop - S /	ith \$0.80 D \$0.80		(413) 703 6291

#### Harbor Bay Ferry (EAST END OF ALAMEDA/S.F.)

#### Weekday Commute

	· · · · · · · · · · · · · · · · · · ·		
Depart Harbor Bay Island	Arrive S.F. Ferry Bldg.	Depart S.F. Ferry Bldg.	Arrive Harbor Bay Island
6:30 a.m.	6:55 a.m.	7:00 a.m.	7:25 a.m.
7:30	7:55	8:00	8:25
8:30	8:55	4:35 p.m.	5:00 p.m.
5:05 p.m.	5:30 p.m.	5:35	6:00
6:05	6:30	6:00	6:25
7:05	7:30	6:35	7:00
		7:35	8:00

#### **FARES:** One-way

Adult	\$6.90
Adult (Clipper Only)	\$5.20
Youth (5-18)	\$3.40
Disablèd / Śeniors (65+)	\$3.40
School Groups	\$2.30
Children (under 5)	FREE

#### **SOUTH SAN FRANCISCO**

ALAMEDA/OAKLAND

Weekday to SSF/Oyster Point			
Depart Alameda Depart Oakland Arrive SSF			
6:25 a.m.	6:40 a.m.	7:20 a.m.	
7:30 7:40		8:20	
8:00 8:10 8:50		8:50	
Weekday to Alameda & Oakland			

Wookday to Allamoda a Galilana			
Depart SSF	Arrive Oakland	Arrive Alameda	
4:20 p.m.	4:55 p.m.	5:10 p.m.	
5:20	6:00	5:50	
7:00	7:50	7:35	

Weekday Service - Monday through Friday

Depart S. San Francisco	Arrive Ferry Building
9:00 a.m.	9:30 a.m.
Depart Ferry Building	Arrive S. San Francisco
3:30 p.m.	4:00 p.m.
	1

One-way	Adult	\$7.90	Seniors (65+ yrs), Disabled	\$3.90
FARES:	Adult (Clipper Only)	\$7.40	School Groups	\$2.60
	Youth (5-18 years)	\$3.90	Children (under 5) (with an adult)	FREE

## **Angel Island Ferry**

#### ANGEL ISLAND

			ANGEL ISLAND			
		Weekdays ar	FARES:	Round Trip		
Γ	Tiburon to	Angel Island	Angel Island to Tiburon		Adult (13 - 64)	\$15.00
ſ	Wednesday - Friday		Wednesday - Friday		Seniors (ages 65+)	\$14.00
	10 am	1 pm	10:20 am	Official Officient (ages of		\$13.00 \$5.00
	Saturday - Sunday		Saturday - Sunday		Toddlers (ages 2 and under) Bicycles	Free* \$1.00
	10 am	1 pm	10:20 am	1:20 pm	,	*****
	11 am <b>3 pm</b> 11:20 am		11:20 am	3:30 pm	* Ferry service by advance res groups of 25 or more. Call (41)	ervation for
					find out if you can "piggyback"	with groups

(\*Limit one free child, ages 2 and under, per paying adult.)

For the most current schedule and other information, visit ww.angelislandferry.co Schedule Subject to

### **Red & White**

#### **BAY CRUISE** Pier

DAT CIVOIDE FIEL 43/2						
10:00 am	1:10 pm	3:45				
10:30 *	1:40	4:15 # *				
11:15	2:15 #	5:00				
11:45	2:30	5:30^*				
12:00 pm #	3:00	6:00 ^				
12:30 #						

Effective thru March 24 Effective beginning March 25

\* Thursday - Monday

#### FARES:

Bay Cruise Adult (18+) \$30.00 Youth (5-17) \$20.00 Child (under 5) Free

^ Sunset Cruise Adult (18+) \$64.00 Youth (5-17) \$44.00

# Bridge to Bridge Adult (18+) \$38.00 Youth (5-17) \$26.00

### **Golden Gate Ferry**

	LARKSPUR								
Wee	ekdays (exclu	ding Holidays	)		Weekends a	and Holidays			
Depart Larkspur	Arrive S.F. Ferry Bldg.	Depart S.F. Ferry Bldg.	Arrive Larkspur	Depart Larkspur	Arrive S.F. Ferry Bldg.	Depart S.F. Ferry Bldg.	Arrive Larkspur		
5:45 6:35 a.m. 7:00	6:15 7:05 a.m. 7:30	6:20 7:10 a.m. 7:35	6:50 7:40 a.m. 8:05	9:30 a.m. 11:40 <b>1:40 p.m.</b>	10:30 a.m. 12:30 p.m. 2:30	12:40 p.m. 3:45	1:30 p.m. 4:35		
7:30 7:50	8:00 8:20	8:30	9:05	4:45	5:35	6:25 7:25	7:15 8:10		
8:20 8:45	8:50 9:20	9:10	9:45	One-way Ferry Fares Larkspur S					
9:15 10:10 11:10	9:50 10:45 11:45	10:10 10:55 11:55	10:45 11:30 <b>12:30 p.m.</b>	Adult Cash Fa	Daily \$11.75 \$ 6.25				
11:40 12:40 p.m. 2:15	12:15 p.m. 1:15 2:50	1:25 p.m. 1:25 3:00	1:00 2:00 3:30	Youth (5-18)/Senior/Disabled \$ 5.50 \$ 5.75 Children 4 and under FREE (limit 2 per fare-paying adult) Children ages 5 and under travel free when accompanied by a full fare paying					
2:50  3:40	3:25  4:15	3:30 4:00 4:30	4:00 4:30 5:00						
4:10 	4:45 	5:00 5:30	5:30 6:00	adult (limit two youth per adult).  Direct ferry service is provided to all Giants games at AT&T Park.  Special service is provided to various concerts and the Bay to Breakers Race. On weekdays, with the exception of the 5:20pm  San Francisco departure which uses a high-capacity Spaulding vessel, all other trips use high-speed catamarans. Weekend service is provided by a high-capacity Spaulding vessel					
5:10 5:40 6:40	5:45 6:15 7:10	6:00 6:30 7:20	6:30 7:00 7:50						
7:25	8:00	8:10	8:40						

SAUSALITO								
We	Weekdays (excluding Holidays)				Weekends and Holidays			
Depart Sausalito	Arrive S.F. Ferry Bldg.	Depart S.F. Ferry Bldg.	Arrive Sausalito	Depart Sausalito	Arrive S.F. Ferry Bldg.	Depart S.F. Ferry Bldg.	Arrive Sausalito	
7:10 a.m.	7:35 a.m.	7:40 a.m.	8:10 a.m.			10:40 a.m.	11:10 a.m.	
8:20	8:45	10:00	10:30	11:20 a.m.	11:50 a.m.	12:00 p.m.	12:30 p.m.	
10:55	11:25	11:35	12:05 p.m.	12:45 p.m.	1:15 p.m.	1:25	1:55	
12:15 p.m.	12:45 p.m.	12:55 p.m.	1:25	2:10	2:40	2:50	3:20	
1:55	2:25	2:35	3:05	3:50	4:20	4:40	5:10	
3:20	3:50	4:00	4:30			6:00	6:30	
4:45	5:15	5:30	6:00	5:35	6:05			
6:10	6:35	6:45	7:10	6:45	7:15			
7:20	7:50	7:55	8:20					

Holiday service is in effect on Martin Luther King, Jr. Day, Presidents Day, Memorial Day, Independence Day, Labor Day, and the day after Thanksgiving Day (Sausalito). The Larkspur line operates on a Modified Holiday Schedule on the day after Thanksgiving Day.

#### **Bay Area Ferry Terminal** Locations

8:50

9:25

9:35

10:05

**Alameda Ferry Terminal** 2990 Main Street

**Harbor Bay Ferry Terminal** 215 Adelphian Way, Alameda

**Larkspur Landing Ferry Terminal** 101 E. Sir Francis Drake Boulevard

**Oakland Ferry Terminal** 

10 Clay Street @ Jack London Square

**Sausalito Ferry Terminal Humbolt Street & Anchor Avenue** 

**San Francisco:** 

SF Ferry Building @ foot of Market Street Pier 41 @ Fisherman's Wharf

**South San Francisco** 

911 Marina Boulevard

**Tiburon Ferry Terminal** 

Tiburon Blvd. & Main St. in Tiburon

**Vallejo Ferry Terminal** 289 Mare Island Way in Vallejo TIBURON COMMUTE

TIBURON - S.F. Ferry Building Weekdays Effective March 6 thru Sunday, March 27

Contact Information Toll free 511 or 711 (TDD)

Weekuays I	Lifective March	ind Sunday, March 21			
Depart	Arrive S.F. Ferry Bldg.		epart S.F.	Arrive	
Tiburon			erry Bldg.	Tiburon	
5:30 a.m.	6:00 a.m.	6	3:05 a.m.	6:35 a.m.	
6:45	7:15	7	7:20	7:50	
7:55			3:35	9:05	
9:10					
			l:25 p.m.	4:45 p.m.	
5:05 p.m.	5:35 p.m.	5:45 6:55		6:15	
6:20	6:50			7:25	
7:30	8:00	8	3:05	8:35	
FARES:		One-	way		
Adult (19-64	)	\$11.50			
Youth (5-18)	Senior (65+)	\$5.75			
Child (age 4	& under)	FREE			

### **Blue & Gold Ferry**

	TIBURO	<b>∖ – Pier 4</b>	1	SAUSALITO				
		ekdays		FISHERMAN'S WHARF, PIER 41				
Depart	Arrive	Depart	Arrive		Weel	kdays		
Pier 41	Tiburon	Tiburon	Pier 41	Depart S.F. Pier 41	Arrive Sausalito	Depart Sausalito	Arrive S.F. Pier 41	
9:45 a.m.	10:30 a.m.	10:40 a.m.	11:10 a.m.				1 .0	
11:20	12:05 p.m.	12:15 p.m.	1:10 p.m.	11:20 a.m.	12:25 p.m.	12:40 p.m		
1:20 p.m.	1:55	2:05	2:55	1:20 p.m.	2:10	2:25	2:55	
3:00	3:30	3:35	4:40	3:00	4:00	4:10	4:40	
4:45	5:15	5:20	6:15	4:45	5:30	5:45	6:15	
8:15 *	8:45 *	8:50 *	9:20 *					
10:20 *	10:50 *	10:55 *	11:25 *					
*Only on Fr	idavs							
Only on th				Weekends and Holidays				
	TIBURON – Pier 41			Depart S.F. Pier 41	Arrive Sausalito	Depart Sausalite	Arrive S.F.	
	Weekends	and Holidays	8	11:20 a.m.	12:05 p.m.	12:15 p.n		
Depart Pier 41	_Arrive	Depart	Arrive	12:55 p.m.	1:25	1:35	2:30	
Pier 41	Tiburon	Tiburon	Pier 41	2:35	3:05	3:15	4:20	
9:45 am	10:30 am *	10:40 am	11:10 am	4:50	5:40	5:50	6:20	
12:55 pm	1:50 pm ^	2:00 pm	2:30 pm	6:30	7:20	7:25	7:55	
2:35	3:30 ^	3:35	4:20 *					
4:50	5:20 ^	5:30	6:20					
6:30	7:00 ^	7:10	7:55				ksgiving (Nov 23),	
8:15	8:45	8:50	9:20	& President's Day (Feb 18) No service on Thanksgiving Day				
10:20	10:50	10:55	11:25	(Nov 22), Chris	tmas Day (Dec 2	5), & New Year'	s Day (Jan 1)	
				FARES:		One-way	Round-trip	
*Via Angel I	sland, ^Via Sa	usalito		Adult	OFNIOD (05.)	\$11.50	\$23.00	
FARES:		One-way	Round-trip	Child (5-11) SENIOR (65+) \$6.75 \$13.50			\$13.50	
Adult Child (5-11)	SENIOR (65+	\$11.50 ) \$6.75	\$23.00 \$13.50					
( /	Oling (0 11) SEIVIOIT (001)   \$\psi_0.70   \$\psi_10.00				For the most current schedule, visit			

BAY (	ANGEL ISLAND - S.F.						
Depart Pier 39			Weekdays (Depart Pier 41)				
Daily Monday - Thursday	Friday -	Sunday		Arrive	Depart		
10:15 a.m.	10:15 a.m.	2:15 p.m.	Depart	Depart Angel		Angel	Arrive
1:15 p.m.	11:00	3:15	Pier 41	Island	Island	Pier 41	
3:15	12:15 p.m.	4:30	9:45 a.m.	10:10 a.m.	10:20 a.m.	11:10 a.m.	
4:30	1:15	5:30 *	11:20	11:50	11:55	1:10 p.m.	
*Available starting March 17, 20	17			1:45 p.m.	1:50 p.m.	2:55	
For the most current schedule, visit www.blueandgoldfleet.com				3:45 p.m.	3:50 p.m.	4:40	
Bay Cruise does not operate during inclement weather.			Week	ends & Holida	ys (Depart P	ier 41)	
FARES: All prices include audio tour.			9:45 a.m.	10:10 a.m.	10:20 a.m.	11:10 a.m.	
Adult \$31.00	Child (5-11)	\$21.00	11:20	11:50	11:55	12:45	
Junior (12-18) \$25.00	Senior (62+)	\$25.00	2:35 p.m.		3:50 p.m.	4:20 p.m.	
Discount fares available at	t www.blueandg	oldfleet.com					

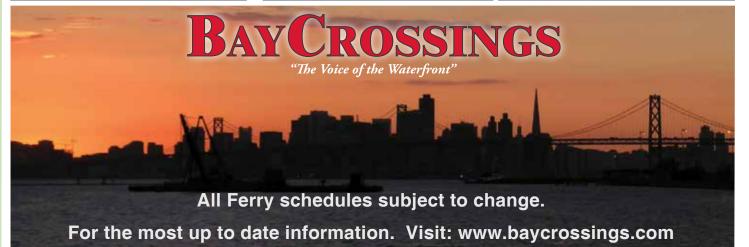
http://www.blueandgoldfleet.com/Ferry/Sausalito/index.cfm

### **RocketBoat**

Service resumes in May 2017

ANGEL ISLAND PRICES							
One Way S.F. Pier 41 (round-trip)							
Adult	\$ 9.00	\$18.00					
Child (5-11) SENIOR (65+)	\$ 4.75	\$ 9.50					
Child (5 & under) FREE							
* All prices include State Park Fees / Weekend Schedule on							

Memorial Day (May 25) / Independence Day (July 4) and Labor

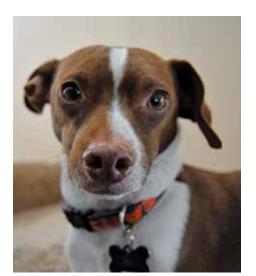


## AROUND THE BAY IN MARCH

#### Monday Mutt Days

Emeryville's Bay Street is set to host an all-new, dog-friendly series dubbed Monday Mutt Days. Every Monday in March from 6 to 7 p.m., dog owners and their furry friends are invited to enjoy free, four-legged festivities in Bay Street's Center Plaza including obedience training consultations from the professional dog trainers at Happy Hound Play and Daycare; nail trimming from All About the DOGue Salon; canine caricatures; a dress-up pooch photo booth; stupid pet tricks contests; a pet psychic; and more. All dogs must be on a leash and have a friendly disposition. Bay Street is a diverse mixed-

destination for films that capture the beauty, power and mysteries of the ocean, the four-day film festival features 11 programs, showcasing 47 films from 12 countries, including eight filmmakers from across the Bay Area. Join ocean lovers from around the world who share your passion and love for our beautiful seas and marine life, and experience the most unique and inspiring independent ocean-related films of the year. Festival goers have the opportunity to discuss current ocean events and issues in panel discussions throughout the festival with an array of filmmakers and local Bay Area ocean and marine experts. For more information, visit oceanfilmfest.org.



use center featuring retail, restaurant and entertainment offerings designed to serve as a gathering place for Bay Area residents and visitors offering more than 60 shops, restaurants, specialty stores and a 16-screen theater. Bay Street is three city blocks long and is located off the I-80 Powell Street exit. For more information, call (510) 655-4002 or visit www.baystreetemeryville.com.

#### Ocean Film Festival

The International Ocean Film Festival returns for its 14th year March 9 to 12 at the Cowell Theater in Fort Mason Center in San Francisco. The premier

## Trivia Night at Rosenblum

Come join the fun at the Rosenblum Cellars Tasting Room with Nicole Farar-Bridges, a hilarious hostess of all things trivia. Every Tuesday starting March 7 at 6 p.m., Nicole will lead up to eight teams through five rounds of questions. Winning teams will receive wine-themed gift baskets and other amazing Rosenblum merchandise. Please sign up early, as teams and tables fill up fast. Rosenblum Cellars is located at 10 Clay Street on the waterfront next to the Oakland ferry terminal in Jack London Square. For more information, visit www.rosenblumcellars.com.

#### Mmmmm Bacon... and Beer Festival

The Oakland Bacon and Beer Festival is coming back for a fourth year. On Saturday, March 11 from 2:30 to 5 p.m. at the Market Building at Jack London Square, @eat Boston, Bison Organic Beer and Oakland Grown present the fourth annual Oakland Bacon and Beer Festival as a fundraiser for Oakland Grown. The Bacon and Beer Festival is a day to celebrate two amazing comestibles, bacon and beer. Your \$47 ticket gets you into the festival, where you're free to sample from the restaurants and brewers. The Market Building at Jack London Square is located at 55 Harrison in Oakland. For more information and tickets, visit baconandbeer.net/Oakland.

#### 166th Saint Patrick's Day **Parade**

The West Coast's largest Irish event

celebrating Irish history and culture, the 166th Annual San Francisco St. Patrick's Day Parade and Festival, will take place on Saturday, March 11. The parade will start at 11:30 a.m. at the corner of Market and Second Streets, where over 5,000 participants from all over the country will make their way down Market Street in colorful floats, Irish dance troupes, marching bands and more—all the way to Civic Center Plaza. A full day of activity is planned for the St. Patrick's Day Festival, which will showcase the very best in Irish history and culture through live performances and entertainment, arts and crafts exhibitors, food and beverage concessions, children's rides and inflatables, and nonprofits representing the Irish community. This colorful San Francisco event is the largest St. Patrick's Day event west of the Mississippi, attracting more than 100,000 people each year! Featured groups from throughout the Bay Area's Irish community include schools, youth organizations, labor unions, cultural groups, and the San Francisco Police and Fire Departments. In addition, many local political and business leaders will proudly join in the parade and march up Market Street. Again this year, the festival will be held at Civic Center Plaza, in front of City Hall. The festival is full of flair and offers all in attendance the opportunity to truly experience Irish culture. The San Francisco Saint Patrick's Day Parade is a time to celebrate and participate in the City's Irish culture and it's a great day out for everyone-Irish or otherwise! The festival starts at 10 a.m. and ends at 5 p.m. For more information, please visit www.uissf.org.

#### Yountville Live

From March 16 to 19, Yountville Live combines the very best in music, wine and food with the small-town lifestyle and sophisticated ambiance of Yountville. This event is the ultimate luxury getaway event, featuring exclusive performances from some of today's hottest recording artists, exquisite foods from world-class restaurants and awardwinning chefs and a unique variety of some of Napa Valley's most celebrated wineries. This super-luxe weekend is the perfect blend of premium entertainment and epicurean experiences, with all of the luxury and sophistication that the Napa Valley has to offer for guests who appreciate the art of living well through discovery and exploration. Performances include Rodrigo Y Gabriela, Five for Fighting and Mayer Hawthorne. For more information and tickets, visit www.yountvillelive.com.

#### More Beer Here!

Marin's favorite rite of spring, the 22nd Annual Fairfax Brewfest, will take place on Saturday, March 25 from 1 to 5 p.m. The event features 24 of the best California microbrewers pouring the freshest batches of over 60 of their awardwinning ales, lagers and special limited brews alongside live music and delicious pub food at the historic Fairfax Pavilion. Presented by Iron Springs Pub & Brewery and the Fairfax Chamber of Commerce, the festival brings you a day of great beer, music, food and friends! Being one of the first big beer events of the season, many of the brewmasters themselves will be pouring the beer so patrons can critique, ask questions and swap beer stories with the experts. Taste the brews and meet the brewers who make these amazing libations during this annual rite of spring in Fairfax. Besides unlimited beer tastings all day, you can dance to hoppin' live music from Tom Rigney & Flambeau. Tickets are \$40 in advance and \$50 at the door. Visit www.fairfaxbrewfest.com for more information.

## **NOW OPEN!**



The HUB @ 375 Beale in San Francisco's Rincon Hill neighborhood is the region's newest resource for transportation information.

### Visit the HUB for...

- FasTrak® assistance
- Clipper® transit fare cards and value
- Air quality permits
- **Bay Trail information and maps**
- And other Bay Area transportation information

Open Monday-Friday 8 a.m. to 6 p.m. and









310 West Cutting Blvd., Point Richmond, CA 94804

Tel. 510.237.0140 • Parts Tel. 510.234.7960

office@baymarineboatworks.com

www.baymarineboatworks.com