Legacy Business Registry Staff Report

HEARING DATE APRIL 10, 2017

RED AND WHITE FLEET

Application No.:	LBR-2016-17-070
Business Name:	Red and White Fleet
Business Address:	Pier 43 ½, Fisherman's Wharf
District:	District 3
Applicant:	Thomas Crowley Escher, President
Nomination Date:	February 6, 2017
Nominated By:	Supervisor Aaron Peskin
Staff Contact:	Richard Kurylo legacybusiness@sfgov.org

BUSINESS DESCRIPTION
Red and White Fleet is the city's oldest and largest operator of sightseeing cruises of San Francisco Bay. Originally founded as a cargo company in 1892 by entrepreneur Thomas Crowley, the maritime business went on to become a global success, earning it the motto, "Anything, Anywhere, Anytime on Water." During the 1906 Earthquake and Fire, Crowley's boats ushered San Franciscans to safety across the bay; they supported war efforts during both WWI and WWII; and they provided free transportation to some 15,000 commuters following the 1989 Loma Prieta Earthquake. Its maritime tours date to the 1915 World's Fair, the Panama Pacific International Exposition, when the business offered its first sightseeing cruise of the San Francisco Bay. During the 1939 Golden State International Exposition held on Treasure Island, it again offered sightseeing tours, this time of the newly constructed Golden Gate and Bay bridges, launching the company's signature Golden Gate Bay Cruise that is still popular today. Red and White Fleet's sightseeing tours from Fisherman's Wharf were in full swing by the 1940s. In 1973, Red and White Fleet provided ferry service to the newly debuted Alcatraz Island National Park. Today, Red and White Fleet is owned and operated by Crowley's grandson, Tom Crowley Escher, who purchased the business from its parent corporation, Crowley Maritime Corporation, in 1997. Red and White Fleet continues to offer boat tours from Pier 43 ½ in 16 different languages. Its commitment to the community and to the environment is demonstrated through its partnership with the Inlandboatman's Union (an ILWU affiliate), its participation in nonprofit and City-sponsored employment programs, its movement to adopt the Bay Area's first biodiesel-powered ferry boats, and its work with Sandia National Laboratories to create the first high-speed hydrogen fuel cell passenger ferry and hydrogen refueling station.

CRITERION 1: Has the applicant operated in San Francisco for 30 or more years, with no break in San Francisco operations exceeding two years?

Yes, the applicant has operated in San Francisco for 30 or more years, with no break in San Francisco operations exceeding two years:

Meiggs Wharf Area / 43 ½ Fisherman's Wharf from 1892 to Present (125 years)

CRITERION 2: Has the applicant contributed to the neighborhood's history and/or the identity of a particular neighborhood or community?

Yes, the applicant has contributed to the Fisherman's Wharf neighborhood's history and identity.

The Historic Preservation Commission recommended the applicant as qualifying, noting the following ways the applicant contributed to the neighborhood's history and/or the identity of a particular neighborhood or community:

- Red and White Fleet is associated with the maritime traditions of San Francisco's Fisherman's Wharf area.

- Red and White Fleet has contributed to the identity of Fisherman's Wharf and to the city's maritime history through its sight-seeing tours of San Francisco Bay and its ferry service to residents and visitors.

- Pier 43 ½ is considered a "Category A Property," denoting a historic resource. It is a contributor to the National Register-listed Port of San Francisco Embarcadero Historic District.

- The business has been cited in the following publications:
  - Arcadia Publishing, 2006, San Francisco's Fisherman's Wharf, by Alessandro Bacari Jr.
  - Regional Oral History Office, Bancroft Library/University of California Berkeley, 1967, "Recollections of the San Francisco Waterfront: Thomas Crowley," an oral history interview conducted by Karl Kortum and Willa Klug Baum.
  - Bancroft Oral History Office, University of California Berkeley, 1973-1975, "Crowley Maritime Corporation: San Francisco Bay Tugboats to International Transportation Fleet," San Francisco Bay Maritime History Series, oral history interview of Thomas B. Crowley conducted by Miriam Feingold Stein.
  - Biodiesel Magazine, 6/14/11, "Biodiesel Sets Sail," by Bryan Simms.
  - Phys Org, 8/1/15, "Red and white fleet going green."
  - San Francisco Examiner, 8/15/16, "SF Port may locate hydrogen fueling station at Pier 54," by Joshua Sabatini.
  - Phys Org, 10/6/16, "Hydrogen-powered passenger ferry in San Francisco Bay is possible, study says."
  - Ship & Bunker, 10/11/16, "More Details Revealed on San Francisco Hydrogen Ferry, Bunkering Plans."
  - WorkBoat, 2/13/17, "All American to build hybrid-electric passenger ferry," by Ken Hocke.

CRITERION 3: Is the applicant committed to maintaining the physical features or traditions that define the business, including craft, culinary, or art forms?

Yes, Red and White Fleet is committed to maintaining the physical features or traditions that define its tradition of offering maritime tours and ferry services to residents and visitors.

HISTORIC PRESERVATION COMMISSION RECOMMENDATION
The Historic Preservation Commission recommends that Red and White Fleet qualifies for the Legacy Business Registry under Administrative Code Section 2A.242(b)(2) and recommends safeguarding of the below listed physical features and traditions.

Physical Features or Traditions that Define the Business:

- Business name of "Red and White Fleet."
- Ferry services and maritime sightseeing cruises, offered in multiple languages.
- Signature red & white colors of the company's vessels.
- Fisherman's Wharf location.
- Iconic "tripod" sign at its box office location at Pier 43 ½.
- Commitment to using environmentally sustainable practices.

CORE PHYSICAL FEATURE(S) OR TRADITION(S) THAT DEFINE THE BUSINESS

Following is the core physical feature or tradition that defines the business that would be required for maintenance of the business on the Legacy Business Registry:

- Ferry service and/or ferry sight-seeing tours of San Francisco Bay.

STAFF RECOMMENDATION

Staff recommends that the San Francisco Small Business Commission include Red and White Fleet currently located at Pier 43 ½, Fisherman's Wharf in the Legacy Business Registry as a Legacy Business under Administrative Code Section 2A.242.

Richard Kurylo, Manager
Legacy Business Program

Small Business Commission
Draft Resolution
HEARING DATE APRIL 10, 2017

RED AND WHITE FLEET

LEGACY BUSINESS REGISTRY RESOLUTION NO. _____

Application No.:	LBR-2016-17-070
Business Name:	Red and White Fleet
Business Address:	Pier 43 ½, Fisherman's Wharf
District:	District 3
Applicant:	Thomas Crowley Escher, President
Nomination Date:	February 6, 2017
Nominated By:	Supervisor Aaron Peskin
Staff Contact:	Richard Kurylo legacybusiness@sfgov.org

ADOPTING FINDINGS APPROVING THE LEGACY BUSINESS REGISTRY APPLICATION FOR RED AND WHITE FLEET, CURRENTLY LOCATED AT PIER 43 ½, FISHERMAN'S WHARF.

WHEREAS, in accordance with Administrative Code Section 2A.242, the Office of Small Business maintains a registry of Legacy Businesses in San Francisco (the "Registry") to recognize that longstanding, community-serving businesses can be valuable cultural assets of the City and to be a tool for providing educational and promotional assistance to Legacy Businesses to encourage their continued viability and success; and

WHEREAS, the subject business has operated in San Francisco for 30 or more years, with no break in San Francisco operations exceeding two years; or

WHEREAS, the subject business has operated in San Francisco for more than 20 years but less than 30 years, has had no break in San Francisco operations exceeding two years, has significantly contributed to the history or identity of a particular neighborhood or community and, if not included in the Registry, faces a significant risk of displacement; and

WHEREAS, the subject business has contributed to the neighborhood's history and identity; and

WHEREAS, the subject business is committed to maintaining the physical features and traditions that define the business; and

WHEREAS, at a duly noticed public hearing held on April 10, 2017, the San Francisco Small Business Commission reviewed documents and correspondence, and heard oral testimony on the Legacy Business Registry application; therefore

BE IT RESOLVED that the Small Business Commission hereby includes Red and White Fleet in the Legacy Business Registry as a Legacy Business under Administrative Code Section 2A.242.

BE IT FURTHER RESOLVED that the Small Business Commission recommends safeguarding the below listed physical features and traditions at Red and White Fleet:

Physical Features or Traditions that Define the Business:

- Business name of "Red and White Fleet."
- Ferry services and maritime sightseeing cruises, offered in multiple languages.
- Signature red & white colors of the company's vessels.
- Fisherman's Wharf location.
- Iconic "tripod" sign at its box office location at Pier 43 ½.
- Commitment to using environmentally sustainable practices.

BE IT FURTHER RESOLVED that the Small Business Commission requires maintenance of the below listed core physical feature or tradition to maintain Red and White Fleet on the Legacy Business Registry:

- Ferry service and/or ferry sight-seeing tours of San Francisco Bay.

I hereby certify that the foregoing Resolution was ADOPTED by the Small Business Commission on April 10, 2017.

_____
Regina Dick-Endrizzi
Director

RESOLUTION NO. _____

Ayes –
Nays –
Abstained –
Absent –

SMALL BUSINESS COMMISSION
MARK DWIGHT, PRESIDENT
REGINA DICK-ENDRIZZI, DIRECTOR

CITY AND COUNTY OF SAN FRANCISCO
EDWIN M. LEE, MAYOR

Legacy Business Registry

Application Review Sheet

Application No.: LBR-2016-17-070
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Business Address: Pier 43 ½, Fisherman's Wharf
District: District 3
Applicant: Thomas Crowley Escher, President
Nomination Date: February 6, 2017
Nominated By: Supervisor Aaron Peskin

CRITERION 1: Has the applicant has operated in San Francisco for 30 or more years, with no break in San Francisco operations exceeding two years? ____X____Yes _____No

Meiggs Wharf Area / 43 ½ Fisherman's Wharf from 1892 to Present (125 years)

CRITERION 2: Has the applicant contributed to the neighborhood's history and/or the identity of a particular neighborhood or community? ____X____Yes _____No

CRITERION 3: Is the applicant committed to maintaining the physical features or traditions that define the business, including craft, culinary, or art forms? ____X____Yes _____No

NOTES: NA

DELIVERY DATE TO HPC: February 15, 2017

Richard Kurylo
Manager, Legacy Business Program

Member, Board of Supervisors
District 3

City and County of San Francisco

AARON PESKIN
佩斯金 市參事

February 6, 2017

Director Regina Dick-Endrizzi
San Francisco Office of Small Business
City Hall, Room 110
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

Dear Director Dick-Endrizzi:

It is my honor and privilege to nominate the Red and White Fleet for inclusion on the Legacy Business Registry.

The Red and White Fleet was founded as a cargo company in 1892 by seventeen-year-old Thomas Crowley. Since the first boat tour during the 1915 World's Fair, the Red and White Fleet has introduced generations of tourists and San Franciscans to the Bay's sights and history. The company provides tours in 16 languages, making it accessible to people from all over the world. The Red and White Fleet gives every passenger the incredible experience of navigating one of the world's most unique and distinctive bodies of water, while simultaneously being a vibrant historic site in and of itself.

I hope for the continued success and growth of this business. It is essential to the culture and spirit of Fisherman's Wharf, District 3 and the City of San Francisco.

Sincerely,

Aaron Peskin

City Hall • 1 Dr. Carlton B. Goodlett Place • Room 244 • San Francisco, California 94102-4689 • (415) 554-7450
Fax (415) 554-7454 • TDD/TTY (415) 554-5227 • E-mail: Aaron.Peskin@sfgov.org

Section One:

Business / Applicant Information. Provide the following information:

- The name, mailing address, and other contact information of the business;
- The name of the person who owns the business. For businesses with multiple owners, identify the person(s) with the highest ownership stake in the business;
- The name, title, and contact information of the applicant;
- The business's San Francisco Business Account Number and entity number with the Secretary of State, if applicable.

NAME OF BUSINESS:		
Red and White Fleet		
BUSINESS OWNER(S) (identify the person(s) with the highest ownership stake in the business)		
Thomas C. Escher		
CURRENT BUSINESS ADDRESS:	**TELEPHONE:**	
Pier 43 1/2 Embarcadero San Francisco, CA 94133	(415) 901-5249	
	EMAIL:	
	tescher@redandwhite.com	
WEBSITE:	**FACEBOOK PAGE:**	**YELP PAGE**
www.redandwhite.com	https://www.facebook.com/redandwhite/	

APPLICANT'S NAME	
Thomas Crowley Escher	✔ Same as Business
APPLICANT'S TITLE	
President	

APPLICANT'S ADDRESS:	TELEPHONE:
2643 Union Street San Francisco, CA 94123	(415) 901-5249
	EMAIL:
	tescher@redandwhite.com

SAN FRANCISCO BUSINESS ACCOUNT NUMBER:	SECRETARY OF STATE ENTITY NUMBER (if applicable):
94-326724	

OFFICIAL USE: Completed by OSB Staff	
NAME OF NOMINATOR:	DATE OF NOMINATION:

Section Two:

Business Location(s).

List the business address of the original San Francisco location, the start date of business, and the dates of operation at the original location. Check the box indicating whether the original location of the business in San Francisco is the founding location of the business. If the business moved from its original location and has had additional addresses in San Francisco, identify all other addresses and the dates of operation at each address. For businesses with more than one location, list the additional locations in section three of the narrative.

ORIGINAL SAN FRANCISCO ADDRESS:	ZIP CODE:	START DATE OF BUSINESS
Meiggs Wharf Area	94133	1892
IS THIS LOCATION THE FOUNDING LOCATION OF THE BUSINESS?	**DATES OF OPERATION AT THIS LOCATON**	
☐ No ☒ Yes		

OTHER ADDRESSES (if applicable):	ZIP CODE:	DATES OF OPERATION
Pier 43 1/2, Fisherman's Wharf	94133	Start: 1892
		End: Current

OTHER ADDRESSES (if applicable):	ZIP CODE:	DATES OF OPERATION
		Start:
		End:

OTHER ADDRESSES (if applicable):	ZIP CODE:	DATES OF OPERATION
		Start:
		End:

OTHER ADDRESSES (if applicable):	ZIP CODE:	DATES OF OPERATION
		Start:
		End:

OTHER ADDRESSES (if applicable):	ZIP CODE:	DATES OF OPERATION
		Start:
		End:

OTHER ADDRESSES (if applicable):	ZIP CODE:	DATES OF OPERATION
		Start:
		End:

Section Three:

Disclosure Statement.

San Francisco Taxes, Business Registration, Licenses, Labor Laws and Public Information Release.

This section is verification that all San Francisco taxes, business registration, and licenses are current and complete, and there are no current violations of San Francisco labor laws. This information will be verified and a business deemed not current in with all San Francisco taxes, business registration, and licenses, or has current violations of San Francisco labor laws, will not be eligible to apply for the Business Assistance Grant.

In addition, we are required to inform you that all information provided in the application will become subject to disclosure under the California Public Records Act.

Please read the following statements and check each to indicate that you agree with the statement. Then sign below in the space provided.

- ☑ I am authorized to submit this application on behalf of the business.
- ☑ I attest that the business is current on all of its San Francisco tax obligations.
- ☑ I attest that the business's business registration and any applicable regulatory license(s) are current.
- ☑ I attest that the Office of Labor Standards and Enforcement (OLSE) has not determined that the business is currently in violation of any of the City's labor laws, and that the business does not owe any outstanding penalties or payments ordered by the OLSE.
- ☑ I understand that documents submitted with this application may be made available to the public for inspection and copying pursuant to the California Public Records Act and San Francisco Sunshine Ordinance.
- ☑ I hereby acknowledge and authorize that all photographs and images submitted as part of the application may be used by the City without compensation.
- ☑ I understand that the Small Business Commission may revoke the placement of the business on the Registry if it finds that the business no longer qualifies, and that placement on the Registry does not entitle the business to a grant of City funds.

Thomas C. Escher 1/13/17 T Escher

Name (Print): Date: Signature:

RED AND WHITE FLEET
Section 4: Written Historical Narrative

CRITERION 1

a. Provide a short history of the business from the date the business opened in San Francisco to the present day, including the ownership history. For businesses with multiple locations, include the history of the original location in San Francisco (including whether it was the business's founding and or headquartered location) and the opening dates and locations of all other locations.

The Red and White Fleet is the original San Francisco tour boat excursion business located at historic Fisherman's Wharf. Founded in 1892, the company has been continually owned and operated by the same San Francisco family providing maritime and recreational transportation services for the cities and ports on San Francisco Bay.

In 1892, 17-year-old Thomas Crowley, using $80 he had saved, purchased a used 18-foot Whitehall boat. He would row it alone through the waters of the bay, ferrying supplies to anchored ships, providing passenger service for workers and those who needed access to other parts of the bay, and even rowing out to the Farallon Islands to meet incoming ships. As his business grew, Crowley soon added three additional Whitehall boats, serving the bay 24-hours a day. The business eventually added several larger and faster gas-powered launches.

In the immediate aftermath of the 1906 earthquake, Crowley's boats rescued people and their belongings from the battered streets of San Francisco and transported them across the bay to safety and shelter. They even transported some of the vault deposits for the Bank of Italy --now called the Bank of America-- over to the Berkeley Pier, carrying them hidden in milk cans. One of the launches actually anchored in the middle of the bay, full of securities from several damaged banks to keep them safe from looters and the fires.

The sightseeing business was booming by 1908, driven by the public's interest in visiting several historic battleships docked on the bay such as the USS Oregon. In 1915, the company played a critical role in the Panama Pacific International Exposition held along the city's northern waterfront (today's Marina District) by transporting manpower and equipment to the Exposition and offering bay cruises to visitors of the fair.

In 1939, during the Golden State International Exposition held on Treasure Island, more than 17 million people came to San Francisco to view the magnificence of the newly-completed bridges, many of those people from the water. These tours to the bridges were the origin of the popular Golden Gate Bay Cruise, San Francisco's oldest and longest-running bay cruise.

During World War II, all the vessels were active in the war effort, with Crowley #21 being used by the US Navy to lay a submarine net across the Golden Gate to protect the Bay. By the late 1940s, the company began operating regularly scheduled sightseeing tours from Fisherman's Wharf. The vessels were painted red and white and the name "Red and White Fleet" was formally adopted.

In 1960, Thomas Crowley Escher, grandson of the founder (and the present owner of Red and White Fleet), began working at Red and White Fleet as a sweeper and a mechanic's helper on the vessels. During the 1960s and 70s, the fleet experienced significant expansion, and in 1973 Red and White Fleet supported the newly-opened Alcatraz Island National Park, providing service from the city to the island. By the end of the 1980s, Red and White Fleet was providing ferry service throughout the bay to locations such as Sausalito, Vallejo, and Oakland.

Much like during 1906 earthquake, Red and White Fleet answered the call to aid during the 1989 Loma Prieta earthquake, providing free transportation to help about 15,000 commuters after the collapse of a section of the Bay Bridge stranded them from their homes.

In 1997, Crowley Maritime Corporation, the parent corporation, shed some of its businesses including its Red and White Fleet. Tom Crowley Escher purchased 100% of the Red and White Fleet, becoming the third generation of his family to own and operate the business.

The original "office" was in the Meiggs Wharf area (historic Fisherman's Wharf) and today the company continues in that area at Pier 43 ½. The company's base shipping and passenger services have evolved over 125 years, through earthquakes and two world wars, to meet the changing needs and demands of San Francisco. Today, Mr. Escher continues his family's San Francisco tradition of offering maritime tours and ferry service to residents and visitors from around the world.

b. Describe any circumstances that required the business to cease operations in San Francisco for more than six months?

There is no known period during Red and White Fleet has ceased operations in San Francisco for more than six months.

c. Is the business a family-owned business? If so, give the generational history of the business.

Red and White Fleet is a family owned business.

In 1892, 17-year-old Thomas Crowley purchased a used 18-foot boat using $80 he had saved. This was the beginning of the company. As his company grew and changed over time, it became known by numerous names:

- Crowley's
- Golden West Tours, Inc.
- Crowley Brothers
- Crowley Launch and Tugboat Company
- Harbor Sightseeing
- Harbor Tours
- Harbor Carriers
- Red and White Fleet, Inc.
- Red and White Ferries, Inc.
- Golden Gate Scenic Steamship Company (DBA)
- Red and White Fleet

The name "Red and White Fleet" has been used officially by the company since the 1940s.

In 1960, Thomas Crowley Escher, grandson of the founder and the present owner, began working at Red and White Fleet as a sweeper and a mechanic's helper on the vessels.

In 1997, Mr. Escher purchased 100% of the Red and White Fleet.

d. Describe the ownership history when the business ownership is not the original owner or a family-owned business.

Not applicable.

e. When the current ownership is not the original owner and has owned the business for less than 30 years, the applicant will need to provide documentation of the existence of the business prior to current ownership to verify it has been in operation for 30+ years. Please use the list of supplemental documents and/or materials as a guide to help demonstrate the existence of the business prior to current ownership.

Not applicable. The current owner has owned the business for more than 30 years.

CRITERION 2

a. Describe the business's contribution to the history and/or identity of the neighborhood, community or San Francisco.

Red and White Fleet has contributed significantly to the history and identity of transportation on San Francisco Bay. It is the original San Francisco tour boat excursion business located at historic Fisherman's Wharf.

The business is presently involved with the Fisherman's Wharf Community Benefit District, Fisherman and Seaman's Memorial Chapel, Maritime Commerce Advisory Committee (Port Committee), Submarine Pampanito, San Francisco Maritime National Park Association, Passenger Vessel Safety, Prevention and Mass Rescue Operations Program, Guardians of the City, Mayors Office of Emergency Services and Society of California Pioneers to name a few. In the past, the business has been active with the San Francisco Museum and Historical Society, Museum of the City of San Francisco and the Fisherman's Wharf Merchants Association.

b. Is the business (or has been) associated with significant events in the neighborhood, the city, or the business industry?

In the aftermath of the 1906 earthquake, Crowley's boats rescued people and their belongings from the streets of San Francisco and transported them across the bay. They also transported vault deposits for the Bank of Italy.

In 1915, for the Panama Pacific International Exposition, the company transported workers and equipment to the Exposition site and offered bay cruises to visitors of the fair.

In 1939, during the Golden State International Exposition, people toured the newly-completed bridges from the water, which was the origin of Red and White Fleet's popular Golden Gate Bay Cruise.

During World War II, all the vessels were active in the war effort.

After the Loma Prieta earthquake in 1989, Red and White Fleet provided free transportation for about 15,000 commuters after the collapse of a section of the Bay Bridge.

c. Has the business ever been referenced in an historical context? Such as in a business trade publication, media, or historical documents?

Historical references to Red and White Fleet are included in this application.

d. Is the business associated with a significant or historical person?

The business is associated with Thomas Crowley who started the business in 1892 at age 17.

e. How does the business demonstrate its commitment to the community?

Red and White Fleet continues to serve the San Francisco community and promote tourism throughout the bay. Some of the efforts include:

- Developing and maintaining a strong, long-term relationship with the Inlandboatman's Union (an ILWU affiliate) to source, recruit, train, and employ qualified individuals and help build the next generation of dedicated workers for all passenger vessel operations on the bay.

- For the last five years, the business has been working with the Chinatown Community Development Center to recruit and employ college-bound recent high school graduates.

- Supporting Mayor Ed Lee's 5th Annual Youth Jobs+ Challenge at the Asian Art Museum in partnership with the United Way, the Office of Economic and Workforce Development, Department of Children and the San Francisco Unified School District.

- Working with the Office of Economic and Workforce Development to fund and select qualified candidates for all open positions.

- Continuing to hire through the Human Services Agency's JOBsNOW! Program, which provides employment to people who are dependent on public assistance and are transitioning back into the workforce.

- Donating complimentary Golden Gate Bay Cruise tickets to numerous non-profit groups such as Laguna Honda Hospital and Rehabilitation Center, North Beach's Madonna Del Luma Celebration, and local Bay Area schools.

A few noteworthy awards for environmental management and stewardship are:

- Multi-year recipient of the Bay Area Air Quality Management District's Carl Moyer Program, surpassing all compliance dates for USEPA tier-rated emission standards and a recognized forerunner with the use of alternative fuels.

- Supported CalRecycle's Waste Reduction Award Program (WRAP) for 14 years – receiving an award every year the program was offered (1999-2012).

- Red and White Fleet will begin operating an aluminum-hulled, lithium-ion battery-electric hybrid vessel in March 2018.

- To continuously improve both environmental operations and the tour boat excursion industry in general, the business is part of a study with Sandia National Laboratories to develop and build *SF-BREEZE,* a zero-pollution hydrogen fuel cell ferry boat.

f. Provide a description of the community the business serves.

After the Golden Gate and Bay Bridges were completed, ferry companies saw a decline business. The company weathered the change by diversifying and offering regularly scheduled sightseeing tours, which were the first of their kind and have operated continuously now for nearly 80 years. Nowadays, as highway congestion continues to increase, water transportation has begun to expand again as an option for commuters.

Red and White Fleet presently carry around 500,000 passengers per year, serving both domestic and international visitors. Because so many of customers are foreign tourists, the business offers each passenger complimentary headphones with narrations in 16 different languages. This type of service acts as a "beacon," attracting a diverse group of people to the Wharf and adding to the vitality of the city.

g. Is the business associated with a culturally significant building/structure/site/object/interior?

The classic "tripod" sign above the box office at Pier 43 ½ is an iconic physical feature that visually defines both Red and White Fleet and the historic Fisherman's Wharf area. The company is currently working with the Port of San Francisco to improve and enhance the business efficiency and beautification of the public experience. This involves adjusting the Pier 43 ½ visitor-serving capacity with new dock floats and redesigning the public queuing and circulation area for both embarking passengers and the general public.

h. How would the community be diminished if the business were to be sold, relocated, shut down, etc.?

If Red and White Fleet were to be closed or shut down, the city would lose one of its oldest continually operating companies --one that has remained owned by the same family throughout its history-- and the only tour company with cruises that sail underneath both bridges and around Alcatraz. Without Red and White's presence at Pier 43 ½, the pattern of

tourism would shift away from the southern end of the Wharf and hurt the neighboring business community that relies on one other for foot traffic. The public would also lose some of the best vantage points possible for numerous special events located on or above the Bay, such as Fourth of July and New Year's fireworks displays and Fleet Week. And with efforts in the development of alternative-fuel vessels, the marine community would lose the "tip of the spear" in environmental sustainability.

CRITERION 3

a. Describe the business and the essential features that define its character.

Presently there are four vessels in the fleet: *Harbor Princess, Harbor Queen, Royal Prince,* and *Zalophus*. Very soon, the company will be adding a new vessel, which when complete will be the largest diesel-electric hybrid passenger ship on San Francisco Bay.

Additionally, the company is currently working with Sandia National Laboratories in partnership with the US Marine Administration, Elliot Bay Design Group, the US Coast Guard, the American Bureau of Shipping, and others to develop a hydrogen fuel cell vessel, *SF-BREEZE.* It will become the world's first high-speed fuel cell vessel in operation.

b. How does the business demonstrate a commitment to maintaining the historical traditions that define the business, and which of these traditions should not be changed in order to retain the businesses historical character? (e.g., business model, goods and services, craft, culinary, or art forms)

The vessels' appearances remain true to the company's name, having been painted with the same colors ever since dedicated sightseeing tours began on the bay. For as long as there have been tour boats operating on the water, there have been red and white tour boats operating on the water.

The company now enters its 125th year of business, but even as it grows and expands to meet new changes and opportunities, they will always be "on the water" offering sightseeing cruises and maintaining a highly-visible presence on Fisherman's Wharf with the iconic sign at the box office location on Pier 43 ½.

c. How has the business demonstrated a commitment to maintaining the special physical features that define the business? Describe any special exterior and interior physical characteristics of the space occupied by the business (e.g. signage, murals, architectural details, neon signs, etc.).

Red and White Fleet is committed to serving the San Francisco community and promoting tourism throughout the bay, maintaining their vessels' appearances, and maintaining the classic "tripod" sign above the box office at Pier 43 ½.


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HARBOR QUEEN


RED & WHITE
FLEET
HARBOR QUEEN


RED AND WHITE
FLEET
HARBOR PRINCESS


RED & WHITE
FLEET
HARBOR QUEEN


RED & WHITE FLEET
ROYAL PRINCE


RED AND WHITE FLEET
ZALOPHUS
© 10 May 2015 www.fototaker.net

References to Red and White Fleet in an historical context, such as business trade publications, media, and historical documents

Regional Oral History Office
The Bancroft Library

University of California
Berkeley, California

San Francisco Bay Maritime History Series

Thomas B. Crowley

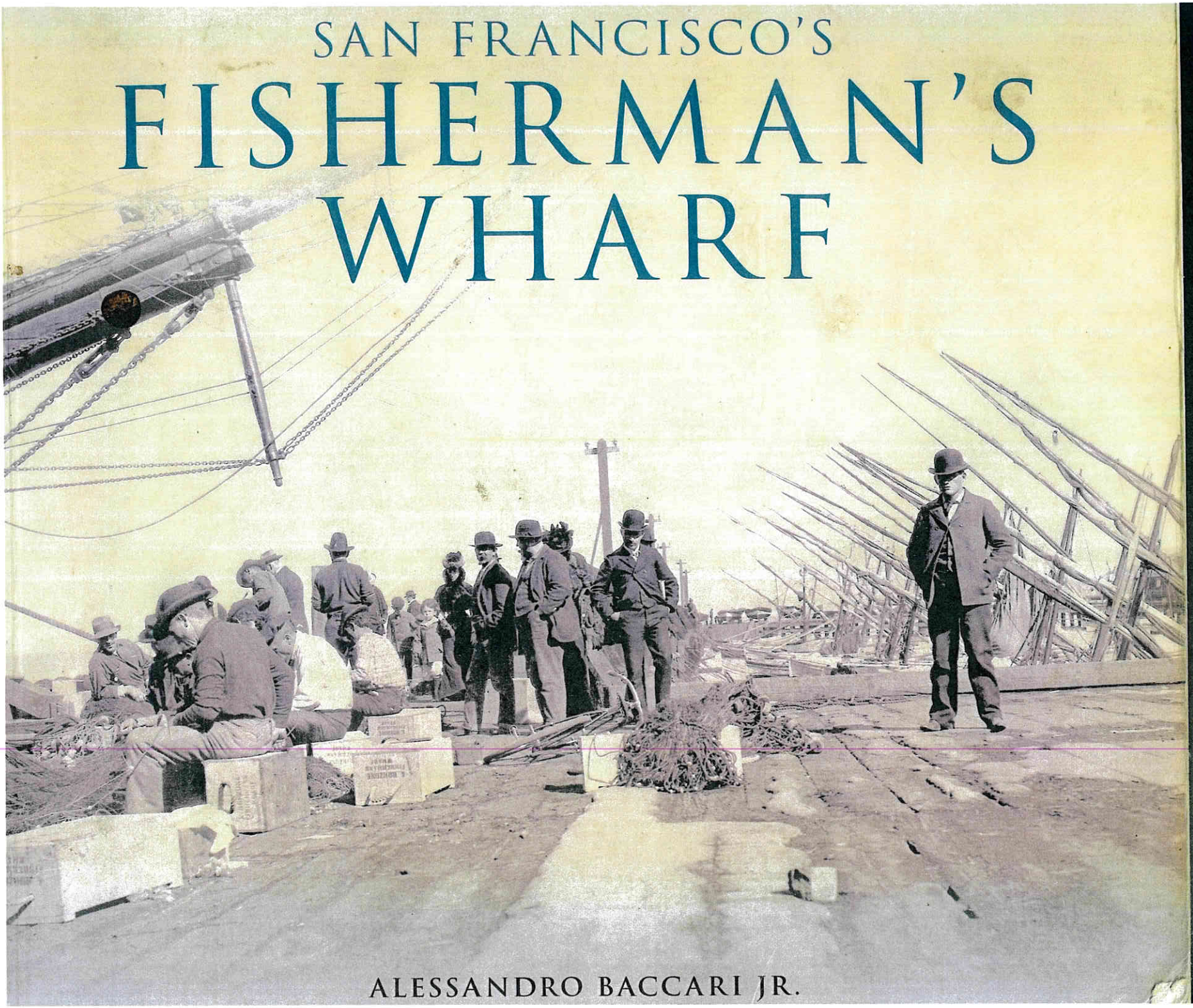
Crowley Maritime Corporation: San Francisco Bay Tugboats to International Transportation Fleet

An Interview Conducted by
Miriam Feingold Stein
1973 - 1975

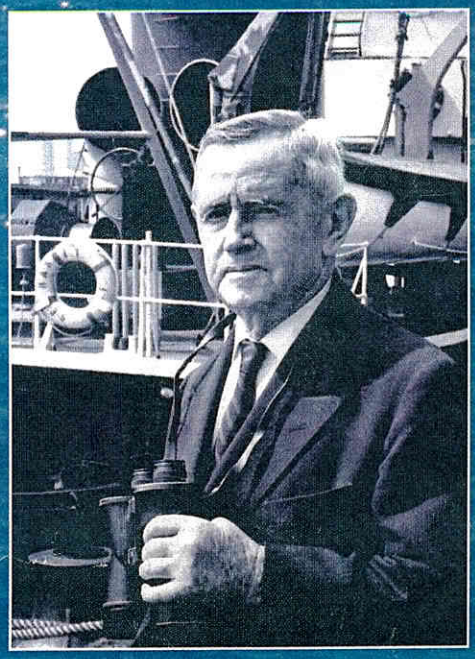
Recollections of the San Francisco Waterfront; Oral History Transcript | and Related Material, 1965-1967

Thomas Crowley

SAN FRANCISCO'S FISHERMAN'S WHARF

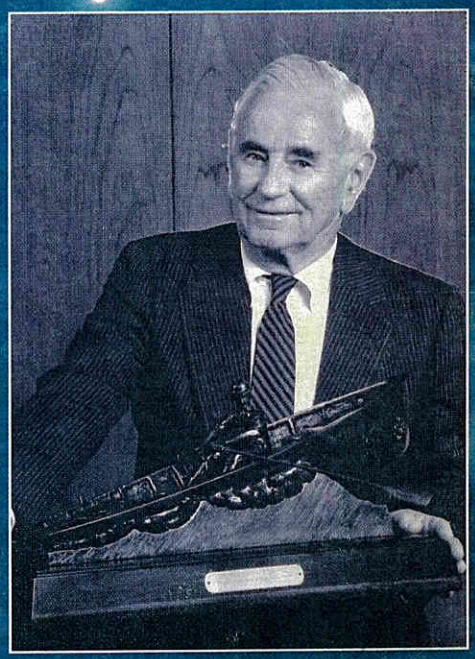


ALESSANDRO BACCARI JR.



TWO MEN AT THE HELM

The First 100 Years of Crowley Maritime Corporation
1892-1992



Thomas Crowley

RECOLLECTIONS OF THE SAN FRANCISCO WATERFRONT

An Interview Conducted by
Karl Kortum and Willa Klug Baum

Appendix
A STATEMENT OF REFUTATION BY
CYRIL MAGNIN
Made to Willa Klug Baum, 1975
Page 282a ff.

Berkeley
1967

INTERVIEWS ON THE SOCIAL HISTORY OF NORTHERN CALIFORNIA

The Regional Oral History Office was established to tape record autobiographical interviews with persons prominent in recent California history. The following interviews are part of a series sponsored by The Bancroft Library to document the social history of Northern California. Other interview series developed by ROHO--(Art, Photography and Architecture; Books and Printing in the San Francisco Bay Area; University of California History)--may contain additional information on this subject.

First Series

Arnstein, Lawrence	Community Service in California Public Health and Social Welfare. 1964
Bocqueraz, Leon	Finding of the Drake Plate. 1956
Braden, Amy Steinhart	Child Welfare and Community Service. 1965
Coggins, Herbert L.	From Horatio Alger to Eugene Debs. 1956
Farquhar, Francis P.	Accountancy, Mountaineering, and the National Parks. 1960
Graves, Roy D.	Index to Roy D. Graves Photograph Collection. 1964
Hornitos, Oldtimers	Life in a Mining Town. 1954
Mariposa Oldtimers	Mariposa Reminiscences. 1956
Maytas, Jennie	Jennie Maytas and the ILGWU. 1957
Norris, Kathleen	An Interview with Kathleen Norris. 1959
Olney, Mary McLean	Oakland, Berkeley, and the University of California, 1880-1895. 1963
Richardson, Leon J.	Berkeley Culture, University of California Highlights, and University Extension, 1892-1960. 1962

Second Series

Crowley, Thomas	Recollections of the San Francisco Waterfront. 1967
Lehman, Benjamin	Recollections and Reminiscences of Life in the Bay Area from 1920 Onward. 1968
Levison, Alice Gerstle	Family Reminiscences. 1967
Lewis, Oscar	Literary San Francisco. 1965
Martinez, Elsie Whitaker	San Francisco Bay Area Writers and Artists. 1964 (Completed, 1968)
McLaughlin, Emma Moffat	A Life in Community Service. 1968
Turner, Ethel Duffy	Writers and Revolutionists. 1967

INTERVIEW HISTORY

Interviewers: Willa K. Baum, head, Regional Oral History Office.
Karl Kortum, director, San Francisco Maritime Museum.

Mr. Kortum was asked to assist as a co-interviewer because of his extensive knowledge of the San Francisco waterfront. During the past twelve years he has interviewed scores of seafaring men and waterfront figures with a view to creating on tape an oral record of the last days of sail as well as the days of steam schooners and the coastwise passenger trade.

Research and Planning: Recommendations that Tom Crowley be interviewed came from Sam Kagel, Professor of Law, and James D. Hart, Professor of English, University of California at Berkeley, and from James deT. Abajian, librarian, California Historical Society.

Mr. Crowley consented to the interview in May 1963. He asked that before the interviewing begin, Mrs. Baum read over the scrapbooks held at the Crowley Launch and Tugboat Company, Pier 32, and the Red Stacks office, Pier 25, San Francisco. Mrs. Baum spent several days at each location. Mr. Crowley was then working at Pier 32 and would stop by the conference room where she was working to point out interesting items in the scrapbooks.

Captain W. J. Darragh, superintendent of Red Stacks since it became a Crowley business, was very hospitable, offering coffee and advice, and inviting Mrs. Baum to study the tugboat situation at firsthand by taking a ride on a tug. That trip, with Captain Allen Clark at the helm and Robert Barrazi assisting, was a most enjoyable part of the research.

An outline was then submitted to Mr. Crowley. Before starting the interviewing, he further suggested that Mrs. Baum look over several family scrapbooks at his home at 30 Florence Street, and this was done in July 1963. Mr. Crowley's home atop a high hill

affords a panoramic view of the Bay; a pair of powerful binoculars on the coffee table punctuated Captain Darragh's report that at any time one of the many offices of the Crowley enterprises could expect a call from Tom Crowley, Sr., asking just what that Crowley boat was doing out there in the Bay. Mr. Crowley always kept a close eye on all of his operations.

A shortage of funds made it necessary to postpone the interviewing at that time and the work was not continued until fall, 1965.

Time and Setting of Interviews:

Seven interviews were held weekly on Monday afternoons at two o'clock and lasted about two hours each.
October 11, October 18, October 25, 1965--Mrs. Baum, interviewer.
November 1, November 8, 1965--Mr. Kortum and Mrs. Baum, interviewers.
November 23, 1965--Mr. Kortum, interviewer.

All interviews were held in Mr. Crowley's office at 260 California Street. This was one large room, furnished with a very large roll top desk and a conference table and chairs. At the front of the office near the door were the desk, files, and office equipment of the young man who served as Mr. Crowley's assistant, and he was present but engaged in his bookkeeping during all of the interviews. Occasionally one or another old friend from the maritime world would stop in--they seemed to have offices in the same building--to see if Mr. Crowley would accompany them to lunch or to some meeting. Otherwise the only persons present were Mr. Crowley and the interviewers.

Conduct of the Interviews:

About a four-page chronological-topical outline of Mr. Crowley's career was sent to him prior to beginning the interviews. In addition, a letter was sent to him each week setting out in a paragraph or two what the subjects were to be for the up-coming interview.

The interviews did not strictly follow the outline--

one idea led to another. Sometimes different aspects of the same event were discussed at different sessions; when this occurred the two accounts were fitted together in the final manuscript.

Mr. Crowley was very cooperative in the work and obviously enjoyed telling his memories of the old days. Had funds permitted, he would have been willing to spend more time on this enterprise.

In November Mr. Crowley had just been informed that the May Day Pictorial News, a monthly San Francisco maritime publication, was dedicating the December 1965 issue to Tom Crowley, "Dean of the Tugboat Industry," on the occasion of his 90th birthday. Mr. Crowley was very pleased about this and the maritime social events that went along with this honor. A few pages from this Crowley issue are included in the appendix.

Editing:

Transcribing and editing were delayed for two years for financial reasons. In the summer of 1967 Mrs. Baum went over the transcripts, combined repeated stories when necessary, arranged the material in chronological-topical order, and chaptered the manuscript.

The first chapter was sent to Mr. Crowley in September 1967, and subsequently two more chapters. Mr. Crowley looked over the material and made a few additions, but at age 92 he found the work burdensome and asked if someone else could check over the rest.

The manuscript was turned over to Harlan Soeten, curator of the San Francisco Maritime Museum, who went over it and added notes (indicated by H.S.) on points that were unclear. He also checked names of persons and firms where possible.

Mr. Kortum went over the interview he had done alone; he also prepared the introduction.

Willa Baum

15 July 1968
Regional Oral History Office
486 The Bancroft Library
University of California at Berkeley

Timeline of Crowley Maritime Corporation

Including Red and White Fleet

1892

- Founder Thomas Crowley purchased one 18-foot Whitehall boat to provide transportation of personnel and stores to ships anchored on San Francisco Bay.
- In a few years, the one Whitehall was joined by two others serving the Bay 24-hours a day.
- In the mid-1890s, the business was incorporated under the name Thomas Crowley and Brothers.
- Crowley purchased his first 36-foot motor launch vessel shortly followed by a second 45-foot vessel, then a third 28-footer.
- Within a few years, services broadened to include bay towing and ship-assist services.

1900

- Crowley continued to build new or buy used gasoline launches, expanding both the fleet and the type of work the company could perform.
- The company also acquired and operated small barges to transport steel to Oakland and barrels of oil, ice, and other supplies to ships in the Bay.

1906

- Crowley's fleet played a significant role in ferrying passengers and their belongings out of San Francisco following the great earthquake.
- Operations incorporated under the name Crowley Launch and Tugboat Company. Stockholders were Thomas Crowley and his two half-brothers.

1908

- Crowley expanded into tugboats to tow the scow schooners through the Bay
- Crowley vessels handled the transportation of nitrate from South America and coal transport for government operations.
- Tom Crowley became recognized as an expert in the most efficient ways to handle and transport marine cargoes.
- Crowley purchased tugs of his own and entered competition with Shipowners and Merchants Tugboat Company, operators of the Red Stack tugs.

- With a diverse fleet of vessels, the motto "Anything, Anywhere, Anytime on Water" was adopted.

1912

- To manage the growing fleet, Crowley built a marine railway, a dock and a woodworking mill in 1912 and named it Crowley Shipyard.

1913

- Crowley became the general manager of and later purchased the Red Stacks.

1914

- Crowley dedicated personnel and equipment to the Panama Pacific International Exposition.

1915

- Crowley purchased Paradise Park and transported people into the park from their private yachts.
- Crowley acquired several small derrick barges outfitted with A-frames and booms for lifting cargo onto and off lighters.
- During the First World War, the company built and added to its fleet a large, heavy-lift derrick barge which could perform 100-ton lifts.
- During World War I, Crowley raised the laid-up coal barge City of Panama, repaired her and converted her to a five-masted schooner, which was renamed Crowley.
- Crowley began transporting coal and other commodities to Australia and South America.
- Crowley entered a partnership with fellow vessel owner Andrew Mahoney that operated two steam schooners and three steel ships.
- Four 150-foot wooden tugs with steam engines were constructed.

1923

- Crowley expanded into Puget Sound with lighter services and established a tugboat service in San Pedro.
- The Company provided tug, launch and barge services in San Francisco Bay along with heavy-lift and derrick barge services.

1930

- Between 1930 and 1932 three water taxis were constructed.

1934

- Crowley undertook a conversion program to convert from steam to diesel.

1935

- Crowley's shipyard operation became a separate company under the Crowley name.

1937

- Crowley entered a new partnership to perform dredging, marine construction, heavy-lifting and other derrick barge services in the Los Angeles, Long Beach and San Diego harbors.

1938

- Crowley designed a 148-foot, 7,000 bbl. gasoline barge capable of moving refined bulk petroleum.
- The 7,000 bbl. barge was shortly joined by a 9,000 bbl. barge, and then an 11,000 bbl. barge.

1939

- Crowley won a concession to operate two passenger services from Treasure Island to the newly constructed Golden Gate Bridge.
- Crowley purchased the oil barging equipment from Shell Oil to operate the petroleum transport in both the Bay Area and Southern California.
- Crowley's dry dock and repair company began building ships for the government in support of World War II.

1945

- Crowley began to build and operate terminals to improve the efficiency of petroleum-distribution.
- The first terminal was built at Alviso at the extreme southern end of San Francisco Bay.

1947

- Construction of the company's first sea-going oil barge, Barge 11, was completed in 1947.
- Crowley undertook the first coastal transportation from San Francisco to Coos Bay, Oregon, of bulk petroleum by barge.
- After the war, the Company replaced all of its surviving steam tugs with war surplus diesel equipment.

- Additional surplus vessels were purchased in the late 1940s, such as miki-class wooden hull, 1200-h.p. tugs, and flatdeck and other barges.
- The Company began the tow of the U.S. battleship Oklahoma from Hawaii to Oakland after it was bombed at Pearl Harbor.

1950

- In the early 1950s, Crowley began hauling gasoline southward to Mexico and brought molasses northward on the return trip.

1953

- Crowley Pioneered transportation of railcars loaded with bails of dissolving pulp on a 125-mile water link between railroad tracks at Ward Cove in Ketchikan, Alaska, and Prince Rupert, British Columbia.
- Crowley acquired the Matinolich shipyard in Oakland.

1955

- Crowley initiated its long commitment to arctic transportation with an agreement to resupply the U.S. Government's distant early warning radar and communication system on the Alaska coastline.

1958

- Regular container transportation services to Alaska from the contiguous 48 were initiated.
- Four new steel barges capable of carrying 300 containers were introduced to the fleet along with 600 containers and terminal cranes.
- Crowley completed the first penetration of the Artic by commercial tug and barge.
- Four million board feet of lumber was transported by barge on the West Coast.
- The San Francisco Bay passenger services were expanded between 1954 and 1958.
- In the mid-1950s, Converted barges undertook the hauling of hot (350 degrees) paving-grade asphalt.

1960

- In the 1960s, Crowley was called on by oil industry officials to help tame the waters of Cook Inlet, Alaska, by rafting tugs together to supply the necessary horsepower to set the oil exploration platforms and furnishing a supply boat and crew boat services.

1968

- Between 1968 and 1970, five new tugs were designed and built with simplified engine rooms to lessen the number of crewmen required from 12 to eight.
- Crowley completed the first Arctic sealift of oil industry cargo around the perimeter of Alaska to Prudhoe Bay.

1970

- Crowley's transport of 187,000 tons of cargo to Prudhoe Bay was the largest commercial sealift in maritime history.
- In May, Crowley initiated services to ferry passengers across the San Pedro channel.

1971

- Crowley expanded oil industry support operations to Singapore to work in the Indonesian oil patch.
- A weekly roll on/roll off freight service between Miami, Florida, and San Juan, Puerto Rico, and from the U.S. Gulf to Puerto Rico was developed.

1973

- The Company continued its support of the oil industry in Alaska as Crowley hauled more of the pipe for the 800-mile pipeline than any other company.

1974

- Jacksonville, Florida, was added as a mainland port of call for cargo bound for San Juan, Puerto Rico.

1975

- Crowley Maritime Corporation was formed.
- Crowley acquired a fleet of all-weather, all-terrain Rolligons, which are vehicles that use large low-pressure rubber air bags to traverse unpacked snow, summer tundra, sand, or marshland initiating the birth of CATCO.
- Personnel were dedicated to salvage and emergency response including oil spill cleanup, dock and vessel booming, design and installation of protective facilities, contingency planning and consulting.

1977

- Aleyska selected Crowley to provide vessel assist and tanker escort services at Valdez for tankers loading crude oil for transport to the mainland states.

- Between 1974 and 1977, 25 Invader-class tugs and nine 450-series petroleum barges were built for the Company.

1978

- The Company developed the world's largest roll-on/roll-off barges for the mainland/Puerto Rico service. By the end of the 1970s, Crowley had become the largest RO/RO carrier in the Caribbean trade operating out of the U.S. Southeast and Gulf.

1980

- New terminals were constructed to handle the new triple-deck barges including those in Lake Charles, Louisiana and Petty's Island near Philadelphia.
- In the early 1980s, Crowley built three ships to bring containerization to the Latin America trade.

1984

- Conversion of five triple deck barges was undertaken in 1984 to stretch the barges from 400-feet to 730-feet increasing the capacity of each vessel by 78 percent.

1985

- Crowley continued its emphasis on services in Alaska by establishing means to store, transport and sell petroleum products from tank farms at Nome, Kotzebue, and Captain's Bay.

1986

- New operating units in 1986 and early in 1987 further internationalized Crowley's marine operations by expanding cargo ship operations to Central America, the entire Caribbean, and both coasts of South America.

1989

- On March 24, when the 987-foot tanker Exxon Valdez went aground, Crowley tugs were first on the scene to take up position alongside the stricken tanker. Crowley was the principle contractor of equipment and personnel to provide marine support for the spill cleanup.

1991

- During the Persian Gulf Crisis in late 1991, Crowley chartered three RO/RO vessels and a tug and water barge to the U.S. Military Sealift Command in support of the United Nations' various military transportation and supply services.

- In March, Crowley was awarded a contract from the Saudi Arabian Government as a prime contractor in the first phase of an environmental cleanup of 450 Kilometers of oil-polluted shores in the Persian Gulf.
- Crowley was the first in the industry to establish a data input program accepted by the Federal Maritime Commission.

1992

- In August, all Crowley companies offering liner cargo and related services to Puerto Rico, the Caribbean, and Central and South America became part of Crowley American Transport, Inc. All other diversified marine contract and logistics services became part of Crowley Marine Services, Inc. Crowley Maritime Corporation operated as a holding company, maintaining full ownership of these two companies.

1994

- Crowley played a leading role in the cleanup of the barge Morris J. Berman's major oil spill off the beaches of San Juan, Puerto Rico.

1994

- Thomas B. Crowley, Jr., was unanimously elected to the position of Chairman of the Board, President and CEO following the passing of his father.

1995

- Crowley formed two joint ventures, Marine Response Alliance (1994) and Clean Pacific (1995) to efficiently provide emergency services according to the requirements of the Oil Pollution Act of 1990.

1997

- Crowley launched a new, weekly Gulf Express service linking Houston with Mexico, Venezuela, Colombia and Panama.
- Crowley became one of the first companies of its kind to launch a website. Within years, the site was made interactive so customers could track their cargo, make bookings, obtain rate quotes, print Internet bills of lading in their own offices applications, etc.
- Crowley Maritime Corporation sold Red & White Fleet passenger ferry services in San Francisco to Thomas Crowley Escher, grandson of the founder Thomas Crowley.

1999

- Crowley sold its South America liner business and the name Crowley American Transport to Hamburg Sud. The remaining liner business was renamed Crowley Liner Services, Inc.

- Prince William Sound-class tugs Nanuq and Tan'erliq are designed by Crowley and put to use assisting and escorting tankers in Valdez, Alaska and Prince William Sound. Offering "Best Available Technology" these 153-foot, 10,192-horsepower tugs are among the most powerful and nimble propulsion tugs in the world.

2000

- Three 140-foot, 10,000-horsepower Prevention and Response Tugs (PRTs)--ALERT, AWARE and ATTENTIVE--are delivered for use by Alyeska Pipeline Service Company's Ship Escort/Response Vessel System in Valdez, Alaska.

2001

- Crowley acquired all of the outstanding shares of Marine Transport Corporation, a U.S.-flag petroleum and chemical tanker company and folded its business activities into Crowley Petroleum Transportation. Marine Transport Corporation continues to provide ship management services for MARAD.
- On Dec. 16, Crowley made the first licensed commercial cargo delivery directly from the United States to Havana, Cuba in nearly 40 years.

2002

- Crowley acquired Miami-based Speed Cargo Service, a transportation services provider, adding the company to its growing logistics operations.
- Tom Crowley, Jr., was awarded the coveted AOTOS Mariners Award for his lifetime of dedication and commitment to the maritime industry.
- In April, Crowley christens its first Articulated Tug Barge (ATB) - the 9,280 HP-tug Sea Reliance and 155,000-barrel barge 550-1. It was the first ATB in a newbuild program consisting of 17 tug-barge combinations spanning more than a decade.

2003

- Crowley expanded its international presence with the formation of Crowley Far East Services in Sakhalin State, Russia, in support of the oil and gas industry there.
- Crowley Online Services debuts as dedicated platform for electronic shipment processing and customer service, powered by GT Nexus software and infrastructure.
- Crowley acquired Apparel Transportation, Inc., a Miami-based apparel transportation services provider.
- Crowley transported more than 400 head of cattle, plus sheep and bison, from the United States to Havana, Cuba, the first shipments of livestock direct from the U.S. via ocean transport in more than 40 years.

- In December, the fourth and final 550-Class ATB is christenined - the 9,280-horsepower tug Coastal Reliance and 155,000-barrel barge 550-4.

2004

- After providing ship assist and tanker escort services in the San Francisco Bay Area from the early 1900s to 1996. Crowley returned its tugs and service to the Bay in the Port of Oakland with two high horsepower tugs--the Tioga (Z drive - 4400 horsepower) and the Sea Robin (twin screw - 5000 horsepower).

2005

- Salvadoran President Antonio Saca and Crowley held opening ceremonies for the company's new 24,500 square-foot distribution center in the Exportsalva Free Zone in El Salvador.
- Crowley acquired marine salvage, wreck removal and emergency response company Titan Maritime, LLC. (Later renamed TITAN Salvage).
- Crowley's port terminal operation in Gulfport, Miss. is flattened by Hurricane Katrina. The company was able to resume vessel service there several weeks later. TITAN Salvage was at the forefront of cleaning up the wreckage in the Gulf after the storm. Titan re-floated about 65 vessels in Louisiana with the use of pneumatic lift bags, linear hydraulic pullers and jack-ups. In addition to the work in Louisiana, Titan is the U.S. Coast Guard's contractor in Mississippi and Alabama and re-floated another 13 vessels.
- Crowley acquired the assets of Yukon Fuel Company, Northland Vessel Leasing and the stock of Service Oil and Gas, Inc. to expand its fuel distribution enterprise throughout Alaska.

2006

- Crowley expands its services in Alaska with acquisition of Columbus Distributing, Inc, a fuel-distribution business.
- Crowley deployed theCrowley Alliance, the company's first Russian flagged and crewed vessel serving the offshore oil industry near Sakhalin Island, Russia. The ship UT 708 design 12,000 BHP AHTS that is Lloyds Ice Class 1A Super has the hull strength and power to break first-year ice up to one-meter (approximately 39.37 inches) thick.
- Crowley christens the first of ten new 185,000-barrel Articulated Tug-Barges (ATBs) - the 9,280 HP-tug Pacific Reliance and barge 650-1.

2007

- After about two years as a public reporting company, Crowley once again became a private company on May 5 with the acquisition of all outstanding shares.

- Crowley christened the Marty J, the first of nine heavy-deck-strength 455 Series barges in a newbuild program. Measuring 400 feet by 105 feet, the barges provide both the capacity and deck strength needed to accommodate larger drilling and production units used for deepwater offshore energy exploration and development.

2008

- Crowley satisfies a customer's need for a larger barge, widening the barge 455-3, from 105 feet to 130 feet and renaming her the Julie B.
- Crowley acquires Customized Brokers, a Miami-based company specializing in the customs clearance of fresh produce into the U.S.
- Crowley acquires Seattle-based Jensen Maritime Consultants, a naval architecture and marine engineering firm with more than 45 years experience designing and engineering a variety of different commercial vessels.

2010

- Crowley and TITAN Salvage respond to the devastating Jan. 12 earthquake in Haiti, reestablishing cargo delivery in the port and reopening the port to other government and commercial traffic over a period of several weeks.
- Crowley announces that it would design, build and operate four new Ocean Class tugs by the end of 2012. The new generation of tugs feature 10,880 horsepower and are designed for endurance towing.
- Crowley begins construction of three larger, Jones Act qualified ATB's known as the 750-Class. Each tank barge will have 330,000 bbls capacity and are scheduled for delivery by the end of 2012.
- In August, Titan opens a new salvage base in Australia, further expanding its worldwide presence.

2011

- Crowley and TITAN Salvage continue to respond to the devastating Jan 2012 earthquake in Haiti, reestablishing cargo delivery in the port and reopening the port to other government and commercial traffic over a period of several weeks
- Crowley acquired Houston-based Jarvis International Freight, Inc., a freight forwarding, export packing and logistics company primarily serving the energy, oilfield and mining industries.
- The Vision/650-10, the last of 10 articulated tug barges (ATB's) began transporting petroleum products between U.S. West Coast ports.

- Crowley established a new Houston-based business, under the name solutions, to bundle company-wide capabilities and assets with world-class project management skills to provide complete turnkey marine solutions for customers with multifaceted marine and offshore construction-related projects.
- In November, Crowley christened its largest articulated tug-barge (ATB), the Legacy/750-1, in New Orleans. The barge can carry up to 330,000-barrels of petroleum products.
- Crowley sold its fleet of company-owned CATCO® Arctic All-Terrain vehicles and related assets to Peak Oilfield Services Company.

2012

- In April, the tender and removal of the Costa Concordia wreck was awarded to company subsidiary TITAN Salvage and partner Micoperi. The job is reported to be the largest maritime wreck removal project ever undertaken.
- Crowley towed the USS Iowa, a historic, retired Navy battleship from San Francisco to Los Angeles.
- TITAN Salvage was awarded a contract to serve as the commercial marine salvage and engineering support contractor for the Navy.
- In August, Jensen Maritime, a Crowley company, opened its third office in New Orleans.
- Crowley expanded its logistics services to include Less-than-Containerload (LCL) ocean and air cargo lifts along with Customs brokerage services to Cartagena, Colombia.
- Crowley christened the Legend/750-2, the16,000-horsepower tugboat and 330,000 barrel tank barge in Tampa, Fla. The articulated tug-barge (ATB) and will be used to transport petroleum products between the U.S. Gulf and East Coasts.
- In October, Crowley christened the first two ocean class tugboats, the Ocean Wave and the Ocean Wind in New Orleans.
- Crowley merged its Houston-based, freight forwarding, export packing and logistics company, Jarvis International Freight, Inc., into the logistics team.
- In November, the crew of Crowley's tugboat, the Guard, performed a heroic rescue of a man who was struggling to stay afloat in the waters outside of San Francisco Bay.
- In December, TITAN Salvage opened its fourth facility in Cairns, Australia.

2013

- In January, Crowley christened its newest tanker, Florida. The 330,000-barrel vessel was immediately put to work in the U.S. Gulf of Mexico for a major energy customer.

- Also that month, Crowley opened a new cold storage and warehouse facility in Miami. The 24/7 facility, CrowleyFresh, is a joint offering made possible by Crowley and Customized Brokers, and offers multiple humidity and temperature-controlled coolers to store and handle perishables.
- In April, Crowley and Bowhead Transport Company announced a joint venture to provide marine services in the Arctic.
- In May, Crowley entered the liquefied natural gas (LNG) market by acquiring Carib Energy LLC.
- Also that month, Crowley' liner services group added more than 3,000 pieces of equipment. The additional resources allowed the company to better meet increasing customer demand throughout Puerto Rico, the Caribbean and Latin America regions.
- Crowley's Caribbean logistics group began offering regularly scheduled weekly less-than-containerload (LCL) services to and from San Juan, Puerto Rico, and select countries within Central America in June.
- In June, Crowley subsidiary TITAN Salvage teamed up with T&T Salvage to complete a challenging salvage project to remove a wreck from a Chilean coast.
- In July, Crowley's petroleum distribution group completed the acquisition of Anderes Oil in Ketchikan, Alaska.
- Crowley announced in August that it would expand its fleet of petroleum vessels by building eight product tankers. (Delivery slated between 2015 and the end of 2017)
- In September, Crowley's petroleum distribution group completed the acquisition of Taku Oil Sales in Juneau, Alaska.
- After a grueling year of preparation and engineering ingenuity, in September TITAN successfully parbuckled (raised upright) the Costa Concordia cruise ship.
- Crowley's new ocean class tugboats completed the successful delivery of the offshore oil production and drilling platform Olympus – the largest tension-leg platform ever to be developed for the U.S. Gulf of Mexico – to its deepwater location in the Gulf. The project provided the first opportunity for all four ocean class tugs to work together on a single job.

2014

- Ocean class tugs and 455 series high-deck strength barges deliver components for several deepwater gulf production facilities including Jack/St. Malo and Tubular Bells
- Accord Ship Management (HK) Limited and Accord Marine Management Pvt. Ltd. are welcomed through majority ownership acquisition to the Crowley family of companies

- Subsidiary Carib Energy LLC received a 20-year, small-scale U.S. Department of Energy (DOE) export license for the supply, trnsportation and distribution of U.S.-sourced liquefied natural gas (LNG) into Non-Free Trade Agreement (NTFA) countries in the Caribbean, Central and South America.
- Construction began on the first of two liquefied natural gas (LNG)-powered, combination container - Roll-On/Roll-Off (ConRo) ships for use in the South Atlantic Puerto Rico trade
- The third and fourth ocean class tugboats <96> Ocean Sun and Ocean Sky were christened and entered the fleet

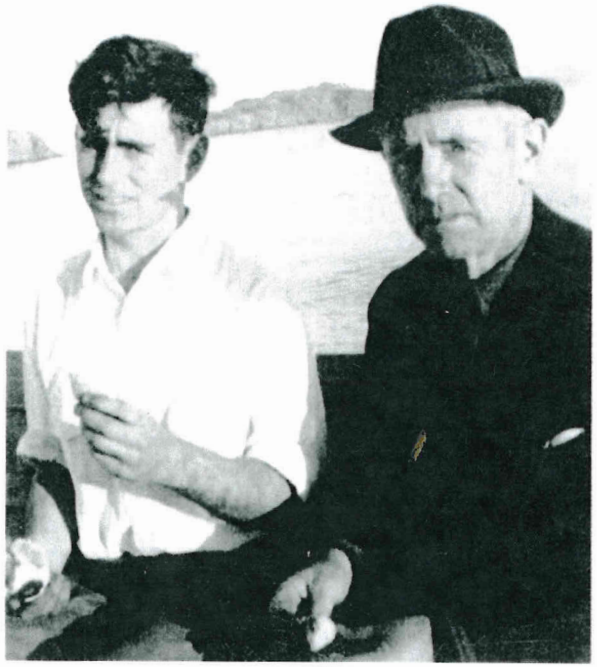
2015

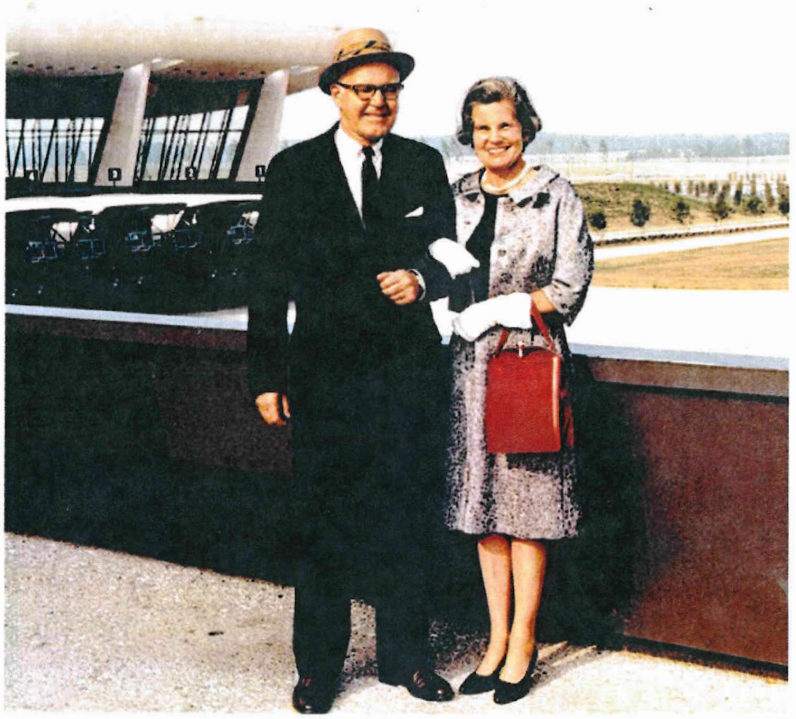
- The company joins the fight against Ebola by providing logistics support services for Operation United Assistance (OUA), in West Africa.
- Crowley Maritime Corp. and Svitzer Salvage merge salvage divisions to create new company Ardent.
- The international and government ship management groups take on new technical management duties for a number of container ships, tankers, MSC marine prepositioning ships the ROCON fleet and the U.S. Navy's T-AGOS/T-AGM fleet.
- Crowley acquires SeaFreight Line, SeaFreight Agencies, and SeaPack to expand its liner and logistics services in the Caribbean Basin.
- $48.5-million construction project for a new pier at its Isla Grande Terminal in San Juan, Puerto Rico begins.
- The first two of four, new LNG-Ready Jones Act product tankers join the petroleum fleet after construction at Philly Shipyard, Inc.
- After two years of careful planning, engineering and preparation, Crowley's marine solutions team, with nearly 300 on-site workers and 20 support vessels, completed the successful installation of customer Furie's Kitchen Lights natural gas production platform and underwater pipeline in Cook Inlet, Alaska.

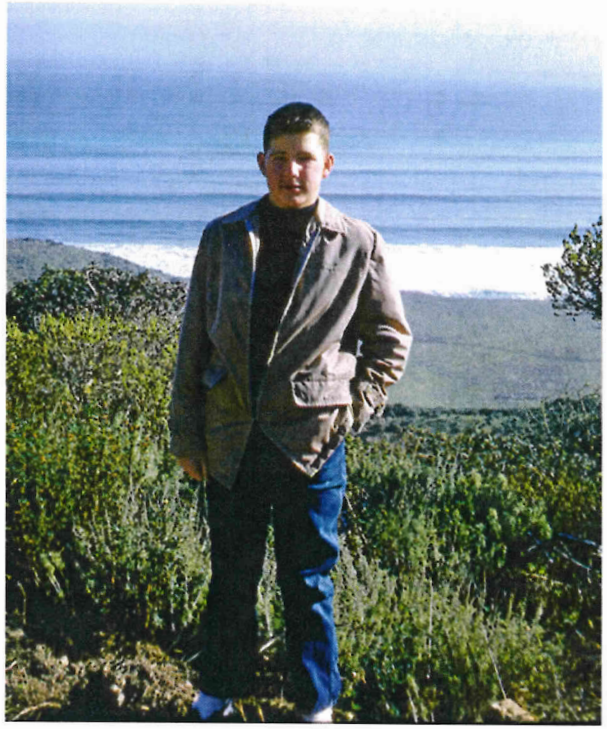
2016

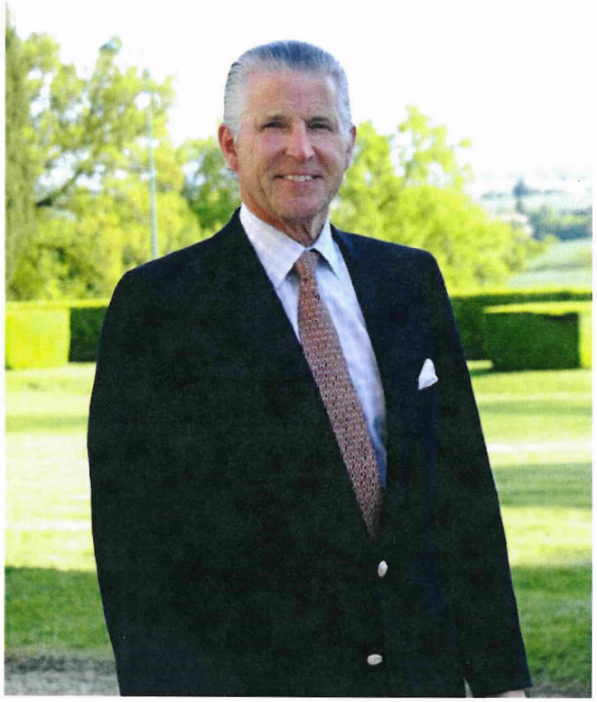
- Crowley welcomes four more newly built, LNG-ready product tankers to its petroleum and chemical distribution fleet.
- Ace Fuels in Alaska joins the Crowley family.

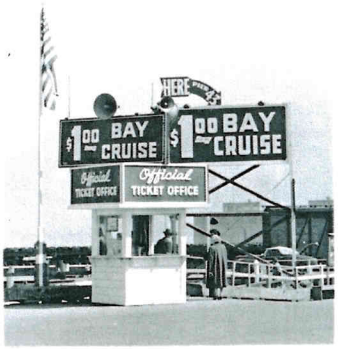
- The government services group towed the ex-USS Taylor from Philadelphia to Charleston for conversion prior to delivery to the Taiwanese government as part of the U.S. foreign military sales program.
- $21 million worth of improvements and upgrades to the Isla Grande port terminal in San Juan got underway.
- The company was awarded a contract to supply commercial LNG to Molinos de Puerto Rico, the Caribbean arm of Ardent Mills LLC.










$1.00 BAY CRUISE
$1.00 BAY CRUISE
Official TICKET OFFICE
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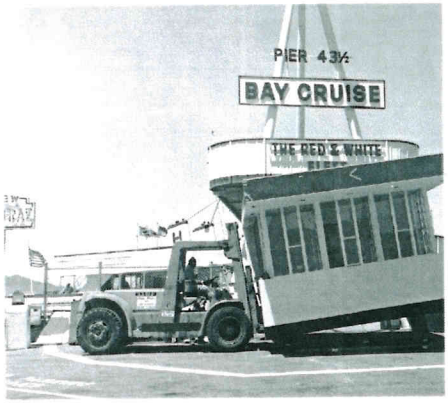
$1.00 BAY CRUISE
HARBOR TOURS
ONE HOUR BAY CRUISE

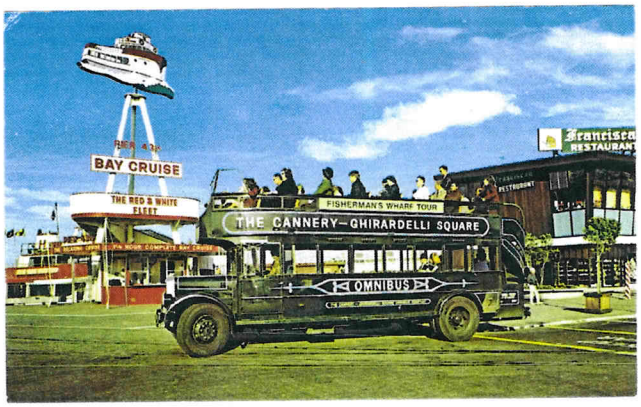

BAY CRUISE


BAY CRUISE
1 HOUR CRUISE
1 HOUR-DAILY CRUISES-2 HOUR


DWICHES
AFOODS
NACK BAR
Burgers · Hot Dogs · Shakes
FRENCH FRIES
Franciscan RESTAURANT


BAY CRUISE
1 HOUR-DAILY CRUISES-2 HOUR
3-63


PIER 43½
BAY CRUISE
THE RED & WHITE


PIER 43½
BAY CRUISE
THE RED & WHITE FLEET
FISHERMAN'S WHARF TOUR
THE CANNERY–GHIRARDELLI SQUARE
OMNIBUS
Franciscan RESTAURANT


PIER 43½
BAY CRUISE
THE RED & WHITE FLEET
TICKETS 1¼ HOUR BAY CRUISE
AMERICA'S NO.1 SCENIC BOAT RIDE
2-83


PIER 43½
BAY CRUISE
THE RED & WHITE FLEET
TICKETS 1¼ HOUR BAY CRUISE
AMERICA'S NO.1 SCENIC BOAT RIDE


PIER 43 1/2
BAY CRUISE & FERRY TERMINAL
RED & WHITE FLEET
BAY CRUISE


PIER 43 1/2
BAY CRUISE & FERRY TERMINAL
RED AND WHITE FLEET

CABLE CARS AND CITY BUS LINES DIRECT TO FISHERMAN'S WHARF

AMPLE PARKING — BRING YOUR CAMERA

SEE AND THRILL TO SAN FRANCISCO'S WORLD FAMOUS SIGHTS

1 HOUR CRUISE — 2 HOUR CRUISE

ALL POINTS OF INTEREST ARE FULLY EXPLAINED OVER THE PUBLIC ADDRESS SYSTEM BY A COMPETENT GUIDE

1 Hour Cruise	2 Hour Cruise
Fisherman's Wharf	Historic Fort Point
Aquatic Park	Golden Gate Bridge
Army Transport Docks	Lime Point
Marina	Sausalito
Presidio	Richardson Bay
View of Golden Gate Bridge	Belvedere and Tiburon
Alcatraz Island	Angel Island
Treasure Island	Upper San Francisco Bay
Yerba Buena Island	Views of California City, San Quentin, Pt. San Pablo, Pt. Orient, Pt. Molate, Red Rock, Richmond, South Hampton
San Francisco - Oakland Bay Bridge	Richmond-San Rafael Bridge Under Construction
Views of East Bay Cities of Berkeley, Oakland, Albany, El Cerrito, Alameda	Plus All the One-Hour Cruise Provides
Waterfront Piers with Ships	
Ferry Building	
Telegraph Hill & Coit Tower	
San Francisco's Fabulous Skyline	

MODERN . . . DIESEL . . . LARGE GLASS ENCLOSED SALONS
SMOOTH RIDING VESSELS FROM 140 TO 400 PASSENGERS

CHARTERS SPECIAL RATES QUOTED FOR GROUPS, CLUBS, CONVENTIONS AND PARTIES

A NEVER - TO - BE - FORGOTTEN - ADVENTURE

SAN FRANCISCO'S MOST POPULAR AND PLEASANT TOURIST ATTRACTION

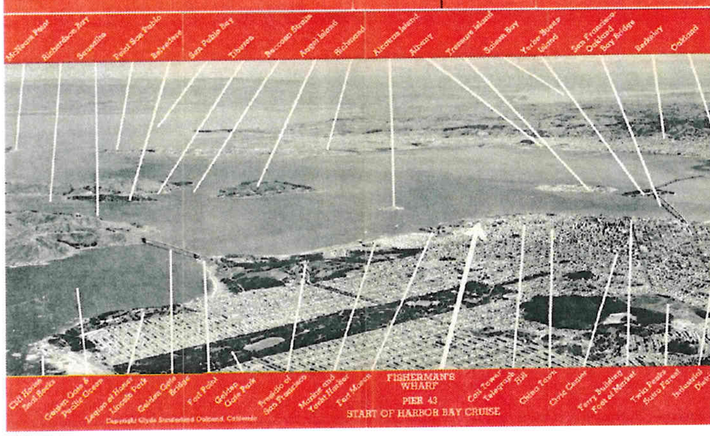
DAILY! 1 AND 2 HOUR BAY CRUISE

SAN FRANCISCO BAY CRUISE

FROM FISHERMAN'S WHARF AT PIER 43

1 HOUR	2 HOUR
Adults . . . $1.25	Adults . . . $1.67
Child 5-11 63	Child 5-11 . . . 1.25

1 AND 2 HOUR HARBOR TOURS INC. FROM FISHERMAN'S WHARF AT PIER 43
PHONE GARFIELD 1-4365



RATES

1-HOUR CRUISE

ADULTS	1.50
CHILDREN, 5-12 (under 5, free)	.60

2-HOUR CRUISE

ADULTS	3.00
CHILDREN, 5-12 (under 5, free)	1.50

SPECIAL CHARTER TRIPS

Harbor Tours offers a most picturesque and different location for group outings—clubs, conventions, parties. Wonderful for dealer displays, dances, teas.

A special trip on the bay, via Harbor Tours, will be long remembered by every member of your group.

Have your next group gathering on the bay. Special group rates quoted upon request. Call GArfield 1-4364.

TAKE THE *Complete* SAN FRANCISCO

Bay Cruise

Ride the LARGE LUXURIOUS *Red and White* CRAFT OF HARBOR TOURS, INC.

Look for this Ticket Window
FISHERMAN'S WHARF . . PIER 43½
Phone DOuglas 2-5414

Since 1946, Harbor Tours, Inc., has made thousands of bay tours for your sightseeing pleasure. For the most complete tour, be sure your bay cruise is aboard a luxurious and modern double-decked, red-and-white sightseeing boat of Harbor Tours

1 AND 2-HOUR CRUISES DAILY FROM PIER 43½

LOOK FOR THE NAME 'HARBOR TOURS' ON OUR TICKET OFFICE

TICKET OFFICE NEAR FAMOUS WHARF RESTAURANTS

ENJOY A BAY CRUISE ABOARD

THE *Harbor King · Harbor Queen · Harbor Princess*

Luxurious and modern double-decked vessels that provide a pleasant, relaxing, and educational interlude on the bay—truly a memory of San Francisco you will always treasure!

A MAGNIFICENT LEISURELY TOUR OF THE BAY

COMPLETE SNACK BAR

A TRIP TO REMEMBER

PARTLY GLASS-ENCLOSED FOR YOUR ADDED COMFORT

WHERE IS TICKET BOOTH?

FREQUENT DEPARTURES 10 A.M. TO 5 P.M.

NARRATED, TOO

1 HOUR CRUISE ADULTS 1.50 · Children 5-12 (under 5, free) .60

SNACK BAR ABOARD

2 HOUR CRUISE ADULTS 3.00 · Children 5-12 (under 5, free) 1.50

SNACK BAR ABOARD

CHARTER TRIPS

MODERN . . . DIESEL . . . LARGE GLASS ENCLOSED SALONS . . . SMOOTH RIDING VESSELS FROM 140 TO 400 PASSENGERS.

DAILY 1 AND 2 HOUR BAY CRUISE FROM PIER 45
FISHERMAN'S WHARF · PHONE DOuglas 2-5414

PLENTY OF PARKING AREA — SNACK BAR ABOARD — CABLE CARS, BUS LINES DIRECT
BRING YOUR CAMERA — TO FISHERMAN'S WHARF

See and thrill to San Francisco's world-famous sights

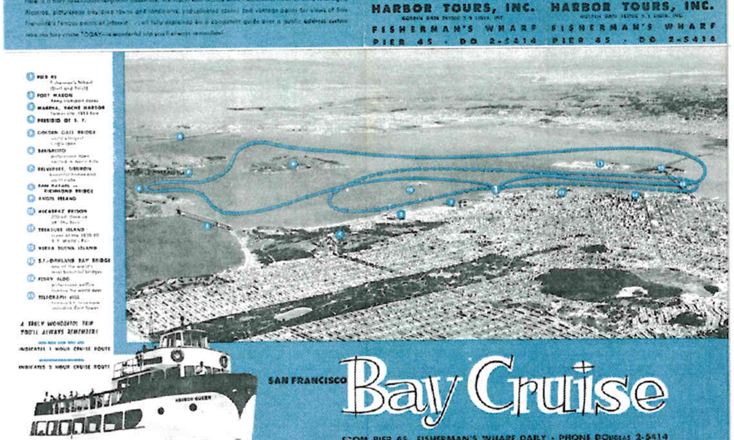
SAN FRANCISCO — DAILY 1 AND 2 HOUR — SAN FRANCISCO

Bay Cruise

A NEVER-TO-BE-FORGOTTEN ADVENTURE

HARBOR TOURS, INC. — FISHERMAN'S WHARF — PIER 45 · DO 2-5414

HARBOR TOURS, INC. — FISHERMAN'S WHARF — PIER 45 · DO 2-5414



SAN FRANCISCO **Bay Cruise**

FROM PIER 45, FISHERMAN'S WHARF DAILY · PHONE DOuglas 2-5414

FISHERMAN'S WHARF

San Francisco first wakened along the waterfront. The waterfront shaped its cosmopolitan character. It's here that much of the city's original flavor can be found.

One of the waterfront's most colorful facets is Fisherman's Wharf—a carnival-bright carry-over from a romantic past. One hundred years ago Genoese fishermen put out from the San Francisco shore in lateen-rigged feluccas. A decade or so later the harbor was dotted with high-prowed Chinese junks built here on the bay and crewed by Chinese shrimp catchers. Gradually both bowed to the fishing prowess of the Southern Italians who dominate the local fishing industry to the present day.

The result is a Mediterranean seascape. Today well over 200 fishing craft tie up in the Wharf basins to land their catches of crab, shrimp, salmon, sole and other deep sea delicacies. The accents of Southern Italy are still heard along the piers where oldtimers meet to mend the nets. Neapolitan touches abound in the rows of bay-view restaurants. During the crab season, huge, outdoor caldrons are kept bubbling to receive the bay's incomparable crustaceans. The whole scene is picturesque, pungent and palate-tickling.

For the first-time visitor to Fisherman's Wharf, we recommend the *spectacular* approach—via cable car. Hop the Powell-Hyde car downtown and allow yourself to be catapulted over two hills to its terminus at Aquatic Park. Walk a block to the west and browse through the Maritime Museum, or inspect the historic exhibition ships at nearby Hyde Street Pier. Stroll east along Jefferson Street into the Wharf's exhilarating hubbub. Jaunty bay cruise boats put out hourly from the quay. The sailing vessel *Balclutha*, a floating museum, beckons at Pier 43. Beyond are the Embarcadero's more than 40 deep water piers sheltering ships of all flags. When you've had your fill of tangy sea air, sea lore and succulent seafood, let the Powell-Mason cable car, which turns about at Taylor and Bay Streets, sweep you light-heartedly back to the center of the city.

11-64

RESTAURANTS *(continued)*

18. A. Sabella Fish Grotto & Capri Room, Fisherman's Wharf, GR 4-3282.
12. Sabella & La Torre, 32 Fisherman's Wharf, OR 5-2824.
2. Señor Pico, Ghirardelli Square, 900 North Point, 775-9060.
9. Tarantino's, Fisherman's Wharf, PR 5-5600.
7. Tokyo Sukiyaki, 225 Jefferson Street, PR 5-9030.
26. Veneto, 389 Bay Street, YU 6-4553.

NIGHT CLUB

27. Whisky A Gogo, 2215 Powell Street, YU 2-2226.

MOTELS

21. Travelodge at the Wharf, 250 Beach Street, EX 2-6700.
23. Villa Roma, 1212 Columbus Avenue, PR 1-3900.

SIGHTSEEING

16. Harbor Tours, Inc., Pier 43½, Fisherman's Wharf, DO 2-5414.

STORES AND SHOPS

25. Cost Plus Imports, 2552 Taylor Street, OR 3-5640.
10. Frank Creeci & Sons, Stall 22, Fisherman's Wharf, GR 4-3796.
1. Ghirardelli Square, 900 North Point, PR 5-2970.
11. Guardino's, Fisherman's Wharf, PR 5-3669.
22. Pacific Curio Shop, 2734 Taylor Street, PR 5-2504.
8. Sea Captain's Chest, 211 Jefferson Street, PR 5-2146.

MUSEUMS

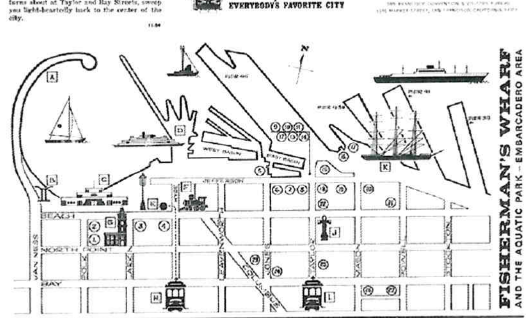
C. San Francisco Maritime Museum, Foot of Polk Street, PR 6-1175.
19. Wax Museum at Fisherman's Wharf, 125 Jefferson Street, TU 5-1834.

Establishments listed above are members of the San Francisco Convention & Visitors Bureau.

SAN FRANCISCO — EVERYBODY'S FAVORITE CITY

FISHERMAN'S WHARF

SAN FRANCISCO

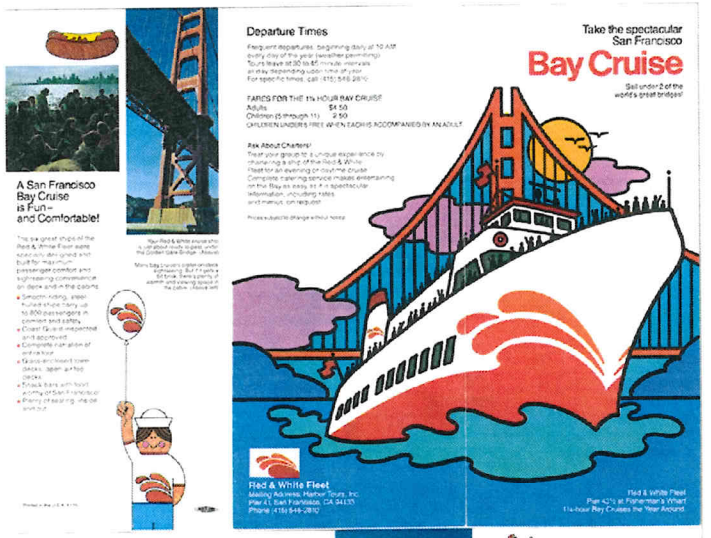


A. Municipal Pier. 185-foot-long crescent pier affords excellent view of city, bay and Marin County.
B. Bocce ball courts, where Italian bowls are played.
C. San Francisco Maritime Museum. Outstanding nautical collection. Free admission daily 10 A.M. to 5 P.M.
D. Hyde Street Pier, permanent display berth for old-time vessels, including ferryboat, sail and steam schooners (part of San Francisco Maritime State Historical Park). Open daily 10 A.M. to 10 P.M.
E. Victorian Plaza. Gaslit replica of turn-of-the-century park. Powell-Hyde cable car turntable.
F. Haslett Warehouse, future home of western transportation museum.
G. Ghirardelli Square, historic (circa 1860's) chocolate-spice-coffee works housing specialty shops, galleries and restaurants overlooking Aquatic lagoon. Underground parking.
H. Powell-Hyde cable car line. (Ride it from downtown San Francisco to Aquatic Park!)
I. Powell-Mason cable car turntable. (Ride it from downtown San Francisco to the Wharf!)
J. St. Francis statue by Beniamino Bufano (in front of I.L.W.U. Local 10).
K. *Balclutha*, 3-masted "deepwaterman" exhibition ship, launched 1886. Open daily 10 A.M. to 10 P.M.

RESTAURANTS

13. Alioto's Seafood Grotto, 8 Fisherman's Wharf, OR 3-0183.
20. Arturo's, 99 Jefferson Street, YU 6-9935.
4. Buena Vista Cafe, 2765 Hyde Street, GR 4-5044.
5. Castagnola's, Fisherman's Wharf, PR 6-5015.
6. Di Maggio's, Fisherman's Wharf, OR 3-2266.
15. Exposition Fish Grotto No. 1, Fisherman's Wharf, OR 3-9565.
14. Fishermen's Grotto, #9 Fisherman's Wharf, OR 3-7025.
17. Franciscan, Fisherman's Wharf, DO 2-7733.
24. Ott's, 359 Bay Street, PR 5-2952.
3. Rolf's Since 1960, 757 Beach Street, OR 3-8881.

(Continued on Back Panel)



The Sunday Brunch Cruises run every Sunday (April-October) with departures at 10:30 AM and 12:30 PM (weather permitting) from Pier 43½ — Fisherman's Wharf.

Passengers are "welcomed aboard" with a complimentary glass of champagne and treated to a beautiful buffet brunch prepared on our luxury vessel, the Royal Star. The Royal Star's spacious glass-enclosed lower & upper decks offer passengers a relaxing and enjoyable 1½ hour cruise on the Bay and a dining experience to be remembered.

Reservations for the Sunday Brunch are recommended at (415) 546-2810 or mail in the form below. Since space is limited, we suggest you list a second preference date on the form. All mail-in reservations must be submitted to Harbor Tours at least 10 days before requested sailing date. Please be advised that there is no reserved seating.

Group rates are available upon request at (415) 546-2810.

RESERVATION FORM: "SUNDAY BRUNCH"

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone #: _____

No. in Party	1st Preference Sailing Date	Sailing Time	Total Amount Enclosed
		10:30 A.M. — 12:00 P.M.	$
	(Sunday)		
No. in Party	2nd Preference Sailing Date	Sailing Time	Total Amount Enclosed
		12:30 P.M. — 2:00 P.M.	$
	(Sunday)		

Send Reservation & Payment To: Harbor Tours, Inc.
Dept. B - Pier 43
San Francisco, CA 94133

(Cashiers Check and Money Orders only)
No Personal Checks Accepted.

Make Check or Money Order payable to: Harbor Tours, Inc.
Allow 15 days for Confirmation Letter.

The "Bar-B-Que On The Bay" is a delightful 2½ hour dinner/dance cruise on beautiful San Francisco Bay. This "gala" cruise departs from Pier 43½ - Fisherman's Wharf at 7:30 P.M. every Thursday evening, weather permitting, (June through October) returning to the Wharf at 10:00 P.M.

As passengers embark our new luxury vessel, the Royal Star, they are greeted aboard with a variety of sounds by our musical groups who will provide entertainment for both dancing and listening pleasure throughout the cruise. Enjoy a supreme dining experience with a delicious barbeque steak dinner prepared on board the ship, with a no-host bar available for your cocktail preference.

The Royal Star's spacious glass enclosed lower and upper decks allow passengers a smooth, comfortable sailing cruise with a magnificent view of San Francisco Bay. Watch the golden sunset behind the Golden Gate, glide past Sausalito, Alcatraz Island and Treasure Island and enjoy the glitter of San Francisco's famed city skyline.

Reservations for the "Bar-B-Que On The Bay" are recommended. Contact (415) 546-2810 for reservations or mail in the form below. Since space is limited, we suggest you list a second preference date on the form. All mail in reservations must be submitted to Harbor Tours at least 10 days before requested sailing date. Please be advised that there is no reserved seating.

Group rates are available upon request at (415) 546-2810.

RESERVATION FORM: "BAR-B-QUE ON THE BAY"

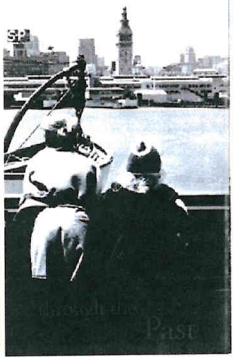
Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone #: _____

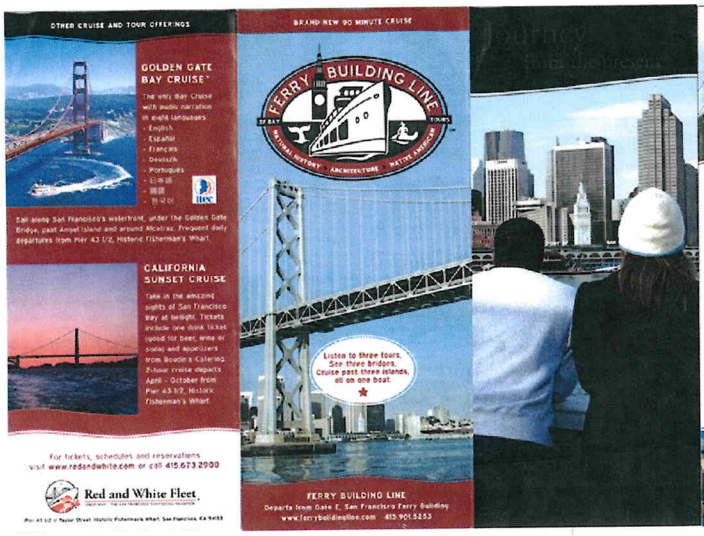
Number in Party	1st Preference Sailing Date	Total Amount Enclosed
		$
	(Thursday)	
Number in Party	2nd Preference Sailing Date	Total Amount Enclosed
		$
	(Thursday)	

Send Reservation & Payment To: Harbor Tours, Inc.
Dept. B - Pier 43
San Francisco, CA 94133

(Cashiers Check and Money Orders only)
No Personal Checks Accepted.

Make Check or Money Order payable to: Harbor Tours, Inc.
Allow 10 days for Confirmation Letter.

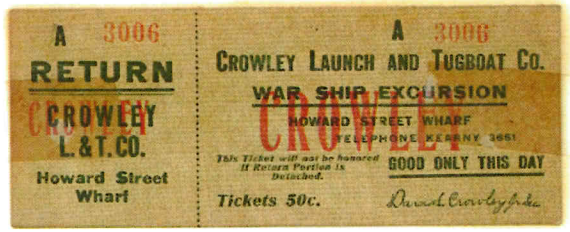


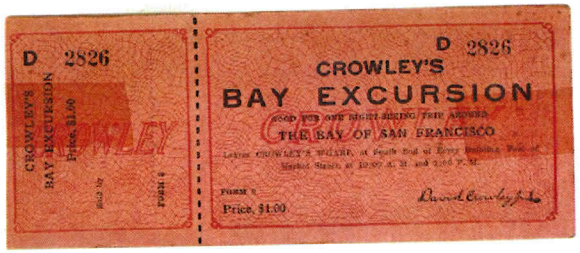


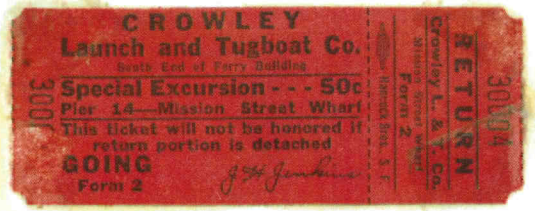
LOCAL SIGHT-SEEING TRIPS OPERATED BY
GOLDEN WEST TOURS, Inc.

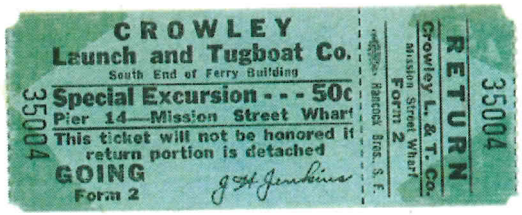
Crowley's Bay Excursion	$1.00
Crowley's Bay-Battleship-Exposition Sight-Seeing Trip	.50
Crowley's Battleship Trips	.50
Trip to Oakland, Berkeley and Alameda	1.00
Key Trolley-Bay-Exposition Trip	1.00
Mt. Tamalpais	1.00
Muir Woods	1.00
Mt. Tamalpais and Muir Woods	2.00
Ocean Shore Scenic Trip	1.00
Seeing San Francisco by Auto, Big Double Trip	1.50
Seeing San Francisco by Special Observation Car	.75

Tickets on Sale at All Hotels and at Offices of
GOLDEN WEST TOURS, Inc.
Phone Sutter 2350









"The Richmond Banner"
EVERY FRIDAY SINCE 1893
THE NEWSPAPER OF THE RICHMOND (PARK-PRESIDIO) DISTRICT OF SAN FRANCISCO
GENERAL COMMERCIAL PRINTING
279 SIXTH AVENUE
POST OFFICE BUILDING
SAN FRANCISCO, CALIF.

May 6, 1939

Dear Mr. Bill Jones:

A few weeks ago, probably because I am a publisher, you mailed me two complimentary tickets for your exposition boat rides. I am sure you did not realize at the time that while so many of my ancestors were printers I therefore think printer's ink the grandest smell in the world, it is also true many of my progentors were seafaring men and the smell of the sea is a good runner-up for my favor.

The result was that I enjoyed my trip around Alcatraz last Sunday tremendously and felt terribly sorry your patronage was so poor. To make some effort to correct this injustice of society toward you I gave you something yesterday money can not buy, an advertisement on the top of page one of my publication. It will get some results for already one subscriber has phoned to ask what "small stipend" meant and remarked that 50¢ was small indeed and regretted better publicity had not caused said subscriber to patronize you sooner than this afternoon.

I shall return again to your port of embarkation and while I am not exactly asking for them, two complimentaries for that speed boat around the island may work the same publicity "magic" your first two did. There is no more stiff-necked editor in existence on barring free publicity but every man has his Achilles' heel and my love of a boat ride is what puts me at your mercy. But you do give value and I give you the enclosed newspaper gladly.

Yours very truly,

Sinclair G. Trimble

sgt/vl

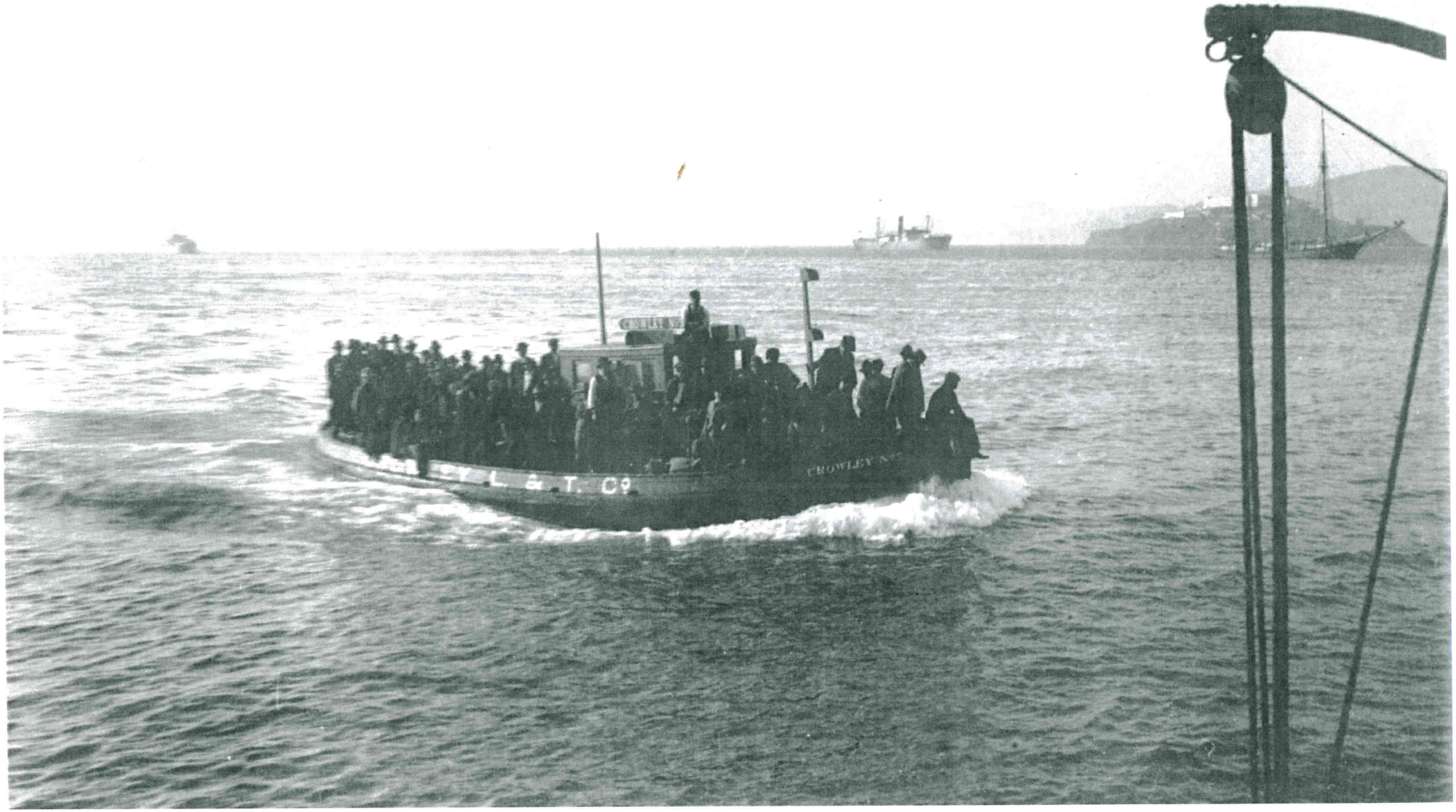
Sinclair G. Trimble
Editor and Publisher

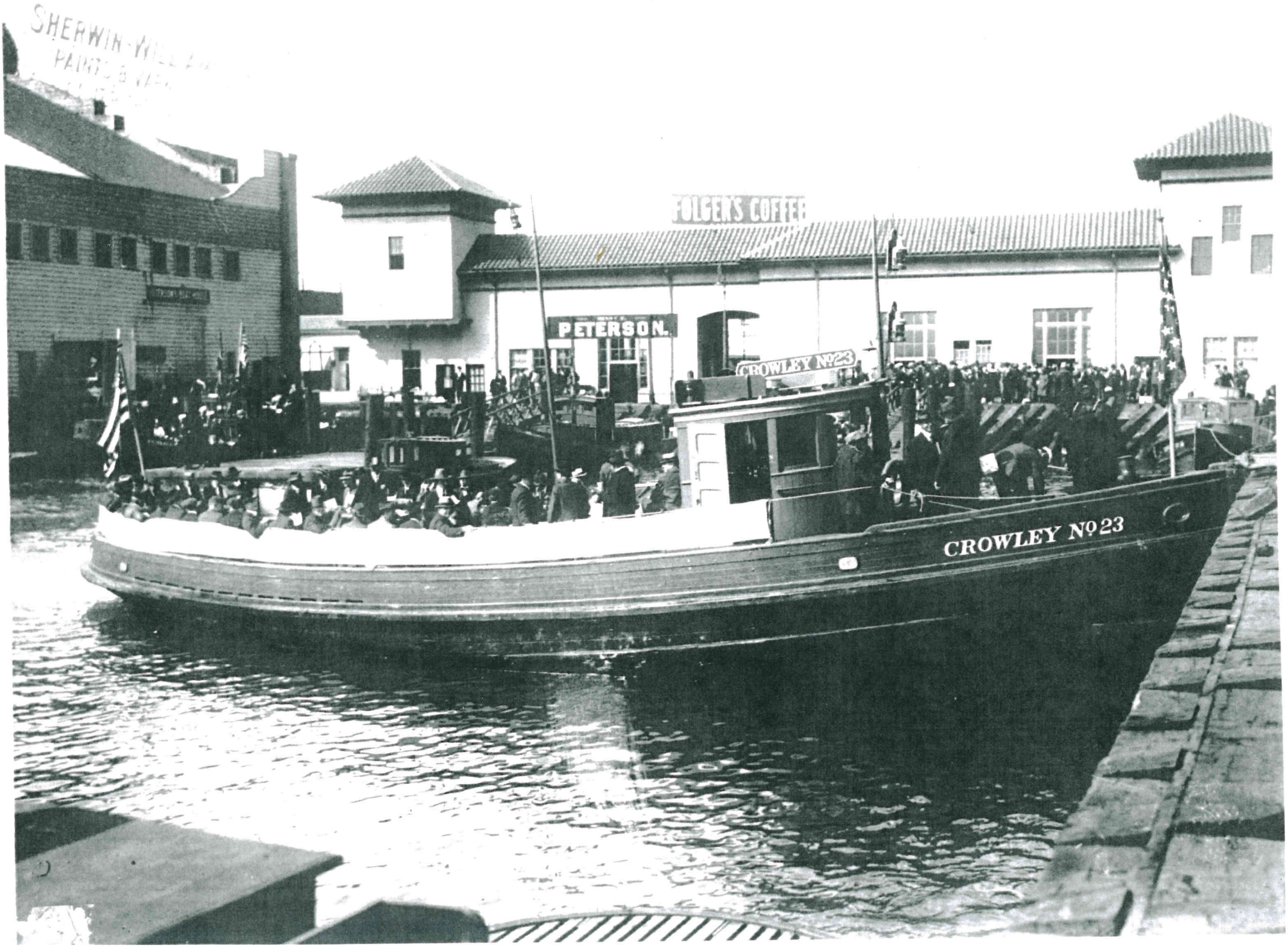
IT'S NICE WORK -:- -:- IF YOU LIKE IT

1439

Surf board riding and aquaplaning are sports too tame for Gaye Caygill of San Francisco. The pretty Russian girl invented a new sport, water "skooting," using a board six feet long and eight inches wide. Mrs. Caygill, known also as Gaye Menard, is a frequent performer in the Sunday morning water sports exhibitions at the Crowley speedboat and bay cruiser landing.


CROWLEY N°15


L. & T. Co.


SHERWIN-WILLIAMS
PAINTS & VARNISH
FOLGER'S COFFEE
PETERSON.
CROWLEY No 23
CROWLEY No 23

Harbor Sightseer (passenger vessel), underway, San Francisco Bay, Calif., ca. 1948-1951, San Francisco Maritime National Historical Park, P82-019a.1,904pl (SAFR 19106).

Harbor Queen (vessel type unidentified), of the Red and White Fleet, before change in colors, ca. 1950, San Francisco Maritime National Historical Park, A01.30858n (SAFR 21374).

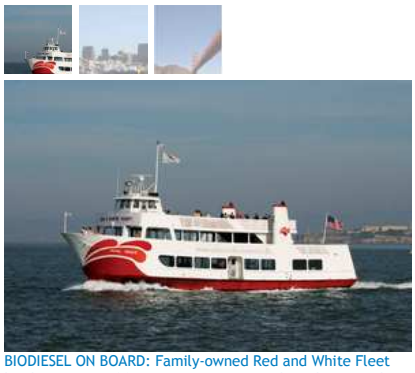
General Frank M. Coxe (built 1922; passenger vessel), docked with passengers boarding, at San Francisco, Calif., ca. 1950, San Francisco Maritime National Historical Park, San Francisco Chronicle collection,
A02.14049n (SAFR 21374).

Harbor Queen (passenger vessel), at dock, underway, San Francisco Bay, Calif., ca. 1952-1962, San Francisco Maritime National Historical Park, P82-019a.1,897pl (SAFR 19106).

Biodiesel Sets Sail

A high percentage of biodiesel is used by consumers on land, and marine operators are trying to match that same level of usage by sea

By Bryan Sims | June 14, 2011



BIODIESEL ON BOARD: Family-owned Red and White Fleet has been using B20 in its passenger vessels without incident since 2006.
PHOTO: RED AND WHITE FLEET

Encountering red tape isn't new for alternative fuels such as biodiesel on their journey to acceptance as viable, on-road fuel. The same could be said for its off-road applications, specifically in maritime use. Perhaps no one understands the trials and tribulations of biodiesel better than Randall von Wedel who, in the early 1990s, was instrumental in helping biodiesel become accepted by boaters in the San Francisco Bay area.

Recognizing biodiesel's inherently higher-quality air and water characteristics, von Wedel, a principal scientist at CytoCulture International and avid boating enthusiast, recalls a pivotal point in California where he saw an opening for marine operators to—by increasing their use of biodiesel—enhance performance in marine engines and reduce their carbon footprint. In 1993, the California Air Resource Board mandated that all high-sulfur No. 2 off-road diesel fuel be switched to what was called low-sulfur, low-aromatic, which inevitably forced oil companies to lower levels of aromatic compounds, such as benzene, in the fuel, von Wedel says. The switch also inevitably caused the gaskets and seals (or elastomers) in boat engines to shrink, he says, because they were designed to swell in the presence of those aromatic compounds found in high-sulfur diesel fuel. Shortly after CARB imposed the switchover, von Wedel and his colleagues published empirical data supporting the fact that biodiesel not only restored lubricity in marine engines, but, because of its solvent properties, allowed the membranes to swell up again. Von Wedel was vindicated.

"That launched biodiesel in California because there was so much publicity associated with using biodiesel in marine engines then," von Wedel tells Biodiesel Magazine. "We were in the right place, at the right time and with the right fuel. I didn't design it—it just happened."

Since that time, von Wedel's pioneering efforts with biodiesel in the Bay area resonated to other fleet operators and boat owners, such as the Red and White Fleet, which was interested in using biodiesel. As it turned out, Red and White became the first commercial adopter of biodiesel in ferry vessels in the Bay area. Since 2006, family-owned Red and White company has been using a B20 blend in its passenger vessels with no issues directly related to engine operability, according to Joe Burgard, director of operations for Red and White.

"We did have some bacteria growth early on, but we didn't attribute it directly to the biodiesel," Burgard says. "I think early on there was a lot of inconsistency on the quality standards of biodiesel, but since we adopted it there have been no issues."

Not only did ferry fleet operators in the Bay area express immense interest using biodiesel, but it also proliferated northward into Washington. In 2004, the Washington State Department of Transportation's Ferry Division conducted a pilot biodiesel fuel test over a four-month period using a B20 blend of soy biodiesel in three of its vessels. Although the operational issues were challenging, according to Paul Brodeur, director of vessel maintenance, preservation and engineering for the ferries division, the test was successful in that it helped him gather important information that would inspire a 12-month biodiesel pilot study in 2008 using blends of B5, B10 and B20 with ULSD in three of its vessels—the Issaquah, the Klahoya and the

Tillikum. Currently, Brodeur says 15 of the 20 vessels run on a B5 blend, amounting to about 17 million gallons of biodiesel consumed annually.

"When that pilot test concluded in 2009, we went to the state legislature for some funding for ongoing biodiesel use," Brodeur says. "We were later funded at a 5 percent level for the incremental cost of the biodiesel, and that was based on availability."

Today, many marine operators across the country are either exploring the use of or are using biodiesel in their marine engines. For example, the Virginia Port Authority expanded its voluntary program in January of using B5 with ULSD in its diesel-powered machines owned by the VPA's operating company, Virginia International Terminals Inc. Also, the U.S. Navy, the largest consumer of diesel fuel in the country, is studying the long-term feasibility of integrating biodiesel and other renewable forms of biofuel in its fleet of ships to reduce its carbon footprint, NOx and SOx emissions and achieve a sustainable goal of buying domestic product.

Things to Keep in Mind

Several studies have been conducted to find which biodiesel blends interact best with marine engines. Marine engines are equipped to perform efficiently without incident on B5, but issues can occur when blends exceed that amount if the proper precautionary measures aren't met. Two of the prominent issues that arise when ship owners consider using blends above 5 percent include incompatibility with fuel filters, gelling and potential microbial growth in older fuel tanks. Of course, operational deficiencies related to biodiesel greatly depend on the size and duty-cycle of any given ship, Brodeur says.

"We're only burning B5 so the blend ratio is pretty low, so we wouldn't expect to have any issues," Brodeur says. "When we did our pilot testing, we started having filter issues and some gelling issues occurred when we ran on B20, especially in colder weather."

Brodeur recalls suspending the use of biodiesel when his B100 product stored in stainless steel totes began to gel when it was subject to temperatures of 20 degrees Fahrenheit. That was when his team manually blended their product, compared to now where they employ in-line blending systems at their fueling sites. Brodeur advises keeping a close watch on fuel clogging that can occur when B20 is used.
"Operationally, the biggest thing we experienced [with B20] was some premature filter clogging, so you have to stay on top of cleaning out your fuel transfer filters and your fuel purifier," Brodeur says. "Issues like these happen at a much slower rate with B5 or B10."

Another aspect to be mindful of, according to Brodeur, is to actively participate in proper fuel management practices by using additives or biocides to ensure fuel tanks are clean to reduce the fuel-water interface that can often create an environment suitable for microbial growth, commonly known as "diesel bugs."

"If we get an active population of microbial growth, then we'll do a higher dosage to kill them, whether it is diesel fuel or a blended product, then we find ourselves in good shape," Brodeur says. "It's not more or less indicative of whether you have a blended product or not. It's a marine environment where you have variables that can cause microbial growth other than biodiesel, like the tanks that are integral with the hull, varying temperatures, tanks sweat, condensation and so forth."

Stricter Emission Standards Ahead

With more oceangoing vessels in use, and stricter fuel and air emission regulations in both domestic and international waters expected to go into effect in the next few years, biodiesel will play a progressively greater role. This was evidenced when, in October 2008, the member states of the International Maritime Organization agreed to amend the International Convention for the Prevention of Pollution From Ships (MARPOL) Annex VI, adopting new tiers of NOx and fuel sulfur controls. The most stringent of these new emission standards apply to ships operating in designated Emission Control Areas, including the newly-designated North American ECA.

The revised MARPOL states that as of 2015, ship operators that trade in emission control areas will be required to burn fuel with less than 0.1 percent sulfur (1,000 ppm), which will help reduce SOx and particulate matter by more than 85 percent from today's levels, according to the U.S. EPA. The fuel sulfur limit allowable under MARPOL today is 10,000 ppm.

Kevin Reynolds, senior marine engineer for The Glosten Associates Inc., an engineering and consulting firm based in Seattle, authored a report on exhaust gas cleaning systems used in ships for The Ship Operators Cooperative Program, which was released in February in light of the new MARPOL regulations that are set to go into effect. Reynolds says the study was designed to guide ship operators when faced with the dilemma of switching to expensive distillate fuel in ECA or install EGS and continue to burn high-sulfur, heavy fuels. He adds that

the use of biodiesel in conjunction with ULSD is a solid option for ship operators looking for ways to comply with impending sulfur emissions as prescribed by the amended MARPOL requirement.

“Biodiesel in our view is certainly a low-sulfur option,” Reynolds says. “The challenge for these large oceangoing ships is that it’s going to be very expensive relative to residual fuel.”

Reynolds continues, “One of the biggest challenges in switching over to biodiesel is that it essentially scrubs the fossil fuel residue off your storage tanks and it tends to plug your filters, hence making the switchover process fairly painful. There’s still some interest in using biodiesel by ship owners, but there needs to be continued pilot projects to get past compatibility issues, along with increased supply, as continually switching between biodiesel and fossil-based fuels could create unwanted incompatibility issues.”

As for NOX, the amended MARPOL requirements will mandate that all marine Tier III engines will have to install some form of aftertreatment technology by 2016. Von Wedel admits there while there may be a slight increase in NOx when using biodiesel, it would be eliminated with the utilization of both biodiesel and aftertreatment technology to comply with MARPOL NOx requirements.

“Biodiesel has good potential to assist in the role, but it’s going to have to be in conjunction with proper additives or with aftertreatment, which will be very challenging for boats,” von Wedel says.

“Boats aren’t set up for that and there’s no market right now to build equipment to retrofit a boat or ferry to accommodate those stringent standards. But, in principle, it could be done.”

If You Build It, They Will Deliver

As biodiesel usage increases by ships near ports and harbors, one might ask: is there an infrastructure at ports to support installation of fuel terminals to meet that demand? The answer is no, especially in the Bay area, according to Kent Bullard, a BQ-9000 consultant and biodiesel quality assurance consultant for Little Rock, Ark.-based biodiesel consulting firm Lee Enterprises Inc.
“There really isn’t any access, at least here in Southern California, to biodiesel unless if you’re having a fuel company come and service your boat by wet fueling then you can get access to fuel if you order it,” Bullard says. “If we could have biodiesel back at Ventura Harbor at the fuel dock, it would start moving again, especially now that biodiesel is becoming price competitive with diesel now.”

Bullard cites California’s ongoing underground storage issue as one of the main culprits holding down the build-out of an infrastructure at ports for greater access to biodiesel in the state. In 2009, California’s Water Resources Board expanded its approval for storing biodiesel blends in underground tanks from the existing B5 limitation to up to B20. A 25-year-old California law requires the storage of any chemical in underground tanks to be tested and independently certified as being compatible with the tank materials, Bullard explains. With only B5 blends having been tested, the water board approved a three-year emergency variance to allow higher blends up to B20 in double-walled tanks and piping that currently meet requirements for petroleum-based fuels.

“You have to provide a letter from all of the tank component manufacturers showing biodiesel compatibility for getting above B5 underground,” Bullard says. “Then you can apply for, and hopefully your local authority will grant you, a variance, which could take about a year and a half until you receive approval.”

In Washington, Brodeur faces the challenge of trying to get consistent access of biodiesel. Currently, the Washington ferries that traverse the Puget Sound region under Brodeur’s watch are all fueled from three different locations. One, he says, is a fuel terminal that delivers blended fuel by boat (also called wet fueling) and the other is equipped with in-line blending capabilities. The third is in the process of having in-line blending equipment installed at the fuel pier in Seattle.

While Brodeur admits that biodiesel is considered a boutique fuel in many port hubs across the country with limited to no state or provincial backing to support the build-out of an infrastructure for more widespread availability, he doesn’t have any regrets for taking a chance on using biodiesel during its pilot studies.

“As long as we continue to receive the necessary funding to support the program, I’m committed to moving the fleet forward with higher biodiesel blends, up to B20, because that’s what we tested and that’s what we know will work,” Brodeur says. “Beyond that, I think we would need to go into more of a pilot project if we were considering blends higher than B20. Certainly, B20 is doable and if we’re funded to that level, I’m committed to make that happen.”

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Red and white fleet going green

August 1, 2015

When it comes to environmental sustainability, Red and White Fleet president Tom Escher is all in.

"Everyone is talking about reducing emissions by 20 percent, 40 percent or more," he said. "I thought, 'Why not do away with emissions altogether?'"

Sandia National Laboratories, which recently signed a cooperative research and development agreement with Red and White Fleet, is helping the San Francisco-based company realize that goal. Named SF-BREEZE (San Francisco Bay Renewable Energy Electric vessel with Zero Emissions), the project aims to design, build and operate a high-speed hydrogen fuel cell passenger ferry and hydrogen refueling station.

Hydrogen fuel cells have several advantages over the diesel engines that power most passenger ferries—no harmful exhaust emissions, higher energy efficiency, quiet operation and no risk of fuel spills. Replacing diesel engines and generators with hydrogen fuel cells could greatly improve air and water quality in harbor areas.

The hydrogen refueling station is planned to be the largest in the world and serve fuel cell electric cars, buses and fleet vehicles in addition to the ferry and other maritime vehicles.

The U.S. Department of Transportation's Maritime Administration (MARAD) is funding a feasibility study to examine the technical, regulatory and economic aspects of the project.

"The Maritime Administration is committed to finding new and efficient technologies for use in the maritime industry that reduce pollution and protect our environment," said Maritime Administrator Paul 'Chip' Jaenichen. "This industry continues moving forward on renewable energy and clean-fuel options, and this project encourages a shift toward lower impact maritime fuels that may further green the waterborne link in our national transportation system."

Sandia is leading the study in partnership with Red and White Fleet, the American Bureau of Shipping, the U.S. Coast Guard and naval architect Elliott Bay Design Group. Other contributors include the California Environmental Protection Agency's Air Resources Board and the Governor's Office of Business and Economic Development.

"We are involving so many stakeholders up front because if the feasibility study shows a 'go' we want to make sure the next phase has a rock-solid foundation," said mechanical engineer Joe Pratt, the Sandia project lead. "We hope that the feasibility study, regardless of the outcome, can be useful to others nationally and around the world who are looking at hydrogen fuel cell vessels as clean energy alternatives."

Boat speed critical to economic viability

Economic viability is essential to the success of SF-BREEZE.

"Rather than a tour boat that would primarily be a demonstration project, Red and White Fleet believes a high-speed passenger ferry makes economic sense," Pratt said. To compete with existing transportation methods—cars, buses, Bay Area Rapid Transit and other ferries—the ferry must be fast. But speed adds complexity.

"If you are trying to achieve speed, boat weight is important," Pratt said. "Fuel cells and hydrogen are heavier than existing diesel engines and fuel, so the question becomes can you build a boat powered by hydrogen fuel cells that is both large and fast enough? The feasibility study will provide that answer."

A preliminary conceptual study shows the answer is probably yes, but it will require a boat specially designed to accommodate hydrogen fuel and the fuel cell technology. A traditional passenger ferry can't easily be retrofitted with a hydrogen fuel cell, so it was essential to include a naval architect in the feasibility study. The ferry design will include collaboration with the American Bureau of Shipping and the Coast Guard to ensure the final design conforms to safety and reliability rules and regulations.

The world's largest hydrogen refueling station

The boat—design, operation, maintenance and fueling—is one part of the equation; the hydrogen refueling station is the other. The high-speed passenger ferry would use about 1,000 kilograms of hydrogen per day. To put this in perspective, an average hydrogen fuel cell car might use less than 5 kilograms of hydrogen per week.

To support the ferry and other potential users, the refueling station would have a capacity of 1,500 kilograms a day—about twice the size of the largest hydrogen refueling station in the world. It would also be the first hydrogen refueling station to simultaneously serve land and marine uses.

The economy of scale could boost the local hydrogen fuel cell marketplace. "A larger station reduces the cost per kilogram of hydrogen," said Pratt. "Higher use will drive down that cost even more."

Reducing the cost of hydrogen refueling could stimulate the market for hydrogen fuel cell cars and accelerate wider adoption of the technology in other vehicle markets, such as heavy-duty trucks and buses.

"This project offers an opportunity to closely examine how hydrogen can take its rightful place as a clean, low-carbon fuel for high-volume transportation operations, and also build the business case as part of an innovative application for fuel cells," said Catherine Dunwoody, chief of the Fuel Cell Program at the California Air Resources Board.

Feasibility study will address regulations

SF-BREEZE will enter new regulatory space, both for the high-speed ferry and refueling station. The feasibility study will examine those regulations and their impact on the project.

For the refueling station, Sandia can draw on its technical expertise in developing and optimizing safe, cost-effective vehicular hydrogen fueling stations. The U.S. Department of Energy Fuel Cell Technologies Office funds most of Sandia's efforts in this area. Sandia is a leading partner in two nationwide infrastructure initiatives: H2USA, a private-public partnership focused on advancing hydrogen infrastructure, and the Hydrogen Fueling Infrastructure Research and Station Technology (H2FIRST), a U.S. Department of Energy project established to support H2USA.

"The knowledge, tools and stakeholder resources we've cultivated through these initiatives will directly apply to developing the large, multi-use hydrogen refueling station," said Pratt. "We will work closely with state and local agencies to determine the best location for the refueling station and understand the associated regulations."

Sandia leads the Maritime Fuel Cell project, which is piloting the use of a hydrogen fuel cell to power refrigerated containers on land and on transport barges at the Port of Honolulu.

"Working with the Bureau of Shipping and the Coast Guard, we've explored some of the unique issues related to using a hydrogen fuel cell on a vessel and in the marine environment," said Pratt. "But there is more at stake when the fuel cell is powering the boat, not an auxiliary system, and the boat is carrying passengers."

Vessel design next step

If the feasibility study indicates that SF-BREEZE could succeed technically, economically and within regulations, the next step is to design the vessel. The project will need additional funding, resources and partners, which could come from the federal government, the state of California, investors, industry or private foundations.

Escher joked that if the project ultimately succeeds, it could hurt him financially.

"It will make all of my boats obsolete and I'll have to replace my entire fleet," he said. "But in all seriousness, this is really about preserving the environment for future generations."

He hopes to continue Red and White's tradition of leadership and environmental stewardship established by his grandfather Thomas Crowley, who started the company in 1892.

"I want to ride across the San Francisco Bay on a quiet, fast boat with no emissions," he said. "If we get thirsty, we can drink the exhaust."

Explore further: Fast-fill hydrogen fueling station enabling zero emission transportation

Provided by: Sandia National Laboratories

SAN FRANCISCO ◆ SINCE 1865
Examiner
Wednesday January 25, 2017

SF Port may locate hydrogen fueling station at Pier 54

Above, a rendering of a possible hydrogen cell fueled ferry boat being studied for use on San Francisco Bay. A proposal to build a hydrogen refueling station on Port property could be used to fuel ferries like that as well as the expected increase of hydrogen-fueled vehicles on the road. It would be the first hydrogen fueling station in San Francisco. (Courtesy Sandia National Laboratories)

By Joshua Sabatini on August 15, 2016 1:00 am

A hydrogen fueling station may operate on a Port of San Francisco pier as part of an effort to bring a zero-emissions ferry service to the San Francisco Bay.

The station would be the first of its kind in the world in that it would serve both boats and private automobiles. Port officials have identified Pier 54 as the most feasible site for the hydrogen filling station, which would cost up to $5 million to build.

The idea comes as auto makers are producing an increasing number of zero emission vehicles powered by hydrogen fuel cells — in fact, every major car company is expected to have a hydrogen fuel cell model within the next five years. With state and industry backing, more and more hydrogen filling stations are cropping up, only none have yet to open in San Francisco.

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The Port wouldn't build the hydrogen filling station, only act as the landlord. But Elaine Forbes, interim executive director of the Port, has provided a letter of support of the pier project for those interested in applying to receive a portion of the $33 million in grant funding provided by the California of Energy Commission to pay for more hydrogen filling stations throughout the state.

Applications are due Aug. 19 and Port officials identified Steven Brooks of Retail Energy Now and Jonathan Avila of StratosFuel as two potential applicants.

"The Port of San Francisco enthusiastically supports the creation of an intermodal hydrogen fueling station on Port property," Forbes wrote in the letter. "The proximity of Port property to the high population density of San Francisco would make a Port-based hydrogen station valuable in many respects."

Hydrogen fuel cells power vehicles when a fuel cell generates electricity through an electrochemical reaction between hydrogen and oxygen. The only byproduct is heat and water.

The Port's interest in hydrogen fuel cells began with Red and White Fleet President Tom Escher, who operates a passenger ferry service on Port property. About four years ago Escher began to research alternatives to his diesel fleet and came upon maritime hydrogen fuel cell research being done by Livermore-based Sandia National Laboratories.

He then shared his idea of a fuel cell ferry. The lab's scientists reacted at first with skepticism and advised Escher to instead set his sights on the cleaner energy from liquefied natural gas, but were later won over with some preliminary calculations.

That led the lab to secure a $500,000 grant from the Department of Transportation Maritime Administration to determine if it was feasible to build SF BREEZE (San Francisco Bay Renewable Energy Electric vessel with Zero Emissions) that could travel some 35 knots.

While the official report isn't due out until September, Joseph Pratt, the SF BREEZE project manager at Sandia National Laboratories, said they sought to answer three main things: is it technically feasible, would it pass muster with maritime regulatory agencies and the economics.

The 15 month long research shows it is feasible to operate a 30-meter, 149-passenger ferry with a catamaran design on hydrogen-filled fuel cells reaching 35 knots and that it can pass regulations, according to Pratt.

The cost, however, is two times the conventional diesel ferry, he said, noting that diesel ferries cost between $10 million to $15 million and SF BREEZE would cost between $20 million and $30 million. But the bulk of that cost is in the fuel cell system, in this case an electric motor with electricity from about 150 fuel cells the size of carry-on luggage.

Sandia has secured another grant to optimize the ferry design, which would look at slowing the ferry down and adding passenger capacity to lower the cost.

“There’s some room to optimize a fuel cell ferry using today’s technology,” Pratt said. The lab is also working on powering a Scripps research vessel using hydrogen fuel cells.

Pratt said they didn’t do a market study and that while the feasibility study does factor in cost parity that may not be the most important factor, noting there is a demand for cars using this technology even with a higher sticker price than gasoline powered cars. The new Toyota Mirai, for example, costs $57,000, which can be lowered with government incentives such as a federal tax credit of $8,000, and a $5,000 cash rebate from the state.

“I’m really excited to see something like this could really happen,” Pratt said.

While hydrogen fuel cell research has gone on for decades, Pratt suggested that the auto industry and people’s growing awareness of climate change is creating a demand to make real world applications of the technology.

The research outcome is welcome news for Port officials. “The vision is that all ferry service on the Bay would be zero emissions,” said Port spokesperson Renée Dunn Martin.

Escher is also encouraged by the results and is committed to eventually building the ferry. He has even set a launch date of March 17, 2018, at 10 a.m., which happens to be St. Patrick’s Day. “St. Patrick got the snakes out of Ireland. We are going to have a solution for pollution,” Escher said.

Chris White, a spokesperson for the California Fuel Cell Partnerships, a collection of auto manufacturers building fuel cell vehicles, said, “We definitely need to have at least one [hydrogen filling station] in San Francisco.”

Currently there are 20 hydrogen filling stations in California with the nearest ones to San Francisco in Mill Valley, Emeryville, South San Francisco and Hayward. The state projects there will be 50 by the end of 2017.

More fuel outlets could incentivize purchases of these vehicle types, particularly heavy road users like drivers for ride-hail services such as Uber or Lyft.

“If you’re an Uber driver and you’re driving around in San Francisco, running over to Emeryville to fill your tank up is not real handy.” White said.

The push for zero-emission cars is being driven by state regulations. In 2012, Gov. Jerry Brown issued an executive order calling for 1.5 million zero-emission vehicles on California’s roads by 2025. Taking the effort further, Assemblywoman Autumn Burke, D-Los Angeles, announced Friday a proposed bill that would require 15 percent of all vehicles sold in California to be emissions-free by 2025.

There are currently 331 hydrogen fuel cell car owners in the state. That is projected to increase to 13,500 vehicles in 2019 and 43,600 vehicles in 2022, according to the state’s Air Resources Board.

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Hydrogen-powered passenger ferry in San Francisco Bay is possible, study says

October 6, 2016

An artistic rendering of the proposed San Francisco Bay Renewable Energy Electric Vessel with Zero Emissions (SF-BREEZE). A Sandia National Laboratories-led study found that a high-speed, hydrogen-fueled passenger ferry is feasible. Credit: Sandia National Laboratories

Nearly two years ago, Sandia National Laboratories researchers Joe Pratt and Lennie Klebanoff set out to answer one not-so-simple question: Is it feasible to build and operate a high-speed passenger ferry solely powered by hydrogen fuel cells? The answer is yes.

The details behind that answer are in a recent report, "Feasibility of the SF-BREEZE: a Zero Emission, Hydrogen Fuel Cell High Speed Passenger Ferry." SF-BREEZE stands for San Francisco Bay Renewable Energy Electric Vessel with Zero Emissions.

"The study found that it is technically possible to build a high-speed, zero-emission hydrogen-powered ferry. We also believe this can be done with full regulatory acceptance," said Pratt.

"In the course of the study, we examined over 10 major issues where feasibility was initially unknown. SF-BREEZE sailed through them all," added Klebanoff.

Tom Escher, president of San Francisco's Red and White Fleet, first conceived of the project when he asked if it was possible to do away with emissions altogether on one of his ferries.

"This is a game changer. We can eliminate environmental pollution from ships," he said. "This could have a major impact on every shipyard in the country."

Funded by the Department of Transportation's Maritime Administration and led by Sandia, the feasibility study brought together the American Bureau of Shipping (ABS), the U.S. Coast Guard, naval architect Elliott Bay Design Group, the Port of San Francisco and dozens of other contributors.

"Not long ago, the prospect of pollution-free transportation seemed like science fiction," said Maritime Administration Administrator Paul "Chip" Jaenichen. "Today, through public-private collaboration on projects like SF-BREEZE, we are making progress to turn it into a reality."

Novel boat design

Hydrogen-powered ferries do exist, but most are smaller, slower vessels used for tours on lakes and rivers. The SF-BREEZE study set out to discover whether it is technically feasible to build a large, fast vessel; it could meet maritime regulations; and it could be economically competitive with modes of transportation already available in the San Francisco Bay area.

The group drew up conceptual 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, the project manager for Elliott Bay Design Group. "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. Leffers explained that this provides physical separation between the fuel cells and passengers.

The project supports Elliott Bay's commitment to the environment. "I'm a big believer in developing environmentally friendly designs," Leffers added. "This project has been terrific because it's something I really believe in. I think that this proof-of-concept, that this boat can be built, is very important for future projects."

Regulations and economics

ABS issued a conditional Approval in Principal to verify that the conceptual design would be compliant with applicable regulations and rules and to identify any potential gaps in compliance. Combining their assessment with feedback from the U.S. Coast Guard, Sandia found no regulatory show-stoppers and concluded that the vessel will be acceptable from a regulatory perspective once a more detailed "ready-to-build" design is generated.

"ABS is proud to have participated in the SF-BREEZE feasibility study and advance the research on unique challenges of designing a high-speed passenger ferry powered solely by hydrogen fuel cells," said ABS Chief Technology Officer Howard Fireman. "The collaboration with Sandia and the project team extends our knowledge base and the potential technology transfer to address the challenge of reducing the environmental footprint."

The hydrogen ferry would cost about twice as much as a comparable diesel ferry with today's prices. Much of that cost is in the fuel cell system.

"Right now, we can't achieve economic parity with a comparable diesel ferry," said Pratt. "But this is a question we need to explore further. Is economic parity necessary from the outset? Lessons from the automotive market tell us maybe not."

Vehicle manufacturers have successfully brought fuel cell electric vehicles to market even though those cars are more expensive than comparable internal combustion engine vehicles. Many experts expect mass adoption of fuel cell electric vehicles to bring down prices of hydrogen fuel cells.

Optimization is next step

The next step is to optimize the vessel design. "We need to consider if the parameters we started out with are optimal for the technology that is available today," said Pratt.

Working with Red and White Fleet and other stakeholders, Klebanoff and Pratt are now undertaking an optimization study. They will examine the tradeoffs between speed and costs and emissions among other factors.

Red and White Fleet President Escher sees SF-BREEZE as the start of a revolution in marine transportation. "When this boat is launched, it will be a seed. When you add a seed to water, it grows," he said. "This seed could grow into a 40-meter tugboat, a 70-meter supply boat or a 300-meter oceangoing ship trading between the West Coast and Hawaii. And all at zero pollution."

Explore further: Red and white fleet going green

More information: "Feasibility of the SF-BREEZE: a Zero Emission, Hydrogen Fuel Cell High Speed Passenger Ferry": energy.sandia.gov/download/38805/

Provided by: Sandia National Laboratories

More Details Revealed on San Francisco Hydrogen Ferry, Bunkering Plans

Tuesday October 11, 2016

Follow reports in August that the **Port of San Francisco** is looking at the possibility of developing a hydrogen bunkering station, more details have been revealed on the plans to build and operate a high-speed, zero-emission hydrogen-powered ferry, and associated refueling infrastructure.

SF-BREEZE is a zero emissions concept ferry, set to be powered by a hydrogen fuel cell.

Science news service Phys.org reports that a recent study has found the project to be "technically possible," and **Sandia National Laboratories** (Sandia) says it has signed a Cooperative Research and Development Agreement (CRADA) with **San Francisco**-based **Red and White Fleet**, which will see the development of the vessel and associated infrastructure.

The vessel is known as *SF-BREEZE* - San Francisco Bay Renewable Energy Electric Vessel with Zero Emissions.

"Hydrogen fuel cells have several advantages over the diesel engines that power most passenger ferries - no harmful exhaust emissions, higher energy efficiency, quiet operation, and no risk of fuel spills. Replacing diesel engines and generators with hydrogen fuel cells could greatly improve air and water quality in harbor areas," said Sandia.

The company says that the hydrogen refueling station that will be built under the project is expected to be the largest in the world.

"In the course of the study, we examined over 10 major issues where feasibility was initially unknown. SF-BREEZE sailed through them all," **Lennie Klebanoff**, a researcher at Sandia told Phys.org.

The passenger ferry is said to be expected to use about **1,000 kilograms (kg)** of hydrogen per day, while the refueling station is expected to have capacity for **1,500 kg** per day.

> **“Hydrogen fuel cells have several advantages over the diesel engines that power most passenger ferries**
>
> *Sandia National Laboratories*

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Rotterdam	307.00	0.50	467.00	1.00
Houston	321.00	14.50	524.00	0.50
Fujairah	327.00	2.00	557.50	1.00

View Bunker Prices for 150 Ports

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1. Feature: The Current Business Models for Suppliers and Intermediaries Will Not Work Beyond 2020; What Can the Bunker Industry Learn from Aviation?
2. "Growing Consensus" Over Who Should Be Paid Disputed OW Bunker Bills

As Ship & Bunker reported in August, the **Port of San Francisco** has identified **Pier 54** as the most viable site for a hydrogen fueling station.

Ship & Bunker News Team

To contact the editor responsible for this story email us at editor@shipandbunker.com

3 **Peter Grunwaldt Joins Hafnia Management as Pool Moves to take Bunkering Requirements In-House**

4 **Yang Ming Recapitalisation Plan to Utilise Taiwan Government Funds**

5 **Singapore's New Ocean Maritime Fined $81,000**

Also in the News

Buckeye Finalises Acquisition of 50% Share in VTTI

Buckeye acquired the 50 percent share in VTTI for $1.15 billion, with VTTI now owned indirectly through a 50/50 split between Buckeye and Vitol.

Read in Full

IMO to Discuss "Smooth and Effective" 0.50% Sulfur Cap Implementation

The Sub-Committee on Pollution Prevention and Response is holding its fourth session from January 16 to 20.

Read in Full

2200 cbm LNG Bunkering Barge Draws Closer to Completion with Cargo Handling System Delivery

GAS Entec has delivered engineering service and LNG Cargo Handling Equipment package to CME's LNG bunker barge project.

Read in Full

All American to build hybrid-electric passenger ferry

By Ken Hocke on FEBRUARY 13, 2017

The new vessel will be the first aluminum-hulled, lithium-ion battery-electric hybrid vessel built from the keel up under USCG Subchapter K regulations. All American Marine image

All American Marine (AAM) has inked a deal for the construction of a new 128'x30' hybrid-electric 600-passenger vessel for the **Red and White Fleet** in San Francisco. The contract for the new aluminum monohull *Enhydra* was signed during the recent Passenger Vessel Association annual meeting in Seattle.

"We are proud to offer a hybrid propulsion system that truly works with instant and tangible benefits," Joe Hudspeth, AAM's vice president of business development, said in a statement announcing the contract.

AAM's latest contract follows an earlier announcement that it would build a 500-passenger aluminum monohull tour boat for **Argosy Cruises**, Seattle. Both operators were originally pursuing construction contracts for steel monohulls, but AAM was able to show considerable savings in construction and maintenance costs with an aluminum design, while ensuring delivery of a solid hull structure. Argosy will take delivery of its vessel in late fall and the Red and White Fleet will receive its new craft in late spring 2018.

The new vessel for Red and White Fleet will be the first aluminum hulled, lithium-ion battery-electric hybrid vessel built from the keel up under Coast Guard Subchapter K passenger vessel regulations and the latest guidelines for structural fire protection. The vessel is specifically designed for harbor tours of San Francisco Bay and the Golden Gate Bridge. Guests on board *Enhydra* will be able to experience amazing views of the bay and cityscape from each of the three decks. The second level offers a full wrap around viewing deck with access to the enlarged bow foredeck. The top deck is completely open and offers plenty of outdoor seating for sun soaking or just relaxing.

The shipyard partnered with **BAE Systems** to design and integrate the complete battery electric hybrid system. BAE Systems will supply its HybriDrive propulsion system that includes a generator, control system, and AC electric traction motor. The generator will mount to a variable speed **Cummins** QSL9 diesel engine, producing 410 hp at 2,100 rpm. The motor generator offers diesel-electric operation of the AC traction motor, which is coupled directly to the propulsion shaft. With this configuration, torque is immediately available for the propeller and the speed can be precisely controlled without the need for a reduction gear.

The hybrid system will also utilize battery power from two 80-kW lithium-ion battery packs. The batteries will come from **Corvus Energy** and are supplied under its next generation **Orca Energy** line. The BAE HybridDrive system can automatically utilize full electric battery operation at slower speeds and when maneuvering in and out of the harbor. At

RELATED

Is a hybrid-assist system your answer to Tier 4?

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RECENT

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higher speeds, the generator will automatically engage and augment the additional power demands of the traction motor. The battery system is sufficient to meet the entire demand of the vessel's hotel load while at the same time providing silent and emission-free operation of the propulsion system during an evening sunset cruise.

Red and White Fleet's vice president of operations, Joe Burgard, said he's eager for passengers to experience San Francisco Bay from the silent decks of the *Enhydra* in 2018. "We see the propulsion configuration on the *Enhydra* as phase one in our move toward the full electrification of our fleet. Stay tuned for phase two."

AAM is celebrating its 30th anniversary and will move into a new purpose-built shipbuilding facility at nearby Squalicum Harbor in April.

ABOUT THE AUTHOR

Ken Hocke

Ken Hocke has been the senior editor of WorkBoat since 1999. He was the associate editor of WorkBoat from 1997 to 1999. Prior to that, he was the editor of the Daily Shipping Guide, a transportation daily in New Orleans. He has written for other publications including The Times-Picayune. He graduated from Louisiana State University with an arts and sciences degree, with a concentration in English, in 1978.

LEAVE A REPLY

Your Comment

Your Name

Your Email

POST COMMENT

Feasibility of a high speed, zero emission hydrogen fuel cell passenger ferry in the San Francisco Bay

Captain Joe Burgard
Red and White Fleet

Dr. Joe Pratt
Sandia National Laboratories

Bay Area Council

Water Transit Committee

January 25, 2017

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

Red and White Fleet

Thomas C. Escher,
Owner and President

- Founded in 1892, the historic Red and White Fleet today offers over 5,000 sightseeing trips/yr under the Golden Gate Bridge.
- Fleet: 4 passenger vessels, steel mono hulls, 350 to 600 pax.
- Under the visionary leadership of Mr. Escher, we are committed to providing our services with the highest level of environmental responsibility.
- We run 6 Tier III engines and 10 Tier II engines across our fleet, but it is clear that these incremental criteria emissions reductions are insufficient to respond to near term threats.
- In 2014, Mr. Escher made a commitment to providing our services on a zero emission vessel.

Sandia National Laboratories

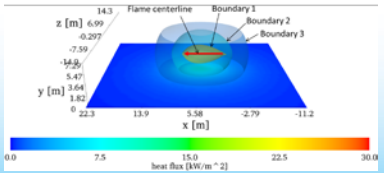
"Exceptional service in the national interest"

- Largest National Lab in U.S.
  - U.S. Department of Energy (DOE)
  - ~12,000 employees
  - ~US$2.3B/yr from DOE, other federal agencies, and private industry
  - H_2 Program in Livermore, CA (HQ in Albuquerque, NM)




- Hydrogen program: 60+ years technical depth in a wide range of areas, which we apply to enable impactful clean energy solutions
- Zero Emission Maritime Program
  - SF-BREEZE ferry
  - ZERO/V coastal-class research vessel
  - Maritime Fuel Cell Generator
  - Development of IMO H_2 regulations
  - Zero Emission Hydrogen Vessel Working Group





Project Concept

High-speed H_2 Ferry

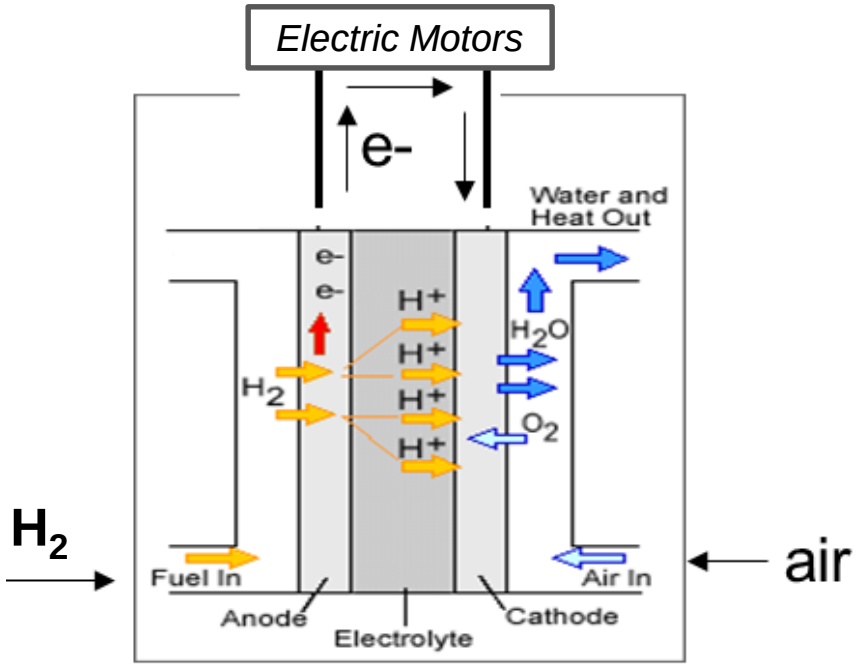
Engineering model of the SF-BREEZE

Dockside Fueling Station

Example existing dockside hydrogen station in Hamburg, Germany

Technically Possible? ***Accepted by Regulators?*** ***Commercially Viable?***

When hydrogen is used in a *Fuel Cell* it produces ZERO pollution or greenhouse gas



Photos Courtesy Ryan Sookoo, Hydrogenics

$2\ H_2 + O_2 \rightarrow 2\ H_2O$

Going In:

H_2 and air

Going Out:

Electricity
Waste Heat
Warm humidified air

Hydrogen fueling stations and fuel cell electric vehicles are in the Bay Area today

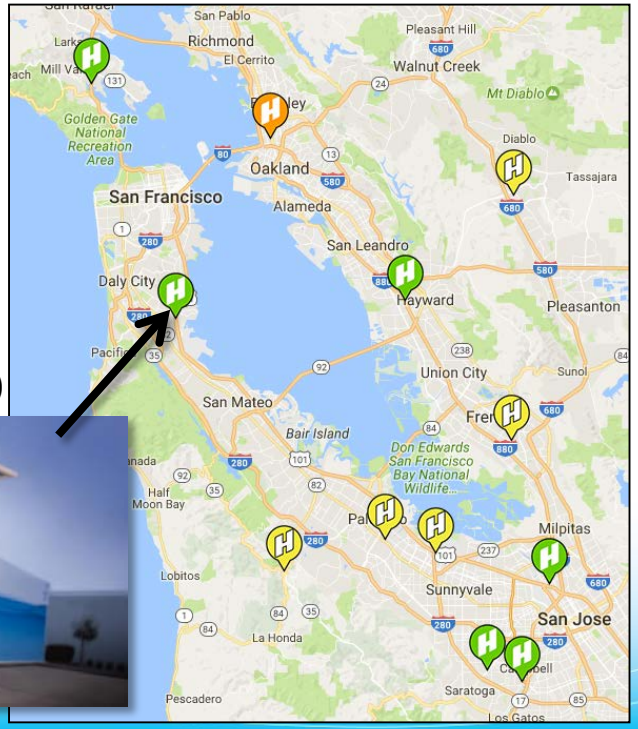
Hyundai Tucson

Toyota Mirai

Honda Clarity

AC Transit buses

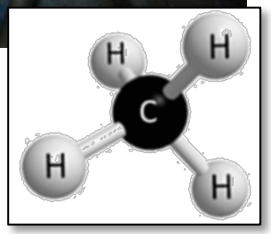
South SF hydrogen fueling station (Airport Blvd @ 101)



Hydrogen is a combustible fuel, very similar to natural gas, but does not contain *carbon.*

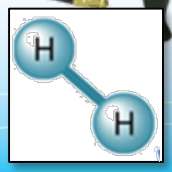
H_2O
CO
CO_2

Natural gas



H_2O

Hydrogen



Hydrogen is the lightest gas

NG H_2

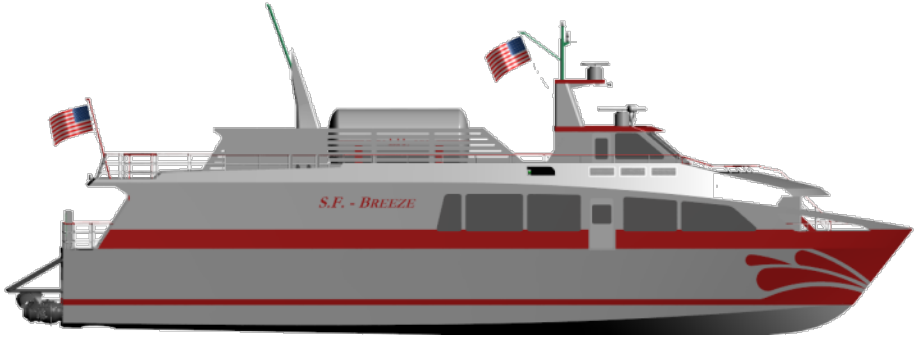
Ferry Operating Logistics – Route for Analysis

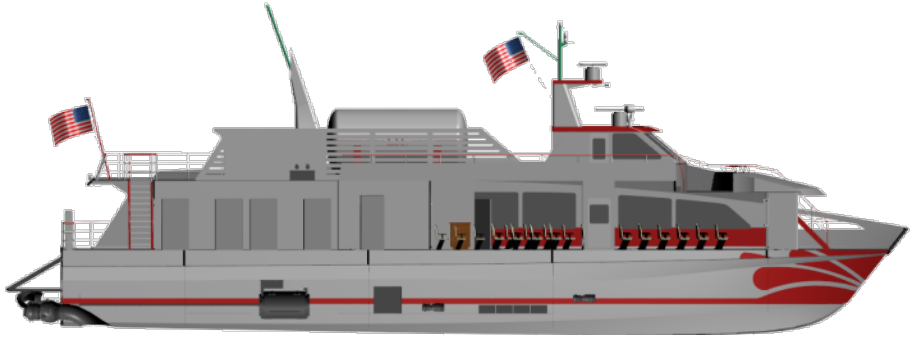
- High-speed commuter ferry in an ocean bay environment, must be competitive with other modes of transportation (car, bus, train, other ferries)
- 23 nm one-way, 35 kts top speed
- Daily logistics:
  - Two morning round trips
  - Refuel in less than 1 hr.
  - Two afternoon round trips
- Designing the ferry to meet the long distance of the Vallejo-SF route gives it maximum flexibility in eventual route choice, including a SF-South Bay route.

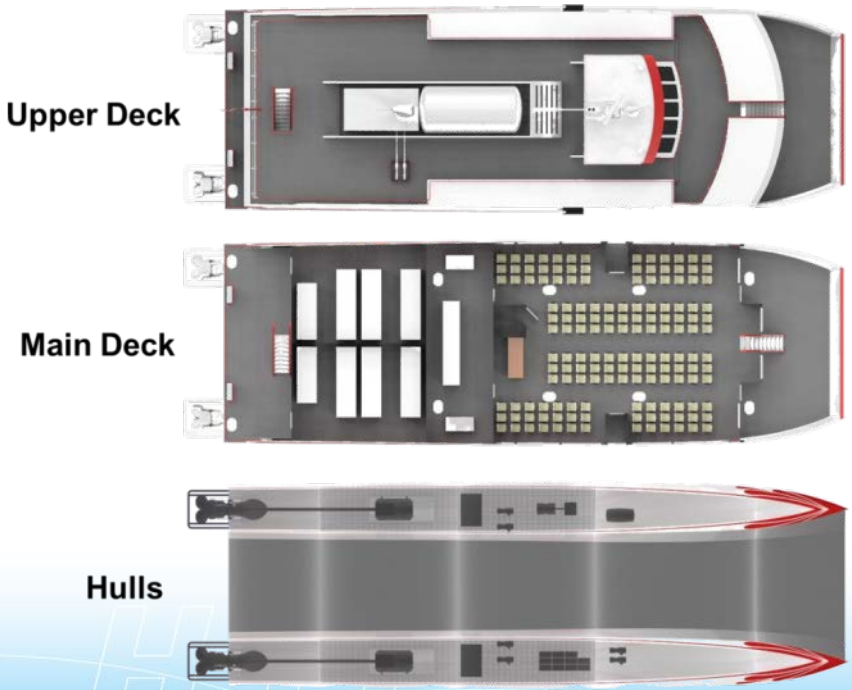
The final SF-BREEZE design meets all requirements

Elliott Bay Design Group Naval Architecture by Elliott Bay Design Group

SF-BREEZE Design Details







- LOA 109’ x Beam 33’ x Depth 11.25’
  Full Load Draft ~ 4.6’
- Full Load Displacement ~ 133 LT
- Tonnage: 79.86 GRT
- Passengers: 150
- Service Speed: 35 knots
- Propulsion power 4.4 MW, installed: 4.92 MW
- Fuel: Renewable LH_2
- **Low noise, no diesel fumes or odor**
- **Faster response time than diesel**
- **ZERO Emissions on the water**
- **ZERO Fuel Spills on the water or on land**

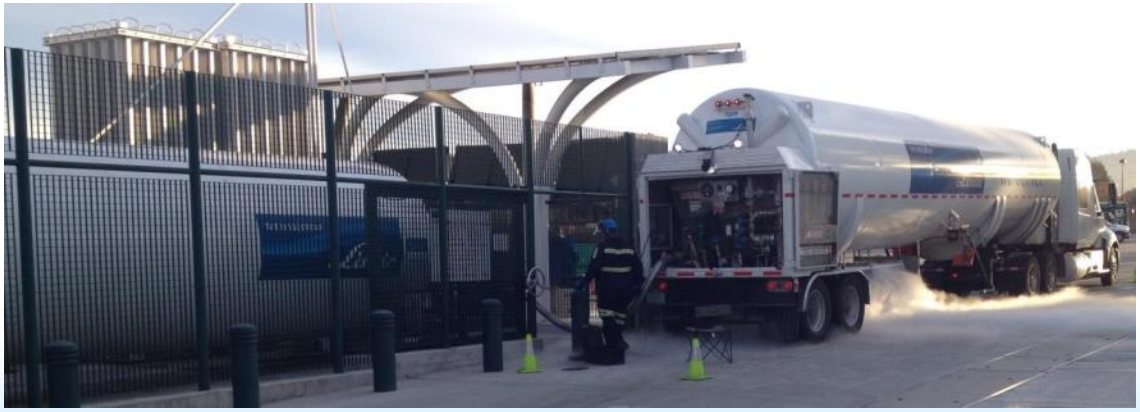
The SF-BREEZE uses LH_2, which is like LNG. Both have been safely transported and used for decades.

LH_2 Storage Tank

LNG Storage Tank

NASA's LH_2 transport barge

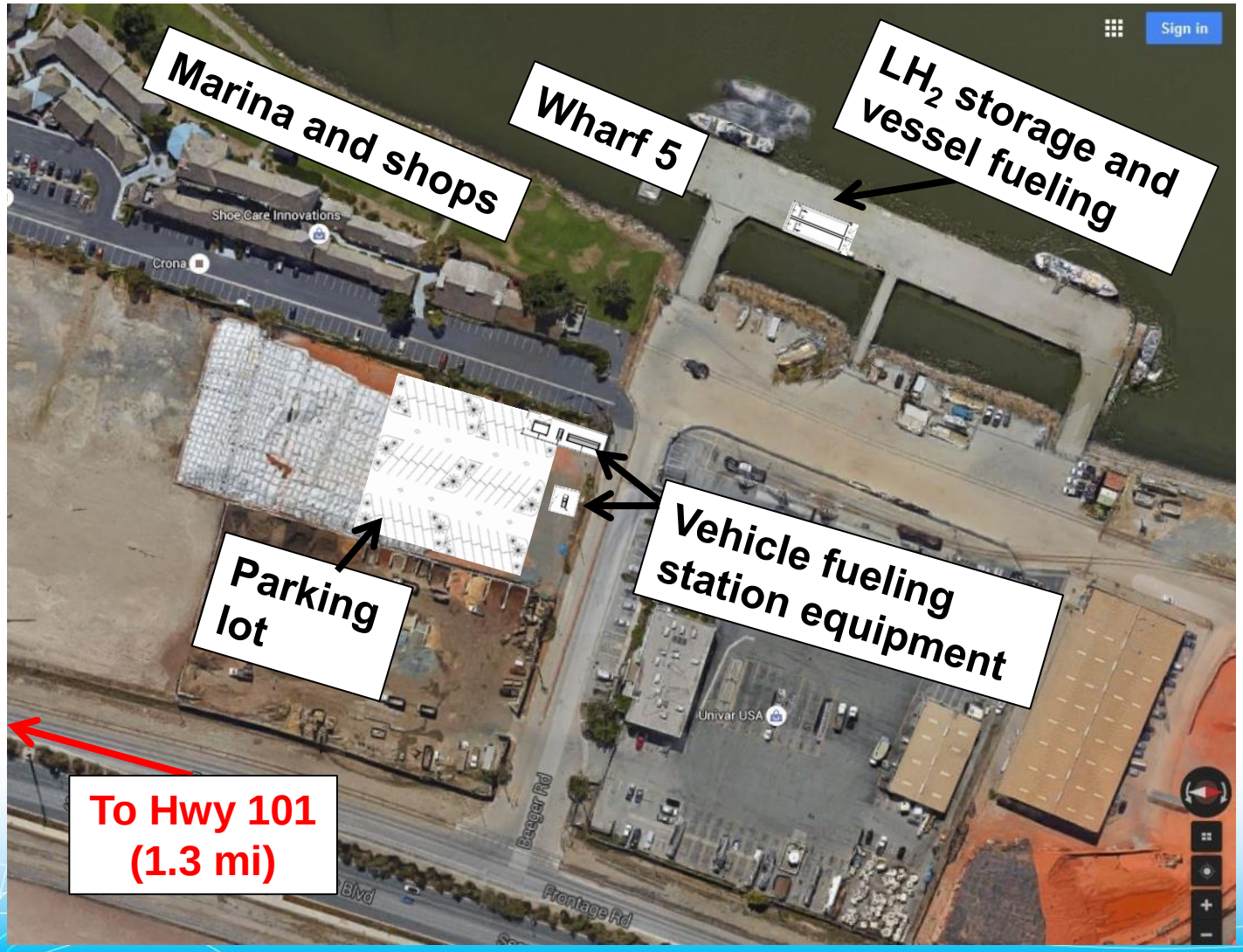
More than 50 LH_2 trucks for every Space Shuttle launch



LH_2 refill at AC Transit in Emeryville, CA

The Port of San Francisco prefers Pier 54 for fueling both the SF-BREEZE and fuel cell electric vehicles.

The Port of Redwood City identified Wharf 5 and nearby lots as ideal for fueling vessels and vehicles.



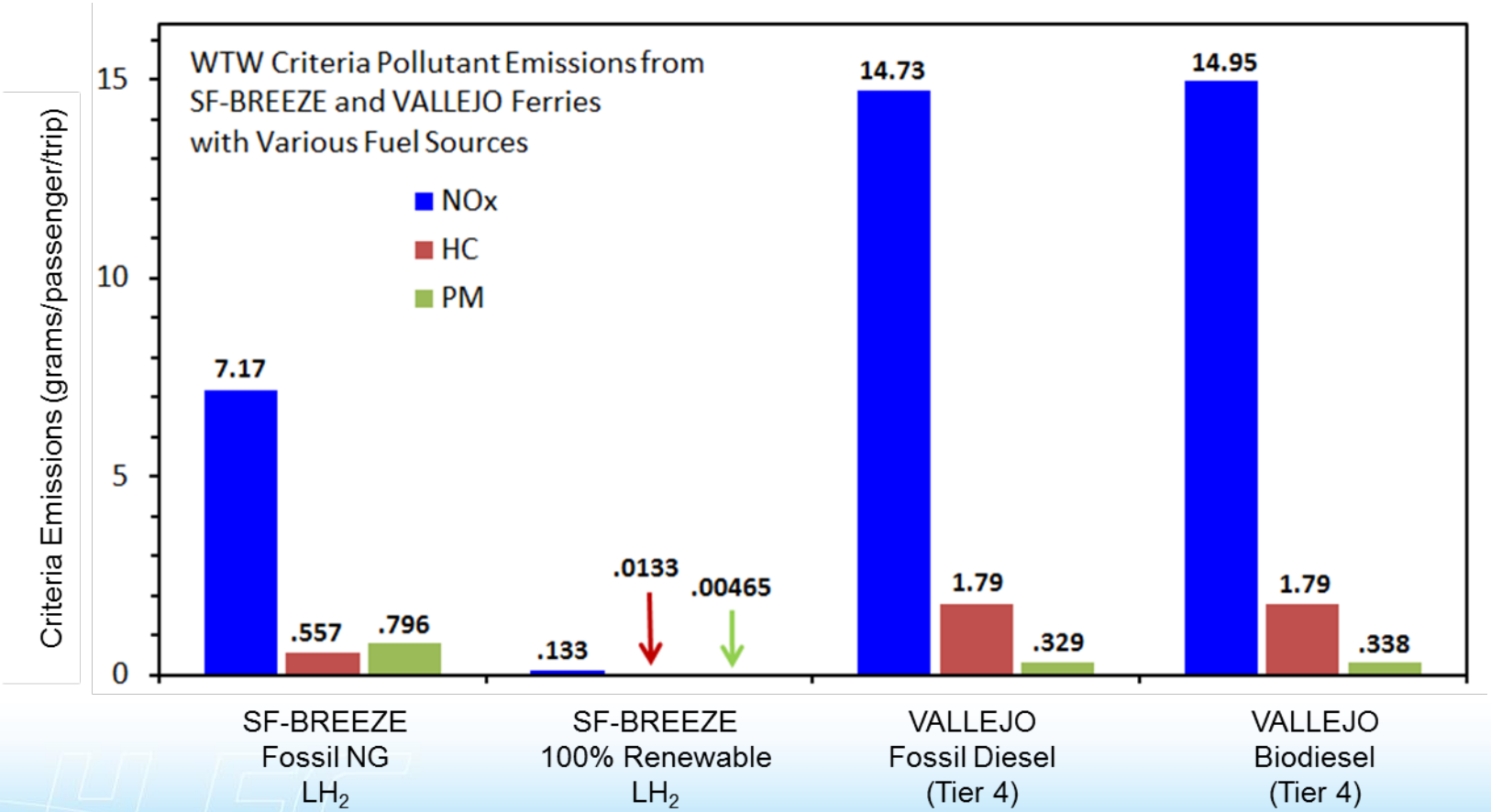
Air Emissions: Analysis, with comparison to the existing, similar sized ferry on the same route

SF-BREEZE
Top Speed: 35 knots
Power Plant: PEM fuel cells
Fuel: Liquid Hydrogen
Passenger Capacity: 150

Vallejo
Top Speed: 35 knots
Power Plant: Diesel engine
Fuel: Ultra low sulfur diesel
Passenger Capacity: 300

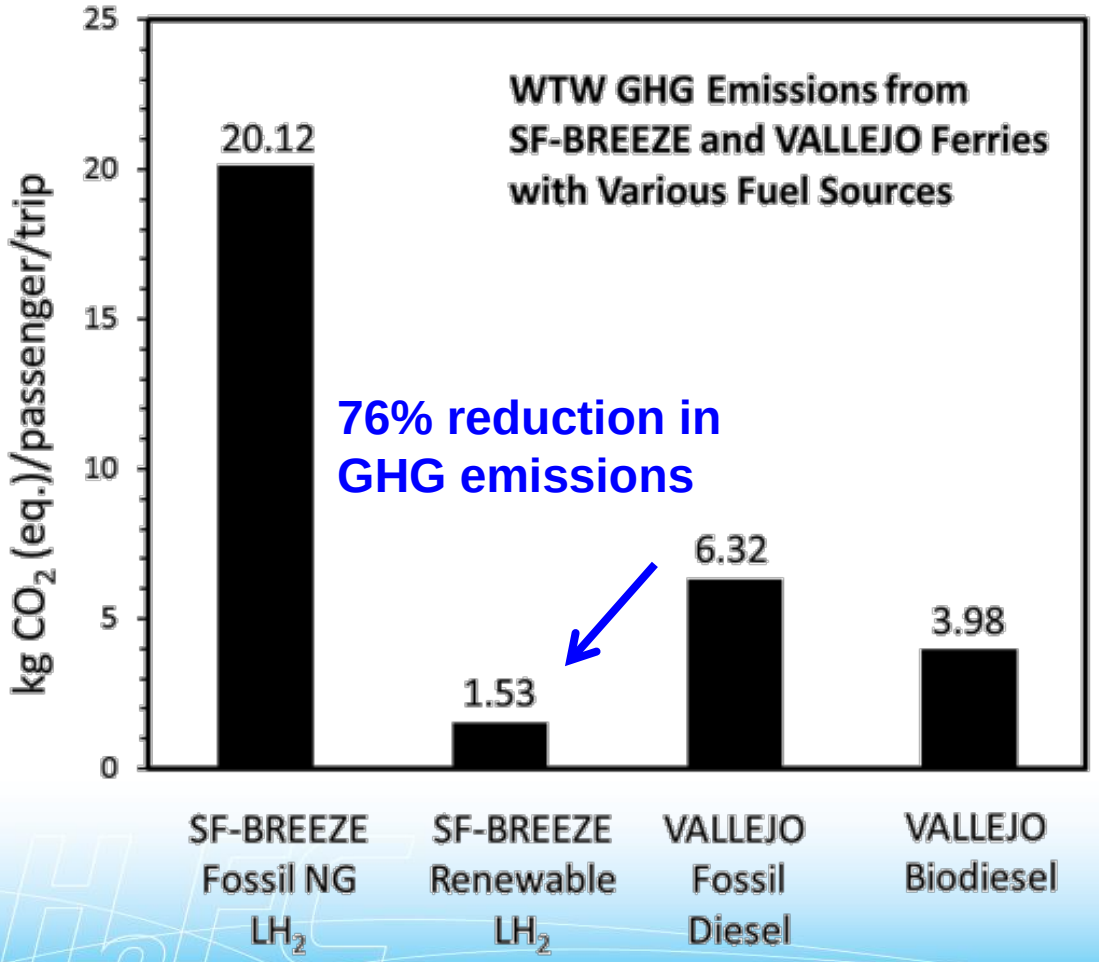
For this comparision, assume a "new-build" Vallejo diesel vessel held to Tier 4 criteria pollutant emission constraints.

The SF-BREEZE drastically reduces "Well-to-Waves" pollutant emissions compared to the most advanced (Tier 4) marine diesel ferries.



The SF-BREEZE has <u>zero</u> criteria pollutant emissions at the point of use

SF-BREEZE can achieve dramatic Well-to-Waves greenhouse gas (GHG) reduction with *renewable* LH_2



All SF-BREEZE emissions are due to the LH_2 production path; the SF-BREEZE is zero emission at the point of use

Renewable liquid hydrogen is available

Renewable methane

→ Reformation

H_2 ↓

Liquefaction → Renewable liquid hydrogen

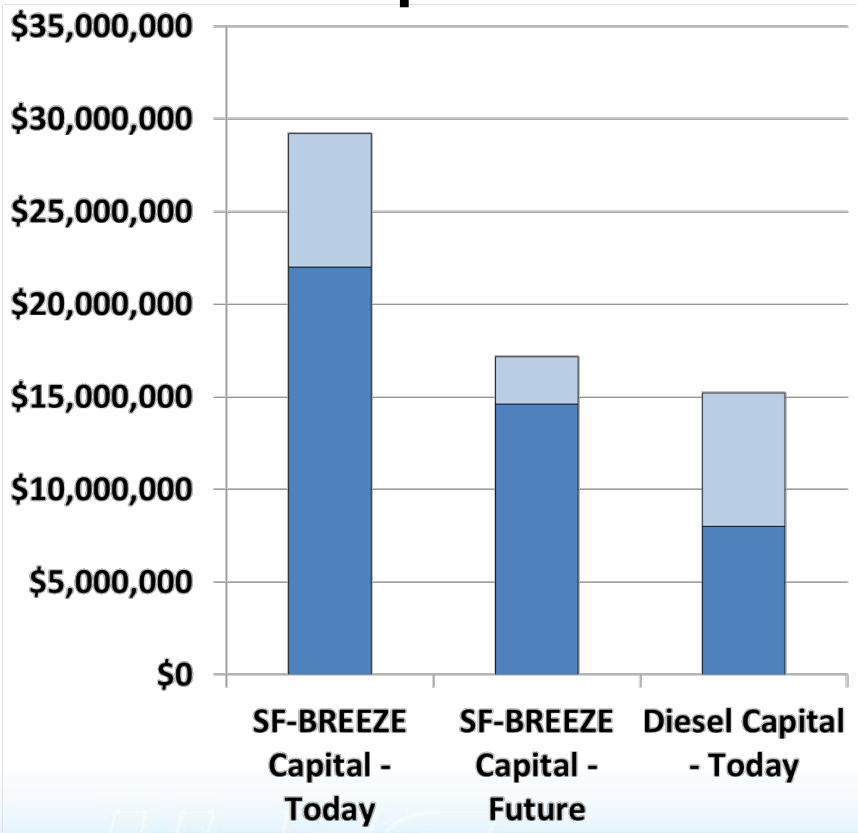
H_2 ↑

Renewable electricity

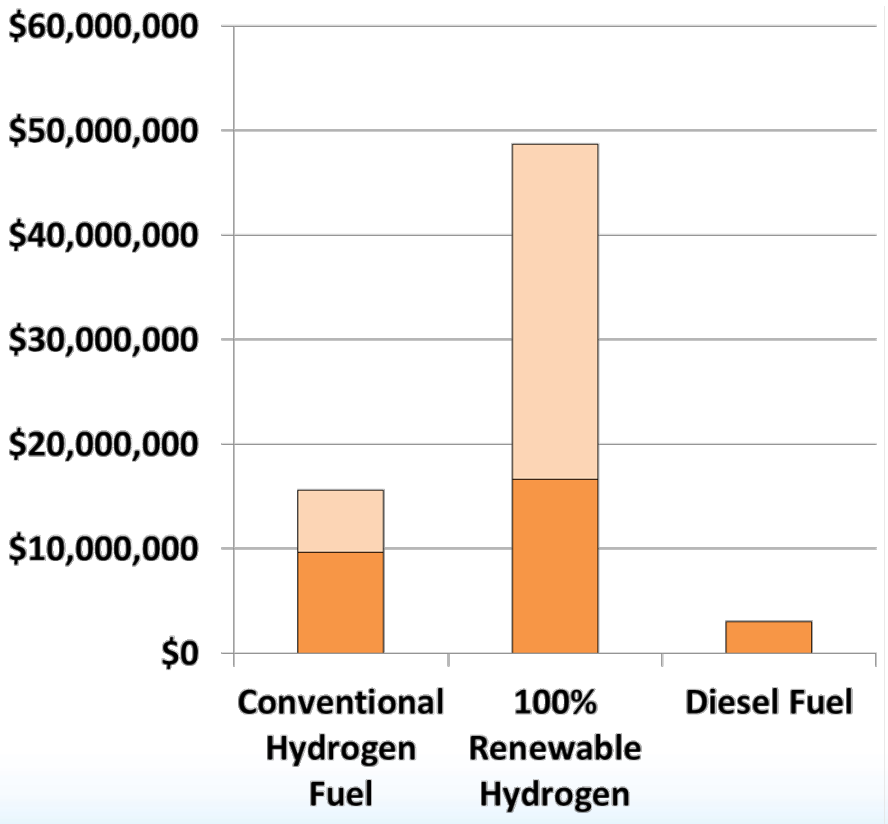
→ Electrolysis

The costs are currently higher than diesel with projected cost decreases ahead

Capital Cost

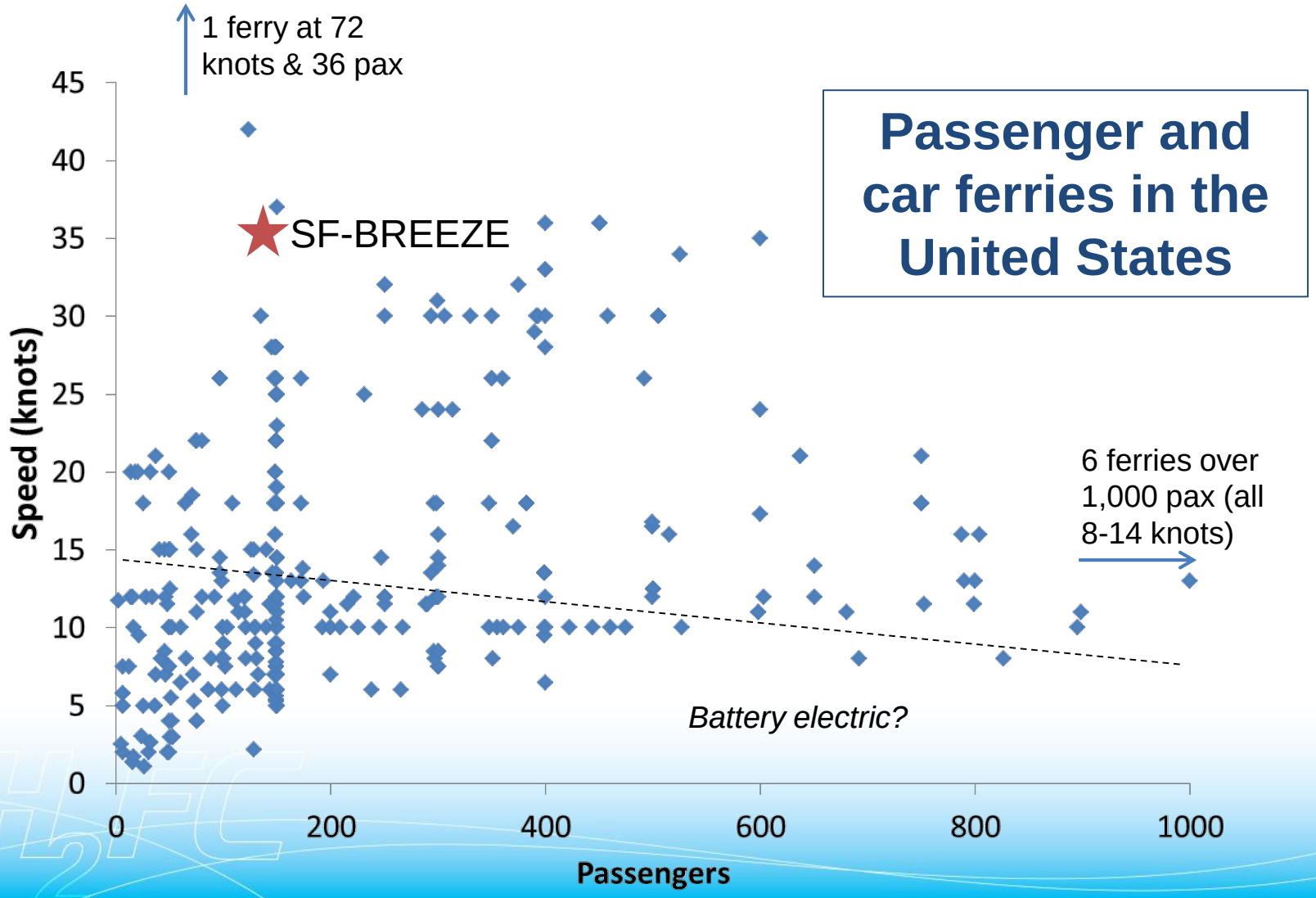


5-Year Fuel Cost



The decreased health risks and lower environmental impact saves our region **$2.6M - $11M** for each SF-BREEZE ferry built instead of a Tier 4 diesel ferry.

Optimization: What is the best type of zero emission ferry to build today?



Summary

	Ferry	Hydrogen Station
Technical	✓	✓
Regulatory	✓	✓
Economic	*Higher than conventional now, today's market acceptance to be determined*	

Next Steps

Six project phases

Phase 1: Feasibility study (complete)*

Phase 2: Optimization of the vessel (starting)*

Phase 3: Detailed design of the H_2 ferry and station

Phase 4: Build the H_2 ferry and station

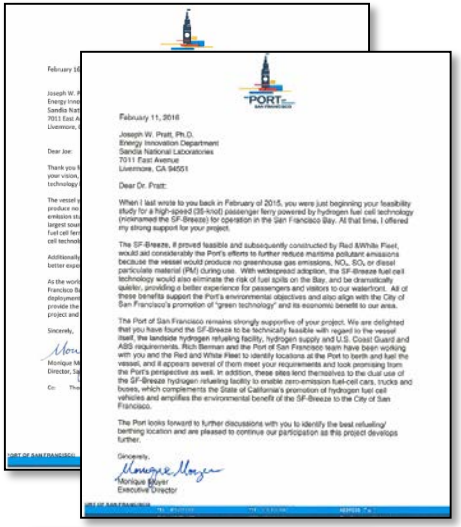
Phase 5: Operate the H_2 ferry and station

Phase 6: Extend to H_2 cars, buses and trucks

*Phases 1 and 2 funded by US DOT / Maritime Administration

Letters of support

Port of SF (2)



Bay Area Council

SF Dept. of Environment

CA Fuel Cell Partnership

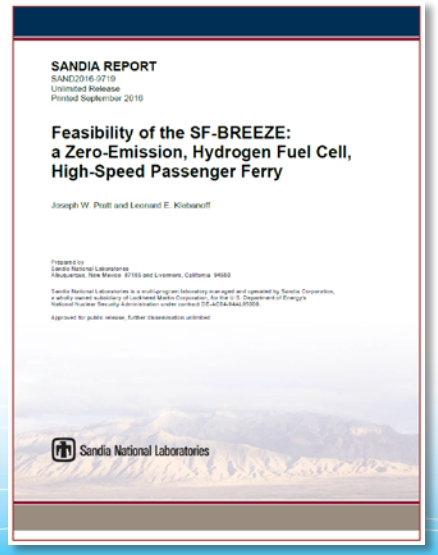
Lt. Governor Gavin Newsom

IEA's H_2 Implementing Agreement

Thank you!

SF-BREEZE Feasibility Study Final Report - Download from: **maritime.sandia.gov**

- All ferry design documents and drawings
- LH_2 fuel assessment (with comparison to LNG)
- Emissions
- Regulations
- Bunkering
- Economics


SANDIA REPORT
SAND2016-9719
Unlimited Release
Printed September 2016

Feasibility of the SF-BREEZE: a Zero-Emission, Hydrogen Fuel Cell, High-Speed Passenger Ferry

Joseph W. Pratt and Leonard E. Klebanoff

Sandia National Laboratories

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Legacy Business Registry Case Report

HEARING DATE: MARCH 15, 2017

Filing Date:	February 15, 2017
Case No.:	2017-002434LBR
Business Name:	Red and White Fleet
Business Address:	Pier 43 1/2, Fisherman's Wharf
Zoning:	C-2 (Community Business)/ 40-X Height and Bulk District
Block/Lot:	9900/043H
Applicant:	Thomas Crowley Escher, President Pier 43 1/2, Fisherman's Wharf San Francisco, CA 94133
Nominated By:	Supervisor Aaron Peskin, District 3
Staff Contact:	Desiree Smith - (415) 575-9093 desiree.smith@sfgov.org
Reviewed By:	Tim Frye – (415) 575-6822 tim.frye @sfgov.org

BUSINESS DESCRIPTION

Red and White Fleet is the city's oldest and largest operator of sightseeing cruises of San Francisco Bay. Originally founded as a cargo company in 1892 by entrepreneur, Thomas Crowley, the maritime business went on to become a global success, earning it the motto, "Anything, Anywhere, Anytime on Water." From tug, launch, and barge services to oil spill cleanups, Crowley's ever-expanding enterprise played important roles in numerous historical events. During the 1906 Earthquake and Fire, Crowley's boats ushered San Franciscans to safety across the bay; they supported war efforts during both WWI and WWII; and they provided free transportation to some 15,000 commuters following the 1989 Loma Prieta Earthquake.

Its maritime tours date to the 1915 World's Fair, the Panama Pacific International Exposition, when the business offered its first sightseeing cruise of the San Francisco Bay. During the 1939 Golden State International Exposition held on Treasure Island, it again offered sightseeing tours, this time of the newly constructed Golden Gate and Bay bridges, launching the company's signature Golden Gate Bay Cruise that is still popular today. Red and White Fleet's sightseeing tours from Fisherman's Wharf were in full swing by the 1940s. In 1973, Red and White Fleet provided ferry service to the newly debuted Alcatraz Island National Park.

Today, Red and White Fleet is owned and operated by Crowley's grandson, Tom Crowley Escher, who purchased the business from its parent corporation, Crowley Maritime Corporation, in 1997. Red and White Fleet continues to offer boat tours from Pier 43 ½ in 16 different languages. Its commitment to the community and to the environment is demonstrated through its partnership with the Inlandboatman's Union (an ILWU affiliate), its participation in nonprofit and City-sponsored employment programs, its movement to adopt the Bay Area's first biodiesel-powered ferry boats, and its work with Sandia National

Laboratories to create the first high-speed hydrogen fuel cell passenger ferry and hydrogen refueling station.

STAFF ANALYSIS

Review Criteria

1. *When was business founded?*

   1892.

2. *Does the business qualify for listing on the Legacy Business Registry? If so, how?*

   Yes, Red and White Fleet qualifies for listing on the Legacy Business Registry because it meets all of the eligibility Criteria:

   i. Red and White Fleet has operated for 125 years.

   ii. Red and White Fleet has contributed to the identity of Fisherman's Wharf and to the city's maritime history through its sight-seeing tours of San Francisco Bay and its ferry service to residents and visitors.

   iii. Red and White Fleet is committed to maintaining the physical features or traditions that define its tradition of offering maritime tours and ferry services to residents and visitors.

3. *Is the business associated with a culturally significant art/craft/cuisine/tradition?*

   The business is associated with the maritime traditions of San Francisco's Fisherman's Wharf area.

4. *Is the business or its building associated with significant events, persons, and/or architecture?*

   Pier 43 ½ is considered a "Category A Property," denoting a historic resource. It is a contributor to the National Register-listed Port of San Francisco Embarcadero Historic District.

5. *Is the property associated with the business listed on a local, state, or federal historic resource registry?*

   Yes, it is a contributor to the National Register-listed Port of San Francisco Embarcadero Historic District.

6. *Is the business mentioned in a local historic context statement?*

   No.

7. *Has the business been cited in published literature, newspapers, journals, etc.?*

   Yes. Red & White Fleet has been cited in numerous publications including but not limited to: Arcadia Publishing, 2006, San Francisco's Fisherman's Wharf, by Alessandro Bacari Jr.; Regional Oral History Office, Bancroft Library/University of California Berkeley, 1967, "Recollections of the San Francisco Waterfront: Thomas Crowley," an oral history interview conducted by Karl Kortum and Willa Klug Baum; Bancroft Oral History Office, University of California Berkeley, 1973-1975, "Crowley Maritime Corporation: San Francisco Bay Tugboats to International Transportation Fleet," San Francisco Bay Maritime History Series, oral history interview of

Thomas B. Crowley conducted by Miriam Feingold Stein; Biodiesel Magazine, 6/14/11, "Biodiesel Sets Sail," by Bryan Simms; Phys.org, 8/1/15, "Red and white fleet going green"; San Francisco Examiner, 8/15/16, "SF Port may locate hydrogen fueling station at Pier 54," by Joshua Sabatini; Phys.org, 10/6/16, "Hydrogen-powered passenger ferry in San Francisco Bay is possible, study says; Ship & Bunker, 10/11/16, "More Details Revealed on San Francisco Hydrogen Ferry, Bunkering Plans"; WorkBoat, 2/13/17, "All American to build hybrid-electric passenger ferry," by Ken Hocke.

Physical Features or Traditions that Define the Business

Location(s) associated with the business:

- Pier 43 ½

Recommended by Applicant

- Business name of "Red and White Fleet"
- Ferry services and maritime sightseeing cruises, offered in multiple languages
- Signature red & white colors of the company's vessels
- Fisherman's Wharf location
- Iconic "tripod" sign at its box office location at Pier 43 ½
- Commitment to using environmentally sustainable practices

Additional Recommended by Staff

No additional recommendations

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Historic Preservation Commission
Draft Resolution

HEARING DATE MARCH 15, 2017

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Applicant:	Thomas Crowley Escher, President Pier 43 ½, Fisherman's Wharf San Francisco, CA 94133
Nominated By:	Supervisor Aaron Peskin, District 3
Staff Contact:	Desiree Smith - (415) 575-9093 desiree.smith@sfgov.org
Reviewed By:	Tim Frye – (415) 575-6822 tim.frye @sfgov.org

ADOPTING FINDINGS RECOMMENDING TO THE SMALL BUSINESS COMMISSION APPROVAL OF THE LEGACY BUSINESS REGISTRY NOMINATION FOR RED AND WHITE FLEET, CURRENTLY LOCATED AT PIER 43 ½, FISHERMAN'S WHARF (BLOCK/LOT 9900/043H).

WHEREAS, in accordance with Administrative Code Section 2A.242, the Office of Small Business maintains a registry of Legacy Businesses in San Francisco (the "Registry") to recognize that longstanding, community-serving businesses can be valuable cultural assets of the City and to be a tool for providing educational and promotional assistance to Legacy Businesses to encourage their continued viability and success; and

WHEREAS, the subject business has operated in San Francisco for 30 or more years, with no break in San Francisco operations exceeding two years; and

WHEREAS, the subject business has contributed to San Francisco's maritime history and the identity of San Francisco's Fisherman's Wharf; and

WHEREAS, the subject business is committed to maintaining the physical features and traditions that define the business; and

WHEREAS, at a duly noticed public hearing held on March 15, 2017, the Historic Preservation Commission reviewed documents, correspondence and heard oral testimony on the Legacy Business Registry nomination.

THEREFORE BE IT RESOLVED that the **Historic Preservation Commission hereby recommends** that Red and White Fleet qualifies for the Legacy Business Registry under Administrative Code Section 2A.242(b)(2) as it has operated for 30 or more years and has continued to contribute to the community.

BE IT FURTHER RESOLVED that the **Historic Preservation Commission hereby** recommends safeguarding of the below listed physical features and traditions for Red and White Fleet:

Location (if applicable)

- *Pier 43 ½, Fisherman's Wharf*

Physical Features or Traditions that Define the Business

- *Business name of "Red and White Fleet"*
- *Ferry services and maritime sightseeing cruises, offered in multiple languages*
- *Signature red & white colors of the company's vessels*
- *Fisherman's Wharf location*
- *Iconic "tripod" sign at its box office location at Pier 43 ½*
- *Commitment to using environmentally sustainable practices*

BE IT FURTHER RESOLVED that the **Historic Preservation Commission's findings and recommendations** are made solely for the purpose of evaluating the subject business's eligibility for the Legacy Business Registry, and the Historic Preservation Commission makes no finding that the subject property or any of its features constitutes a historical resource pursuant to CEQA Guidelines Section 15064.5(a).

BE IT FURTHER RESOLVED that the **Historic Preservation Commission hereby directs** its Commission Secretary to transmit this Resolution and other pertinent materials in the case file 2017-002434LBR to the Office of Small Business.

I hereby certify that the foregoing Resolution was ADOPTED by the Historic Preservation Commission on March 15, 2017.

Jonas P. Ionin

Commission Secretary

AYES:

NOES:

ABSENT:

ADOPTED: