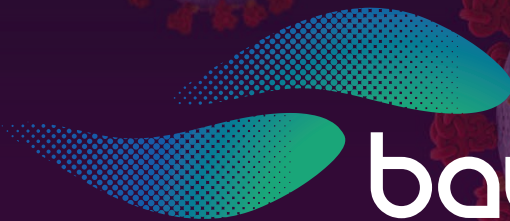


bay.org



bayecotarium

ANNUAL REPORT 2019-2020



## ACKNOWLEDGMENTS

We are grateful to our Donors, Patrons, Sponsors and Members who have continued to support our mission through one of the most difficult years in the 25 year history of the Aquarium of the Bay. Our wonderful staff, many of whom faced furloughs due to the pandemic shelter-in-place Public Health Directives, for their dedication, care and hard-work in nurturing the 24,000 animals in our collections. Our Board of Directors have remained alert to the fiscal challenges and emergency measures that we proactively put in place. We are deeply indebted to Douglas Bystry and his team at CDFI for helping us with Emergency Loans when we most needed, and to PIER 39, under the leadership of Taylor Safford, for providing us with a 22 year lease extension in conjunction with the Port Commission of San Francisco. Our gratitude to PG&E for their proactive support deferring utility payments during the shelter-in-place.

**Copyright 2020 © BayEcotarium / bay.org**

Content: Department Directors

Design/Layout: Studio Aqua







# CONTENTS

06

BOARD OF  
DIRECTORS

14

OVERVIEW

08

ADVISORS &  
AMBASSADORS

86

THE BAY INSTITUTE

20

AQUARIUM  
OF THE BAY

10

EXECUTIVE  
LEADERSHIP

90

BAY MODEL  
ALLIANCE

66

STUDIO AQUA

12

MESSAGES

92

BAY ACADEMY

76

SEA LION CENTER

112

FINANCIAL  
REPORT 2019

100

2020 DONORS  
AND MEMBERS

118

ECOCURRENT  
NEWSLETTER

## BOARD OF DIRECTORS



**BEN BLEIMAN**  
Chair



**BETHANY PATTEN**  
First Vice Chair



**ROSALIND JACKSON**  
Secretary



**STEVEN MACHTINGER**  
Treasurer



**HARRISON DUNNING**



**JJ HENLEY**



**ANGELIQUE TOMPKINS**



**EDWARD UEBER**



**DEAN MOREHOUS**



**KAY CARNEY**



**JACQUELINE MILLER**



## ADVISORS/AMBASSADORS



**DR. SYLVIA EARLE**  
National Geographic Explorer in Residence  
Founder, Mission Blue; Deep Ocean  
Exploration and Research



**JOHN GEIGER**  
Chief Executive Officer  
Royal Canadian Geographical Society



**DR. YVONNE CAGLE**  
NASA Astronaut, Johnson Space Center's Space  
and Life Sciences Directorate  
Advisor, NASA Flight Opportunities Program



**DR. CONRAD LAUTENBACHER**  
Retired Navy Vice Admiral; Former Under  
Secretary for Oceans and Atmosphere;  
Eighth Administrator, NOAA



**DR. DANIEL KAMMEN**  
Professor, Energy (UC Berkeley); Goldman School  
of Public Policy; Dept. of Nuclear Engineering  
Founding Director, Renewable and Appropriate  
Energy Laboratory



**BRIAN BAIRD**  
Assistant Secretary, Ocean & Coastal Policy,  
State of California; Former Director, Coast &  
Oceans Program, The Bay Institute



**DR. PAUL AUERBACH**  
Redlich Family Professor at Stanford University  
Adjunct Professor of Military/Emergency  
Medicine at the Uniformed  
Services University of the Health Sciences



**DR. BRUCE CAHAN**  
Founder & CEO, Urban Logic  
Stanford University



**AJAY MADHOK**  
Entrepreneur & Technical Advisor  
CEO, Inloop; Founder, Equals



**TAYLOR SAFFORD**  
President & CEO, PIER 39



**SUDHA PENNATHUR**  
Sudha Pennathur LP Collections



**M.R. RANGASWAMI**  
Founder Chairman, Corporate  
Eco Forum



**DR. BRANDEN BROUGH**  
Deputy Director, Molecular Foundry  
Lawrence Berkeley National Laboratory



**ALEX PANAGOPULOS**  
Founder & CEO  
Forward Ships



**JASON CHAN**  
Vice President of  
Asian Leaders Alliance



**GEORGE ORBELIAN**  
Buckminster Fuller Institute



**DR. SAM MOLYNEUX**  
Former Managing Director,  
Chan Zuckerberg Initiative  
Co-founder and Co-CEO,  
Poppy





Tala the Cape Porcupine from Southern Africa, preps for her public debut in the Farallon room at Aquarium of the Bay

## EXECUTIVE LEADERSHIP



**GEORGE JACOB FRCGS**  
President & CEO



**PAUL NAKAMOTO**  
Vice President  
Guest Services



**CATHY TOLENTINO**  
Director, Tourism Development &  
Event Services



**VICKI DE WITT**  
Executive Assistant



**JAZ CARIOLA**  
Director, Guest Services



**MELISSA SCHOUEST**  
Director, Animal Care



**GARY BOBKER**  
Director, The Bay Institute



**CHRIS LOW**  
Director, Life Support Systems  
& Facilities



**BRAXTON CAHILL**  
Controller



**DAYNE BUDDO, PHD**  
Director, Bay Academy



**MICHAEL SKINNER, JD**  
Director, Institutional  
Advancement



**PATRICK DORAN**  
Associate Director, IT Services

# COLLABORATIONS



## BOARD OF DIRECTORS



AQUARIUM OF THE BAY

BAY MODEL ALLIANCE

STUDIO AQUA

SEA LION CENTER

THE BAY INSTITUTE

BAY ACADEMY



ADVISORS & AMBASSADORS





## MESSAGE FROM CHAIR, BOARD OF DIRECTORS

December 14, 2020

Dear Friends:

2020 has been a year of extraordinary challenges and extraordinary achievements for bay.org. Perhaps no industry was hit harder by the COVID-19 crisis than the zoo & aquarium community. We were forced to shutter our doors to visitors - and thus forgo our main source of revenue - but also to ensure that the myriad living creatures in our care remained healthy and happy at no insignificant cost.

During this time of great crisis, we were fortunate to have a staff in place that truly rose to the challenges. Under the steady guidance of bay.org's leadership team, the organization managed to accomplish feats that were almost impossible to imagine, including maintaining the health of 25,000 animals with a skeleton staff, refinancing significant financial obligations, and raising hundreds of thousands of dollars of donations with direct pleas and creative, entrepreneurial, endeavors such as our wildly successful aquarium mask campaign!

While we're not quite out of the water yet, we are counting our blessings that the steadfast commitment of our staff and executive team shepherded us this far. We have great hopes that 2021 will bring better fortune and - dare we say - a return to normalcy for our small but mighty nonprofit!

Sincerely,

Ben Bleiman

Chair, Board of Directors, BayEcotarium  
San Francisco Entertainment Commissioner





## MESSAGE FROM PRESIDENT & CEO

December 14, 2020

Dear Members, Patrons and Friends:

2020 has been a challenging year for us at so many levels. What began as a great start with the Mayor of San Francisco declaring January 16 as Sea Lions Day- following our historic launch of the largest public STEAM program in California that saw 30 painted Sea Lion Statues around the city, quickly evaporated into hesitant despair. The March 16 Shelter-in-Place Public Health Order due to the COVID-19 pandemic in San Francisco shut our operations triggering staff lay-offs and furloughs. What was initially anticipated as a temporary disruption, stretched a staggering 27 weeks, compounding fiscal losses upwards of \$8 million, even as we struggled to maintain critical staff to enable life support systems and animal care, at the core of a 24x7 operation.

Several fast moving developments and decisive action has stood us in good stead. First, we were able to work with financial institutions to secure an emergency loan. Second, we drastically reduced our workforce to bring down administrative overheads. Third, we were able to swiftly submit our applications for Federal assistance and secure it when we needed it the most. Fourth, we launched some of the best designer face masks honoring animals from our collections to tremendous public response and demand. Fifth, we shifted gears to develop virtual content, e-Learning modules, and offer virtual tours and lectures to audiences from around the world. Sixth, we accelerated our grant submittals and extended our expertise to develop Aquarium Functional and Master Plans for national institutions in Jamaica and Norway. Seventh, we focused on internal repairs, re-vamping our research vessel, animal care and deep cleaning the aquarium in prep for the upcoming 25th Anniversary celebrations. Next, we re-structured our debt and negotiated a historic 22 year lease extension. Ninth, we released the much anticipated Bay Institute Water Report for 2018-19. Tenth, for the first time, we launched Dive Certification Programs along with underwater photography and laid the groundwork for EcoXpeditions field research cohorts with the first mission scheduled in March 2021 for Hawaii, followed by Costa Rica. Finally, we published a seminal book "The Corona Conundrum" bringing attention to the problems and exploring potential solutions, as we all look to the future of tourism, destination dynamics and economic drivers of 2021.

Your continued support has been a great source of strength for all of us.

We look forward to a wonderful and promising 2021.

Stay tuned. Stay Connected.

George Jacob FRCGS  
President & CEO, BayEcoTarium

Board of Directors, ICOM-US  
Board of Directors, Bay Area Council  
Board of Directors, Cal-Travel  
Fellow, Royal Canadian Geographical Society

Chief Advisor, UN Environment (Caribbean) Climate Museum Initiatives



## EXECUTIVE SUMMARY

What began as an up-beat year with the launch of California's largest STEAM education public endeavor with 30 painted sea lion statues serving as environmental ambassadors on the Embarcadero on January 16, 2020, quickly turned into one of the most challenging year in the history of the Aquarium of the Bay.

As San Francisco went into Shelter-in-Place following Public Health Orders owing to COVID-19 pandemic, PIER 39 closed its doors to public, as with all attractions and businesses across town and counties. As the shut-down continued, many businesses teetered on the verge of bankruptcy while others accelerated their desperate quest for donors, hand-outs, loans, grants and underwriters.

The Aquarium was left with little choice but to initiate lay-offs and furloughs, retaining core staff to work on Life Support Systems, Animal Care, Administrative and Financial services, even as it prepared for federal SBA loans and PPP support as interim relief. While we were successful in getting the first and second emergency loans, we were also successful in securing an Emergency Loan from CDFI avoiding a major crises with 24,000 live animals in our care and collections. Simultaneous efforts to lobby with various professional associations including AZA, CAZA, Cal-Travel, SF Chamber, SF Travel, and others with both City Hall and the Governor's office of GoBiz continued resulting in issuance of re-opening Guidelines in May/June. It was followed up with swift re-opening plans, videos, instructions and on-site measures at the aquarium with enhanced circulation and sanitization protocols in preparation of a short-lived re-opening go-ahead that barely lasted 24 hours. While our comprehensive plans were ahead of many other institutions, we were approached by other institutions and attractions to share our protocols and plans to help them with theirs. An important development that ensued was the prompt support provided by the Association of Zoos & Aquarium's President Dan Ashe, who issued us a letter at our request, urging Governor

Newsom to recognize Aquariums as 'Essential Service' and de-link them from museums that do not have live collections.

Internally, we moved fast on five fronts. We designed and created face masks quickly sourcing them and launching them successfully to high local demand that continues to this day. It was challenging given the deluge of face-mask demands that flooded all manufacturers around the world. Next, we shifted gears to offer virtual tours, e-Learning modules, podcasts, live-cams and tapped into all television and radio networks including NBC, CBS, ABC, KRON, KCBS, with our appeal for help. As content creation gained center stage and we entered into several collaborative Memorandums of Understanding with Sophia University in Japan, Cocos Islands and other research institutions. We authored and released a seminal book, *The Corona Conundrum*, outlining the opportunities for a generational shift in augmented learning in Aquariums, science centers and museums of the future. Following that, as the lock-down stretched to September, we tapped into our internal expertise and consulting capabilities to lend our expertise to two prestigious projects internationally. First, we were awarded the contract to generate a Functional Brief for a \$3 billion NOK National Aquarium rejuvenation plan in the Ocean City of Bergen in Norway. Second, we are awarded a Master Planning contract to develop the National Oceanarium in Jamaica. Finally, we launched *EcoXpeditions*- a series of field-based research and training activities with cohort-driven Dive Certifications and Research Field-trips to Costa Rica. These steps not only add to sources of revenue, but also strengthen the institution as a whole and tests its ability to leverage its resources toward maximum impact, in the time of unprecedented existential crises.

With a September 21, re-opening announcement there was a short-lived glimmer of hope at 25% cap that barely lasted 9 weeks, before Corona called for yet another shut-down as the City plunged into the 'Purple' color coded state of emergency threshold with hospitalization increases.

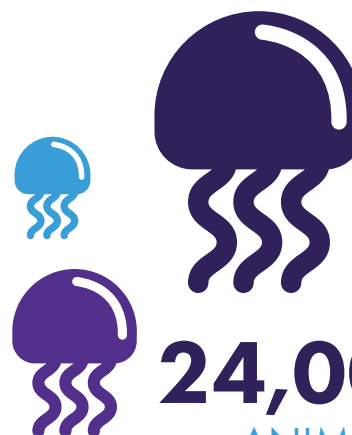
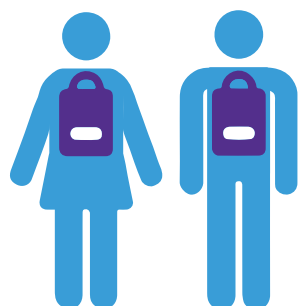


**BAYECOTARIUM IS THE LARGEST  
NON-PROFIT WATERSHED  
CONSERVATION GROUP IN THE  
SAN FRANCISCO BAY AREA  
WITH A MISSION TO ENABLE  
CONVERSATIONS ON CLIMATE  
RESILIENCE AND OCEAN  
CONSERVATION GLOBALLY,  
INSPIRING ACTIONABLE  
ENVIRONMENTAL STEWARDSHIP  
LOCALLY, TO PROTECT AND  
PRESERVE ITS ECOSYSTEMS FROM  
SIERRA TO THE SEA™ AND BEYOND.**

## 40 YEARS OF ACHIEVEMENTS

**1.6 MILLION  
CHILDREN**

FREE STEAM  
EDUCATION PROGRAM



**24,000+**

ANIMALS

**188**

SPECIES IN OUR CARE

**12.9 MILLION**

VISITORS

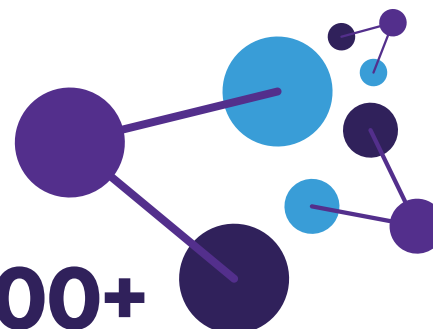


**10,000 LBS.**

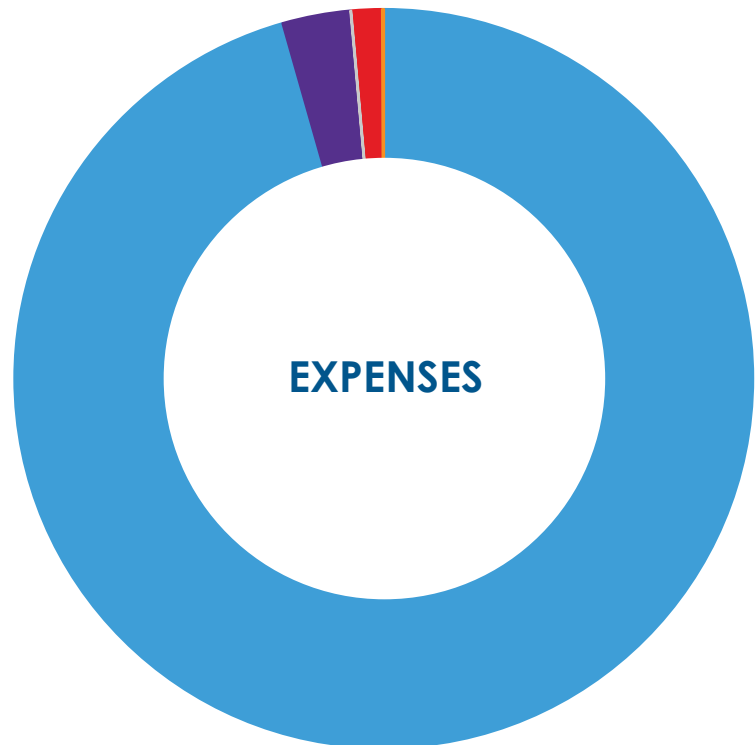
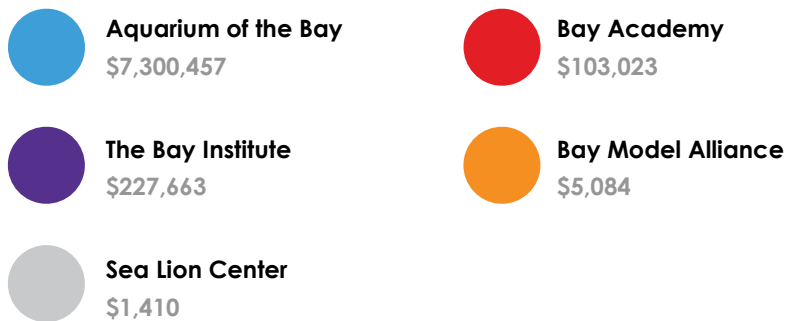
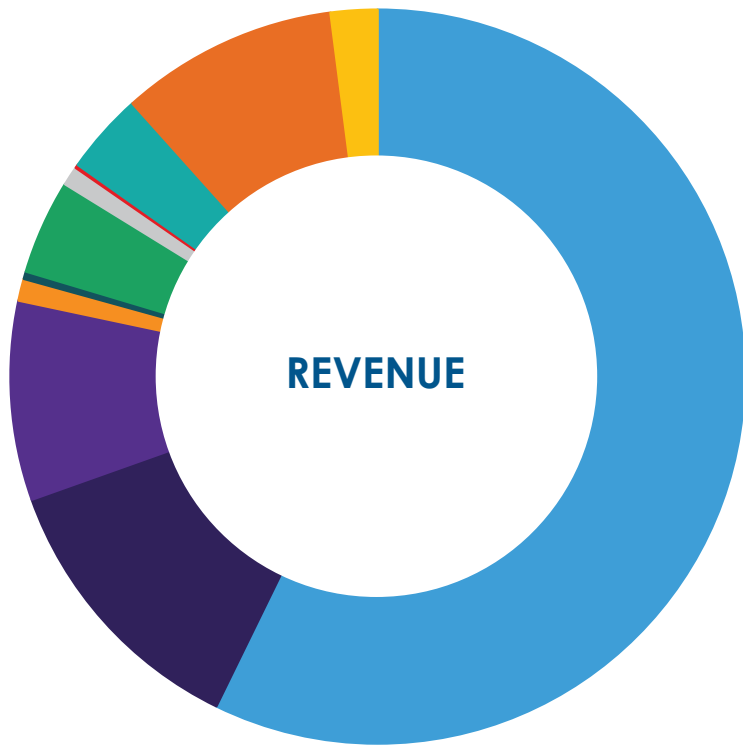
TRASH REMOVED FROM  
BAY SHORELINE

**65,000+**

NETWORK FOLLOWERS







\*Financial numbers include estimates for Q4 2020





bayecotarium  
SAN FRANCISCO



WASHINGTON D.C.



BERGEN

OSLO

PARIS



GENEVA



ST. LUCIA  
GRENADA  
TRINIDAD & TOBAGO



HAWAII



CABO PULMO



COLOMBIA

COSTA RICA

JAMAICA



CAPE TOWN

# INTERNATIONAL OUTREACH



SEOUL

TOKYO





## AQUARIUM OF THE BAY



1.

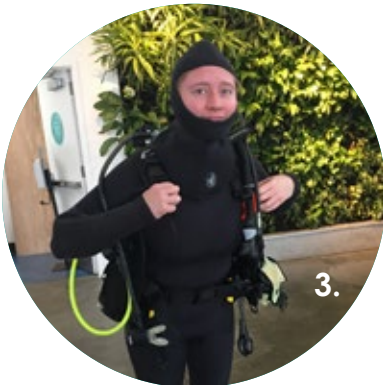
### ANIMAL CARE

In 2020, the Animal Care department continued to maintain the high standards of care for our living collection, and the exhibits showcasing them, during an unprecedented global pandemic. The department swiftly enacted contingency plans, seized opportunities to execute many projects inside the aquarium, and began to rebuild the volunteer program. The department continues to work hard to provide excellent care for our animals while assisting the organization operationally as the institution navigates the reopening process.



2.

When the shelter-in-place order was instituted in March, our department split up into non-overlapping teams to maintain operational needs in case the virus infected the staff, working hard to maintain care under trying conditions, both physically and mentally. Those plans meant the department operated at 50% strength for over 4 months. During the shutdown our team utilized the opportunities given to us to accomplish several projects, including draining and deep-cleaning several exhibits, re-configuring back of house and storage areas, and many other projects that would have been more difficult while open.



3.

Additionally, the department continued efforts to encourage and allow animals in our care to reproduce in our care. Another generation of several hundred Pacific spiny lumpsummers was raised both for

display here and to assist other institutions in showcasing this unique and engaging species. These breeding efforts enable us and other institutions to showcase and inspire conservation for marine life while lowering the impact upon the wild populations. Several additional generations of jellies have been successfully raised for display as well.

The Animal care team has successfully re-started the volunteer program this fall, onboarding 15-20 volunteers to date, allowing the department to once again utilize volunteers to assist our team in caring for the animals. The volunteers themselves have been eager to return, learning new skills and assisting our department in caring for the animals. The pandemic has resulted in a wide array of necessary changes to the program, precipitating new protocols and changes to make this a reality. In addition, every volunteer diver had to be re-trained and re-certified by our Dive Safety Officer after so many months away from the aquarium.

The living collection continues to thrive under our care. The AC team added some Red octopus to the collection once more (*Octopus rubescens*) as well as accepting juvenile leopard sharks from southern California that needed a home. Three bat rays were born here in 2020, and while not on display yet, are doing well and hope to be on display in the new year. Overall, the animal care department continues to persevere and deliver a high standard of care in a difficult year no one anticipated.

1. Andrew Wolf, Biologist II, tending to animal care needs behind the scenes
2. Aquarium tunnels get a thorough cleaning
3. Jill Berryman gearing up for the river otter enclosure



Animal care team social distancing during in the aquarium tunnels



1.

## Highlights

- The Animal Care team has persevered through unprecedented times, delivering uninterrupted care and support for our living collection through a global pandemic.
- This year the aquarium successfully raised over 200 Pacific spiny lump suckers and have begun sending them to other institutions, as well as ensuring we have another generation to display and engage with guests, as well as new generations of jellies.
- The broadnose sevengill research project continues, capturing and tagging and sampling several dozen sharks while performing husbandry operations in the bay this summer. Additionally, staff successfully recaptured several individuals tagged in 2019, an exciting milestone.
- Tala the Cape Porcupine from Southern Africa has begun engaging with the guests during an animal ambassador encounter where she greets guests and helps the animal care team convey important topics about human impact and climate change. Digital versions of her presentation, and a new informational nook are now in development, and hope to be presented to the public soon.
- Lastly, the Animal Care team has achieved several smaller animal related milestones, such as moving one of our 6 juvenile leopard sharks onto display, acquiring new smaller but interesting animals and species to display, and more.





2.

1. Volunteer divers wave from the shark tunnels I
2. Tala the Cape Porcupine from Southern Africa encounters one of the River otters for the first time.
3. Mike McGill poses with a soupfin shark, caught while sevengill fishing, before safely returning it to the bay.



3.



2900SXL

ASSOCIATION  
OF ZOOS &  
AQUARIUMS &



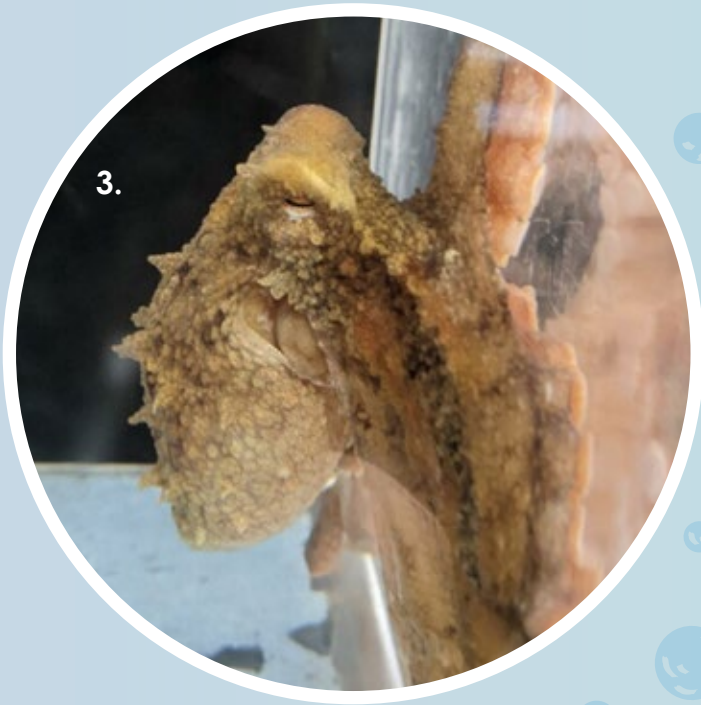
Smithsonian Affiliate



AQUARIUM OF THE BAY  
SAN FRANCISCO CA

1.





1. Animal care staff train in donning immersion suits, necessary safety training delayed by shelter-in-place that the team is catching up on.
2. Animal Care Specialist Meghan Holst feeding baby spiny lump suckers in the Aqua Lab
3. Red Octopus in the holding area in prep for main display tank
4. Pacific spiny lump suckers, moments after hatching, are collected and safely moved.

Research Vessel Mike Reigle, hauled out for hull cleaning and repainting, ahead of the summer collecting season.





Tala the Cape Porcupine from Southern Africa trains with Noel Fong, Biologist II, in the Farallon room.



## AQUARIUM OF THE BAY

### GUEST SERVICES & RETAIL



Aquarium of the Bay's Guest Services Team, headed by Director Jazmin Carola, started 2020 off strong with the Sea Lions in San Francisco celebration that brought us guests to see the sea lion statues and helped aquarium ticket sales in January, February and the beginning of March. Our Sea Lions in San Francisco merchandise helped boost retail sales in the first quarter as well.

During the twenty-seven week shut down, most of our Guest Services Staff were furloughed but our core team was able to concentrate on our Gateway Tickets Point of Sales System, strengthening our online sales via our Gateway Connect portal for tour operators and online travel agents and new timed ticketing, preparing for the aquariums reopening.

Retail created and began to sell new Aquarium of the Bay Face Masks during the early days of the pandemic, as well as revamped the EcoStore, our online web store, with new merchandise, including Sea Lions in San Francisco merchandise and new product bundles. Once PIER 39 was able to reopen, our new Retail Executive, Jaclyn Wasmann, reopened our PIER 39 gift store open during our aquarium closure. New displays with mannequins and the product ordered by our Retail Buyer, Kiran Bedi, sold well during the aquarium closure. Record online store sales were recorded during our twenty-

seven week closure, creating a growing revenue stream for the aquarium during the closure.

Once the aquarium was permitted to reopen in September, our Guest Services and Retail Staff were brought back with new safety protocols and guest procedures in place to help reopen the aquarium safely for our staff and our guests. Timed ticketing was implemented to help control the flow of guests into the aquarium to comply with San Francisco Department of Public Health capacity regulations.

Aquarium guest evaluations continue to give us high marks on our guest experience and customer service since our reopening.



1. Aquarium of the Bay's gift store on PIER 39 reopened with the help of our new Retail Executive, Jaclyn Wasmann
2. Moray eel at Aquarium of the Bay
3. Dianna Cohen of the Plastic Pollution Coalition holds up the new sea lion bottle
4. Our online web store, EcoStore, was refreshed with additional products and bundles during the pandemic.
5. Renovated displays with new sea lion products at retail store on PIER 39





Face Mask – Tentacles



**BUNDLE**

Bundle | Shirt, Magnet, Tumbler, Mug



**BUNDLE**

Bundle | T-Shirt and Bottle Opener/Coaster



**BUNDLE**

Bundle | Tumbler, Magnet Postcard, Sea Lion Shirt



Aquarium H2GO Silo Tumbler



Soundtrack from Aquarium of the Bay



Aquarium of the Bay – Etched Shark Mug



Museum Futures: Gen Alpha (Hardcover)



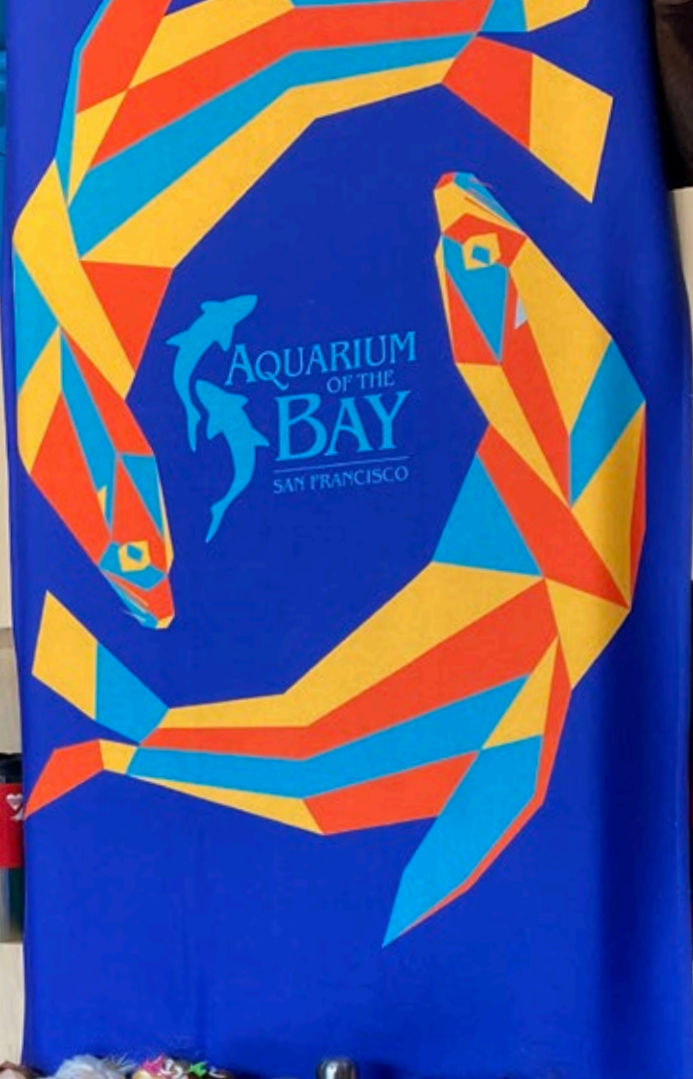
Showing 1-16 of 40 results

4.





Aquarium of the Bay gift store at PIER 39





## AQUARIUM OF THE BAY



### SALES & EVENTS

#### Highlights

2020 should have been a great year for Sales & Events if not for COVID-19.

#### Hosted workshops for Bay Area Corporate Meeting Planners:

- Private tour of the aquarium, special presentation on venue rentals and what we do as a nonprofit
- Positive feedback from meeting planners who attended.



#### Hosted Virtual Live interactive familiarization event of the Aquarium for Groupon staff (2,000 employees and their families) via Zoom

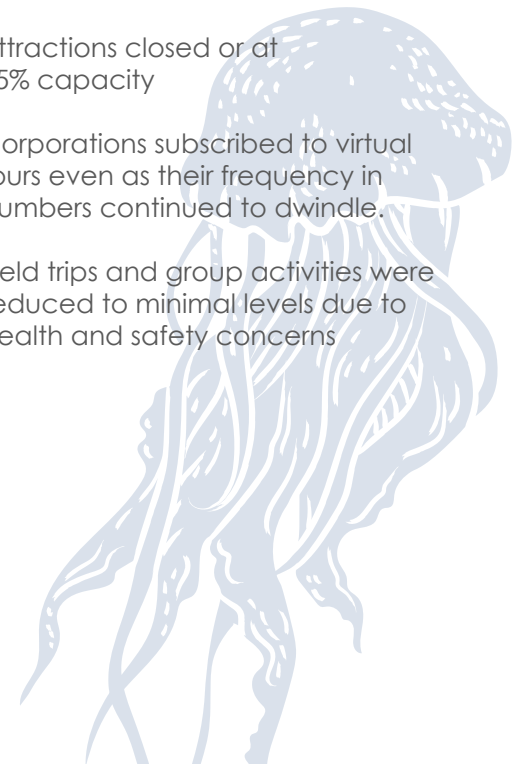
- Feedback from staff was very positive.
- Looking forward to new programs for virtual events for them to promote
- Continued to stay in communication with our clients on a weekly basis (March through current), keeping them up to date with the aquarium and our animals through social media/Facebook live programs



- Even at 25% capacity limitations, the clients continued to engage with our online ticketing packages and group sales that generated positive cash flow.

#### Challenges

- Increase of inquiries and confirmations for Private event bookings lost.
- Some Tour Operators went out of business
- Some Catering companies engaged by the aquarium went out of business
- Hotels continued extended closures with some working at 25% occupancy
- Attractions closed or at 25% capacity
- Corporations subscribed to virtual tours even as their frequency in numbers continued to dwindle.
- Field trips and group activities were reduced to minimal levels due to health and safety concerns

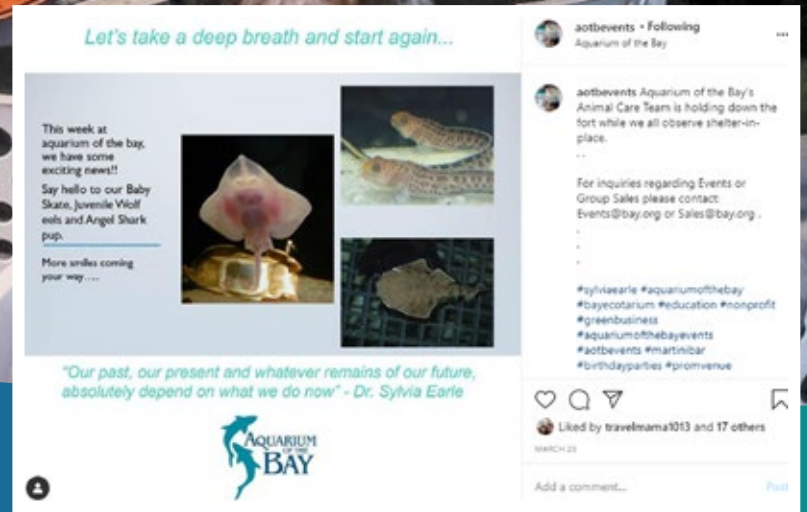




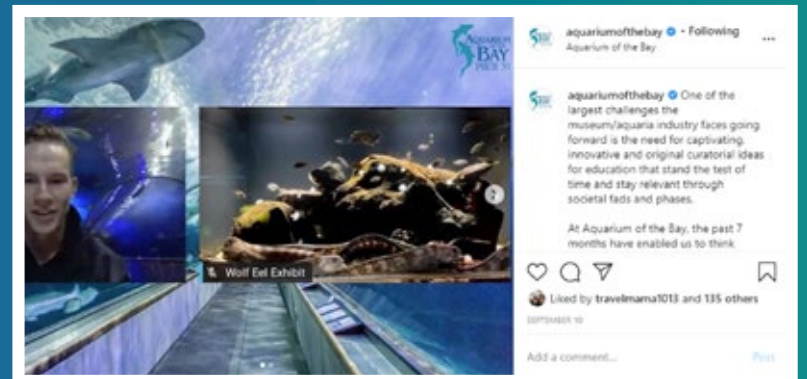


4.

1. Farallon room event space setup for SF Planner Master Class
2. Guests from SF Planner Master Class enjoy experiencing the aquarium tunnels during a tour
3. Cathy Tolentino, Director of Sales and Events, and Neha Prakash, help attend a bar during an event in the aquarium
4. George Jacob, President & CEO of bay.org, addressing the Bay Area meeting planners at the SF Planner Master Class.
5. Updates on social media about marine biodiversity to our partners & guests
6. Live interactive tour through Facebook & Instagram live



5.



6.



**SATURDAY, FEBRUARY 29**

AQUARIUM OF THE BAY PIER 39

Smithsonian Affiliate



**SANKOFA Days**  
@THE BAY





As part of Black History Month, Board Members Anquelique Tompkins and Kay Carney teamed up with aquarium events team to create Sankofa Days, a celebration of Black History Month. Families from the Bayview Hunters Point Community and communities throughout San Francisco participated in music, arts and culture.



Virtual Behind-  
the-Scenes Tour



## VIRTUAL TOURS

Due to the pandemic & shelter-in-place, we know that in person field trips are a vital challenge. That's why our wildlife experts would like to take your team on an interactive tour of Aquarium of the Bay in San Francisco. With over 20,000 animals to show you, and scientists on staff to answer your questions, plan a field trip full of curiosity and wonder!

### Aquarium of the Bay Virtual Experiences:

#### Amazing Adaptions: The Survival Strategies of Sharks and Fish

Explore the multi-colored rockfish of our nearshore kelp forest, go behind the scenes to learn about the Pacific spiny lump sucker babies we raise at the aquarium, and journey beneath the waves in our Sharks of Alcatraz tunnel.

#### From Otters to Octopuses: Enriching Animals' Lives

Like humans, some animals are so smart they need puzzles and games to stay healthy and happy. Learn about our smartest species and go behind the scenes to see how we keep them entertained!

#### How InterESTING: Jellies, Anemones, and Corals

How do jellies? Why are anemones so slimy? Is it true that some corals can live hundreds of years? Go behind the scenes to learn about the lifecycle of the jellies, corals, and anemones we raise on-site.

#### Cold-Blooded Creatures: Reptiles and Amphibians

Meet some of the coolest animals on land. We would like to introduce you to our blue-tongue skink, King snake, and Red-eared Slider turtle up close. Then, we'll explore the amphibians you might find in the forests of California. They have an important climate change message to share with you!



### Behind-the-Scenes Tour

Go beyond the “Staff Only” signs and see what it takes to run an Aquarium. Explore the life sustaining pumps and systems that keep over 700,000 gallons of water filtering and moving through our tanks every day. Find out how many freezers it takes to feed over 10,000 marine animals per week, and how we provide healthcare for our animals. Along the way, learn about the conservation efforts and shark research at the core of our institution.

### BayEcotarium Ed-Ventures

- Live Interactive Exploration Experience in the natural environment for a global audience.
- Participants explore a habitat with a Wildlife Expert and content configured based on the audience by our Education Specialists.
- Environmental biodiversity: underwater, wetlands and forests, and each immerse adventure takes the audience on a spiritual journey.

- Guests explore underwater peering through the lens of an Underwater Remotely Operated Vehicle (ROV) while it explores.
- Aerial drones and surface cameras used to capture footage and broadcast live from the field.
- Guests are able to ask questions real-time and get responses as they explore.
- The unpredictable features of the wild gives the audience a unique experience.



MAZE THERAPEUTICS





## AQUARIUM OF THE BAY



explore



engage



experience

### NEW FOR 2021: HANDS-ON MARINE CONSERVATION



With the launch of EcoXpeditions as a dedicated new branch the upcoming marine conservation field trips will bring you bring up-close and personal to the hands-on conservation work on marine life in multiple locations around the globe.

Participants will have the chance to tag sharks, conduct underwater marine assessments, learn about marine protected areas, participate in coral restoration, observe strategies for adaptation to climate change and engage in a truly once-in-a-lifetime experience based around marine conservation.

#### Costa Rica: June-July, 2021

3 Expeditions:

- Golfo de Papagayo: June 13-22
- Cocos Island: June 26-July 6
- Golfo Dulce: July 8-18

Focus: Shark research and conservation, hands-on training and experience in shark tagging and underwater shark visual monitoring

#### Hawaii: March, 2021

Focus: Marine Protected Areas, coral restoration

#### Colombia: August, 2021

Focus: Marine Protected Areas, Climate Change

#### Mexico: November, 2021

Focus: Marine Protected Areas, whale sharks, bull sharks





eco-peditions  
● COSTA RICA



# UNLOCKING THE LOCKDOWN - VIRTUALLY!



ONLINE  
**CONCERT**  
FOR A HEALTHY PLANET

DATE  
**22** APRIL  
**EARTH DAY**  
50 YEARS: 1970-2020



GRAMMY® WINNER

**RICKY KEJ**

LIVE AT **One Page Spotlight**

FEATURING  
**5 GRAMMY® WINNERS**  
AND OVER **40** MUSICIANS  
FROM **6** COUNTRIES

**BAYECOTARIUM PARTNER**



**TIMES (PST)**  
World Premiere: 7:30AM & 5:00PM

**STREAM ONLINE:**  
aquariumofthebay.org  
bayecotarium.org

**bayecotarium**

## GOODWILL PARTNERS



OTT STREAMING PARTNER



CAUSE PARTNER



BIG SCREEN PARTNER



LIVE STREAMING PARTNER



DIGITAL OOH PARTNER



StarTimes

BROADCAST PARTNER: AFRICA



ECOSARIUM PARTNER



DIGITAL PROMOTION PARTNER



OTT PARTNER



STREAMING PARTNER





**MANNY'S**  
SPACE

bayecotarium

Manny's  
Super Civic Cyber  
Conversations

**GEORGE JACOB**  
President & CEO, Aquarium of the Bay / BayEcotarium

**THE FUTURE OF MUSEUMS AND AQUARIUMS**



Aquarium of the Bay | Smithsonian Affiliate

TUNE IN FRI 4/17 AT 5 PM REGISTER @ WELCOMETOMANNYS.COM



**Earth Day**  
Plant a Tree... Sequester Carbon.

**50 YEARS**

**CLIMATE CHANGE**

**AQUARIUM OF THE BAY**

bayecotarium

Smithsonian Affiliate

SAN FRANCISCO GREEN BUSINESS

ASSOCIATION OF ZOOS & AQUARIUMS &

**FREE VIRTUAL EVENT**  
**DEC. 11<sup>TH</sup>** -   
[www.facebook.com/aquariumofthebay](http://www.facebook.com/aquariumofthebay)



**SPACE REFRACTIONS**

KIMIK Live Concert from the Aquarium of the Bay  
Donate @ [www.aquariumofthebayfund.org](http://www.aquariumofthebayfund.org)  
**10 a.m. PST // 7 p.m. CET**

Smithsonian Affiliate

**AQUARIUM OF THE BAY**

ASSOCIATION OF ZOOS & AQUARIUMS &

**VIRTUAL SHABBAT**

**MUSIC BY**  
Mikey Pauker  
Hughie Stone Fish  
Kosha Dillz

**FRIDAY, JULY 31 2020**  
6:00pm to 7:30pm

**AQUARIUM OF THE BAY & VAJUE CULTURE**

**RSVP TODAY (FREE)**



Smithsonian Affiliate

**AQUARIUM OF THE BAY**

ASSOCIATION OF ZOOS & AQUARIUMS &



# TROUT

*in the*

# CLASSROOM



1.

## EDUCATION

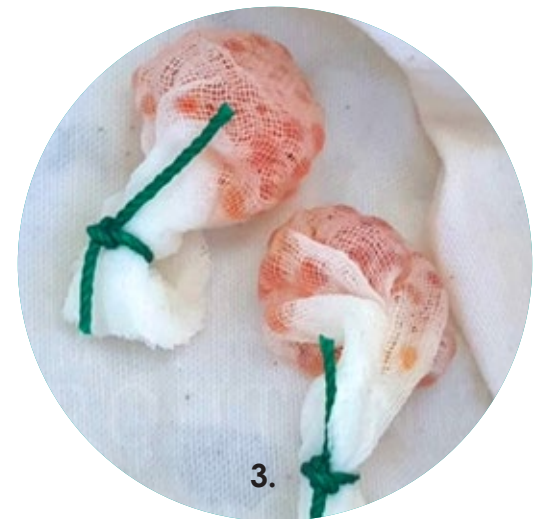
Education and outreach programs were significantly affected with the Shelter-in-Place Order from COVID-19 in March. As the activities merged with the Bay Academy under the supervision of Dr. Dayne Buddo, much of the overlap and redundancy was eliminated. As one of the public-facing arms, a difficult decision was made to furlough all staff initially, eventually leading to permanent layoffs, as the shutdown progressed from weeks into months.

The mode of delivery and engagement with our schools was forced to rapidly evolve into a virtual space, as schools closed and switched to online platforms. Throughout the shutdown, minimal staff was brought back periodically, to keep our engagement with our community that we serve. Despite these unprecedented challenges, the education activities shifted gears online and continued to make a meaningful contribution towards awareness on climate change and ocean literacy.

### Trout in the Classroom

9 schools and teachers took part in the 2020 Trout in the Classroom Program. They had the eggs delivered in late February and they hatched very soon afterwards. While the Education Team normally accompanies the classes to release their fish, this year was much different. Once we got the word that schools would be closed, the team rapidly implemented a plan to collect the fish from the classrooms, and release these into Lake Merced prior to schools shutting down. We created a video of the release, and shared this with the schools, as well as with the California Department of Fish and Wildlife that oversees this program.

1. Trout in the Classroom education program, concluded with a video of trout being released
2. Steelhead Trout
3. Trout Eggs delivered to Classrooms in February 2020
4. Trout being released into Lake Merced by Education Specialist, Lindsay Shorter





## AQUARIUM OF THE BAY



### Virtual Aquarium Visits

Within 2 weeks of the Shelter-in-Place Order, we launched our Schools' Virtual Tours in order to bridge the gap for those students who would have otherwise visited the aquarium for the field trip. With support from the Animal Care Team, the education staff engaged approximately 1,500 students across the Bay Area, and even overseas in the Caribbean between April and May, 2020. This program subsequently developed further and is now a permanent feature of the program portfolio of the department, showcasing 5 different tours for schools, corporate groups and the general public, and is offered at least twice per week, serving over 5,000 persons.



### Science Saturdays in the Discovery Zone

A brief reopening of the aquarium was announced for September 21, 2020, at 25% capacity, which lasted barely for five weeks before a complete shutdown was reordered in San Francisco. The Bay Academy team used the window of opportunity to offer a special Saturday Oceans Workshop. This provided an outdoor engagement with an Education Specialist with various scientific techniques of water sampling, plankton analysis (food webs), animal adaptations among other concepts.



### High School Internship Program

The aquarium received funding from the San Francisco Public Utilities Commission (SFPUC) to implement an internship program for select high schools. We recruited five high school students and implemented the internship program in a virtual mode over the Summer. The program covered tasks under the aquarium program such as social media content, and career-building activities such as resume writing, interview techniques and presentation skills. This internship program was done in tandem with two Interns from the Mayor's Office. The program culminated in a special virtual session where the interns presented on their climate project, attended by George Jacob who gave the students some motivational words and inspiration for their future ahead.

1. Education Specialist, Alice Pederkoff, streaming during Virtual Aquarium Visits
2. Virtual Aquarium Visits promotional graphic
3. Science Saturdays in the Discovery Zone with Alice Pederkoff, Education Specialist
4. Virtual Aquarium Visits promotional graphic





◀ Surfrider in the Carter White House legendary Rob Caughlan better known as "Birdlegs" weighs in his support for BayEcotarium

▶ Napa staff picnic



VJB CELLARS



BARREL ROOM





## AQUARIUM OF THE BAY



### Smithsonian Earth Optimism Project

The Aquarium of the Bay, a Smithsonian Affiliate received a grant from the Smithsonian Institution to be one of nine affiliates to be a part of this national competition. This involves the recruitment and mentorship of 10 high school students from the Bay Area to each produce a 2-minute video on an environmental issue in their community, linking it with the COVID-19 pandemic. In some cases, this also meant a positive impact on the environment such as improvement in air quality due to a reduction in traffic. The Education staff designs and delivers content presentations and mentors the students in producing their videos. Each video would be entered in the video contest in mid-January, 2021.



### Sea Lions 30th Anniversary

We celebrated the 30th Anniversary of the arrival of the Sea Lions on January 16, 2020. One of the major activities was an event showcasing the 30 Sea Lion statues painted by local artists and positioned across the city. A special declaration was made by Mayor London Breed of the day as Sea Lions Day at the event. The Bay Academy team supported this event with walking tours for the public to learn more about the sea lions on K-dock and presentations in the Sea Lion Center.

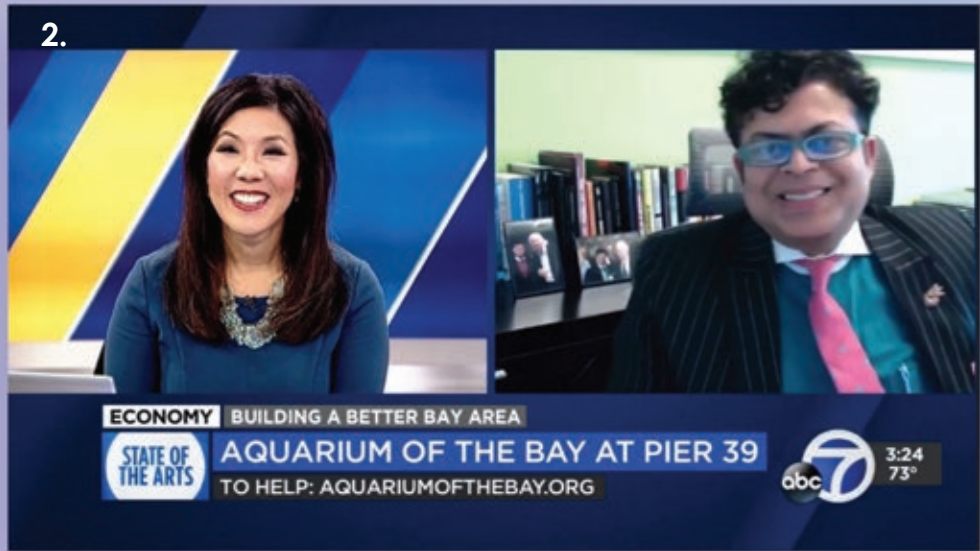


1. Education Specialist, Alice Pederkoff showing participants locomotion and adaptation of turtles
2. Wolf eel exhibit
3. Education Specialist Mayra Rivas teaching plankton sampling



Sea Lions in San Francisco statues at PIER 39 during the 30th anniversary week





1. Anchor Dan Ashley from ABC 7 visiting Aquarium of the Bay's Corporate HQ with the BayEctorium scale model
2. ABC 7 broadcast on December 7, 2020, interviewing George Jacob, President & CEO, on the impact of the aquarium's closure during the pandemic in 2020.
3. Interview with George Jacob outside Aquarium of the Bay



3.





## AQUARIUM OF THE BAY



### FACILITIES AND LIFE SUPPORT SYSTEMS

2020 has presented significant challenges for the Fac/LSS Department with major unplanned repairs and reduced staffing.

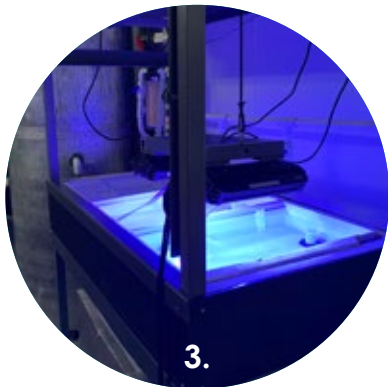
As is to be expected the original operating equipment is now coming to the end of its life cycle (25+ years) and we are seeing that in major repairs. The department staff did a wonderful job with equipment maintaining and repairs.



Working with the Finance Team and the President's office many of the emergency repairs were completed in record time. Negotiations with vendors/contractors yielded donations and cost discounts that were a tremendous help during these challenging times.

### Staffing

Staffing hours for facilities and life support systems underwent a 20% reduction across the board to help the organization meet these challenging financial times. We were still able to cover all shifts (24/7) and address daily expectations, and handle emergencies



### Highlights

- Completed a new Jellyfish culture/rearing system for future cost saving measures ensuring adequate stock for exhibits and additional animals to share with other AZA institutions.
- Completed refurbish of PIER 39 gift store. Sales are up!
- Provided detailed input towards the review of the master-lease renewal.
- Generated safety protocols aligned with COVID-19 Department of Public Health mandates.

1. Repair of main sprinkler lines
2. New chiller compressor installed
3. Jellyfish culture in Aqua Lab
4. Great white shark sculpture being transported from the Sea Lion Center to the Aquarium of the Bay



1.



## 2020 Major Repairs

- In January, the main 6" line that feeds the aquariums sprinkler system failed. The line runs from the breakwater under the aquarium and is exposed to salt air and bay water at high tide. A 40' section needed to be replaced in order fix the leak and replace other areas that were failing to avoid future issues. The cost of this repair was \$16,490.
- In January, we started to have multiple issues with elevator 1. Both elevator 2 & 3 have undergone modernization in the last few years, however elevator 1 has not had any major repairs or modernizations and still has all original equipment. The major issues we had were the main control boards failed and the elevator was wracked inside the elevator pit from lack of use when we shutdown in March. The elevator was unracked and because the boards were no longer available due to aging out, they had to be repaired. The cost for these repairs were over \$20,000. We are in the process of getting a proposal to modernize the elevator.
- In March, Compressor A on the main chiller failed. We were able to still operate the chiller at 50% capacity. Fortunately, during this time of year tank temperatures are within normal temperature range because of the cold incoming bay water and ambient outside temperatures. This gave us some time to explore options. We decided the best course

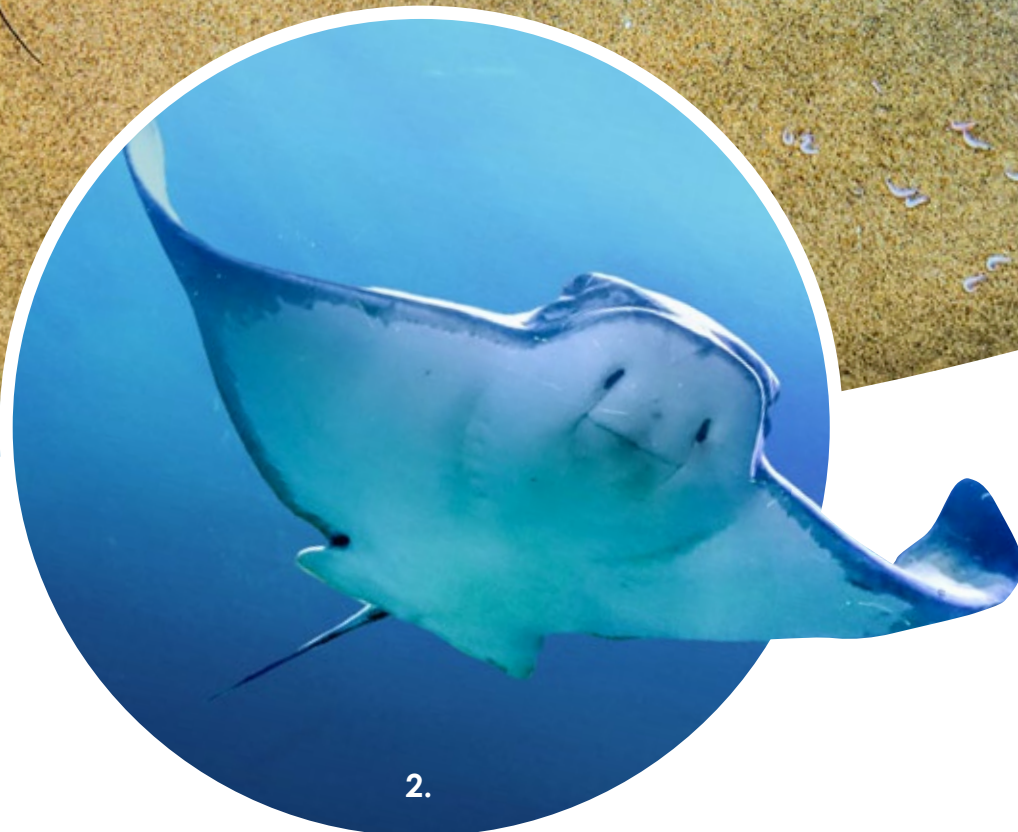
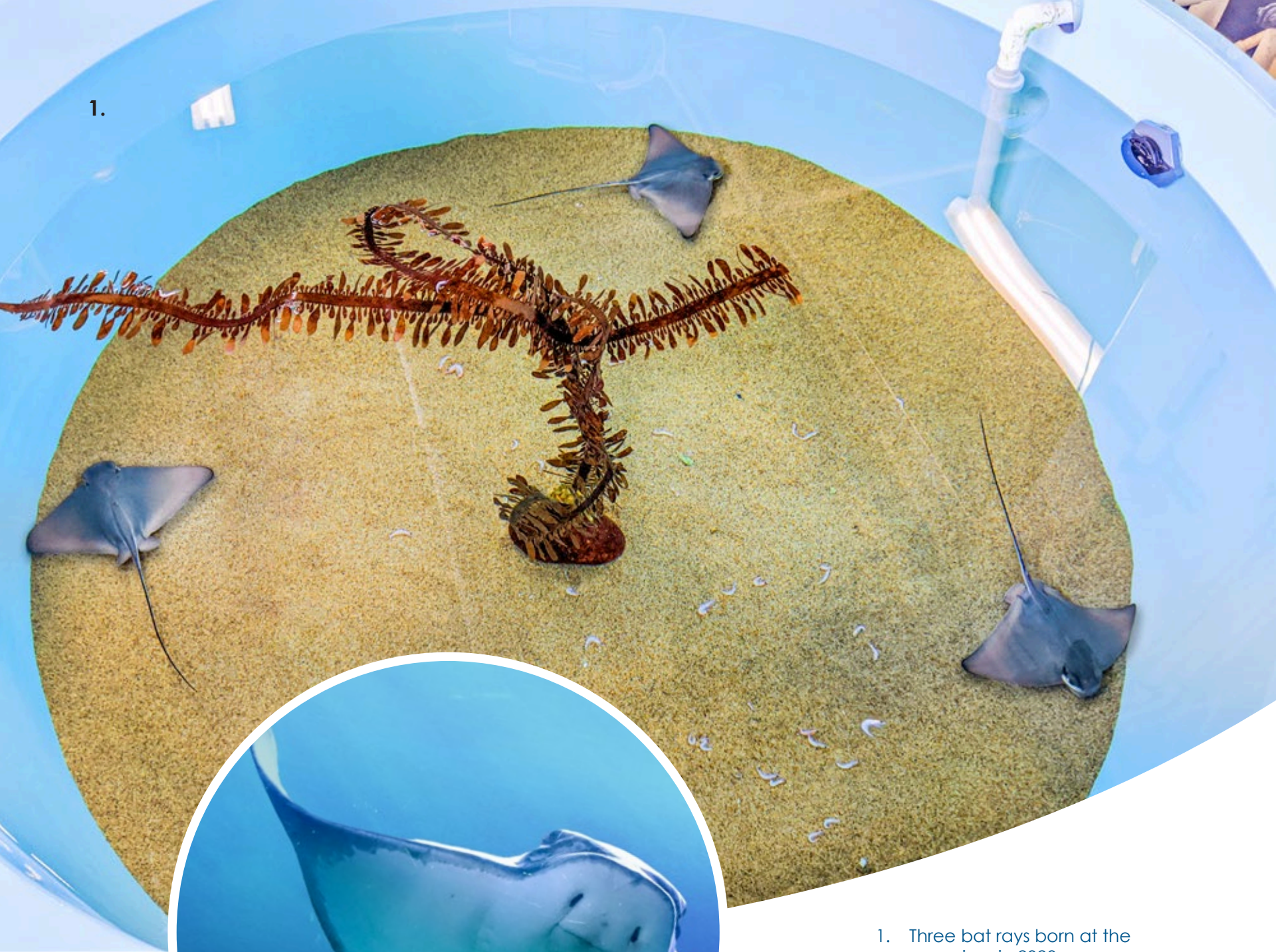
of action was to contract with Pacific Coast Trane for a service contract which included the cost of the compressor replacement over 3 years. The chiller is also a Trane chiller. The cost of the replacement over 3 years is \$52,715.

- In September, the raw water draft pump failed and needed to be replaced. Fortunately, this work was completed by staff and the cost associated with repair for replacement of the pump, motor, and 50' motor lead was \$5,084
- In September, the automatic exit door for retail 1 failed. The control board had failed. The cost of the repair was \$3,790.
- During the months of September and October we experienced (3) power outages. The transfer switch that automatically switches from commercial power to our emergency generator failed and the power had to be manually switched. This is quite dangerous and needed to be addressed immediately. The invoice for the repair has not been submitted to us yet so the cost is unknown at this time.

1. Raw water pump replacement
2. Elevator repair outside Aquarium of the Bay
3. Main sprinkler line repair
4. New chiller compressor being transported



1.



2.

1. Three bat rays born at the aquarium in 2020
2. Full grown bat ray
3. Hunter Coughlin welcoming Warren Carlyle at the aquarium Corporate HQ
4. Warren Carlyle from OctoNation during a collaboration meeting





### OCTONATION COLLABORATION MEETING

This past October we had the wonderful opportunity to welcome Warren Carlyle and the team from **OctoNation: The Largest Octopus Fan Club** for an Aquarium visit and collaboration meeting! Warren is the Founder and CEO of OctoNation and has been working with the Aquarium of the Bay for the past year in various forms, from social media livestreams to planning future OctoNation/BayEcotarium education initiatives. Special thanks to their team for promoting our face masks on OctoNation's social media platforms with hundreds of thousands of followers and supporters!

OctoNation and their mission to inspire conservation and wonder of the ocean by teaching the world about octopuses aligns beautifully with our goal to protect, restore, and inspire conservation of the San Francisco Bay and its watershed, through education. Look out for much more OctoNation & BayEcotarium involvement in the new year!





## AQUARIUM OF THE BAY



### INFORMATION TECHNOLOGY (IT)

#### Replacing Equipment

- Replaced long distance Wi-Fi connection between the Sea Lion Center and Aquarium.
- Replaced the aging 2009 server with newer model with fully upgraded software.
- Replaced Cisco Meraki router that had failed a few days after reopening. IT had replacement stock on hand so total downtime was only 2-3 hours.



been given access to Galaxy's learning portal which contains a wealth of knowledge about the galaxy ecosystem. This was generously donated to us by Galaxy after the departure of our main source of galaxy knowledge Lauren E.R. left for different opportunities.

#### Designing and Printing Test Tickets:



#### COVID-19 and How to Remain Connected:

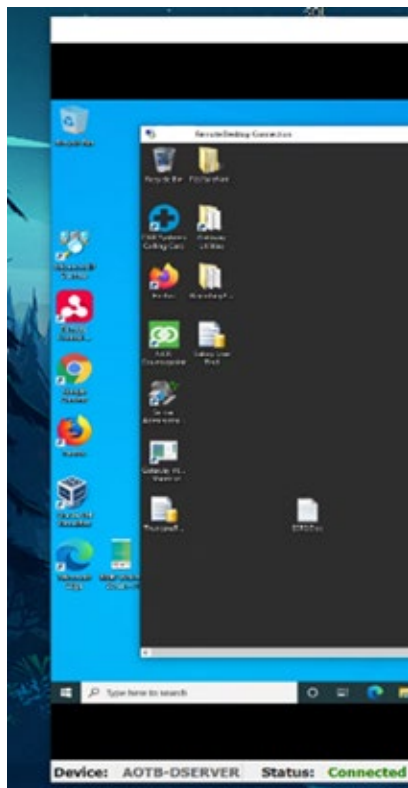
Use of Microsoft Teams, Remote support, and other video conferencing apps to remain connected even in the thick of full lockdown. Thankfully with IT heavily pushing Teams as an application to remain connected before the crisis, we were well prepared to keep our separate departments connected throughout the full lockdown even from home. With our remote support software we were able to remotely connect to any computer that had previously installed the software and thanks to our efforts 90% of company computers had the software when the March stay at

#### Galaxy

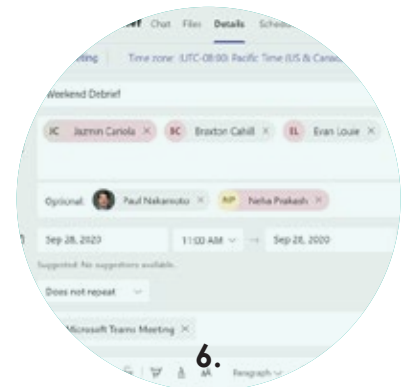
Our POS ticketing system Galaxy has been integrated under the IT team going forward in 2020. We are now responsible for all hardware and software as it relates to Galaxy, which has been further compounded by the need for timed ticketing to reopen in our COVID-19 reality. Our push to move sales contracts to Galaxy Connect API to better integrate with our new timed ticketing initiative, so that guests are able to buy and print timed tickets from 3rd party vendors like Get your Guide, Rush49, and others. Recently we have

home order took place. We in IT were lucky that we had already had these items in place before the pandemic as we heard of other institutions that were scrambling to get video conferencing setup with people who were already at home, so IT was largely able to continue operation remotely with little interference from the pandemic with only hardware support being something we could not do remotely.

### A Computer within a Computer within a Computer Compu-ception:



1. California ground squirrel at Aquarium of the Bay
2. Andrew feeding shakes to corynactius anemones
3. Sea nettle
4. Orange sky seen outside PIER 39 during California wildfires.
5. Orange sky seen from our corporate office, looking out towards PIER 39
6. Example of implementing Microsoft Teams for meeting during COVID-19.



1.

2.

3.



1. Rivers otters frolicking in the exhibit area
2. Giant Sea Bass in nearshore tunnel
3. Aquarium of the Bay tunnel
4. Diver Biologist Jill Berryman vacuuming around kelp in tunnel





## AQUARIUM OF THE BAY



### Aquarium of the Bay develops Functional Brief for new national Aquarium in Bergen, Norway

Early this year the National Aquarium project of Norway tapped into Aquarium of the Bay to provide the functional brief for the creation of a new 50,000 m<sup>2</sup> state of the art aquarium in ocean city Bergen.

An international team from Norway, France, Canada and United States led by President and CEO George Jacob worked closely with Akvariet

Bergen to create the meta narrative, functional and technical parameters, exhibit vignettes and thematic areas, that would provide a baseline directive to Architects and planners. Directors from various departments provided input into marine biodiversity, education programs, exhibit displays, life support system, tourism potential and institutional collaborations for policy and prototypes.

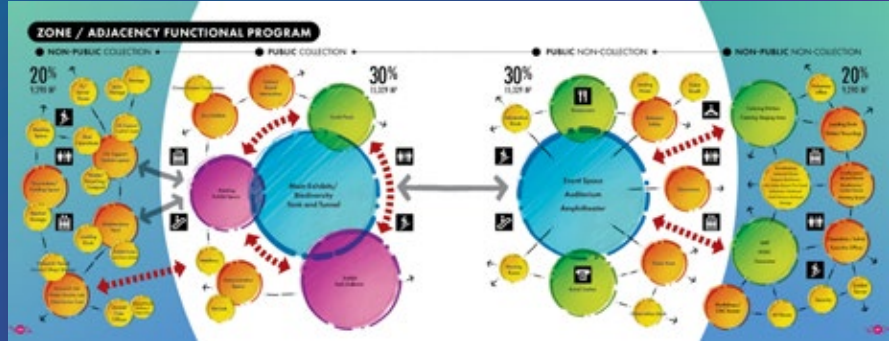
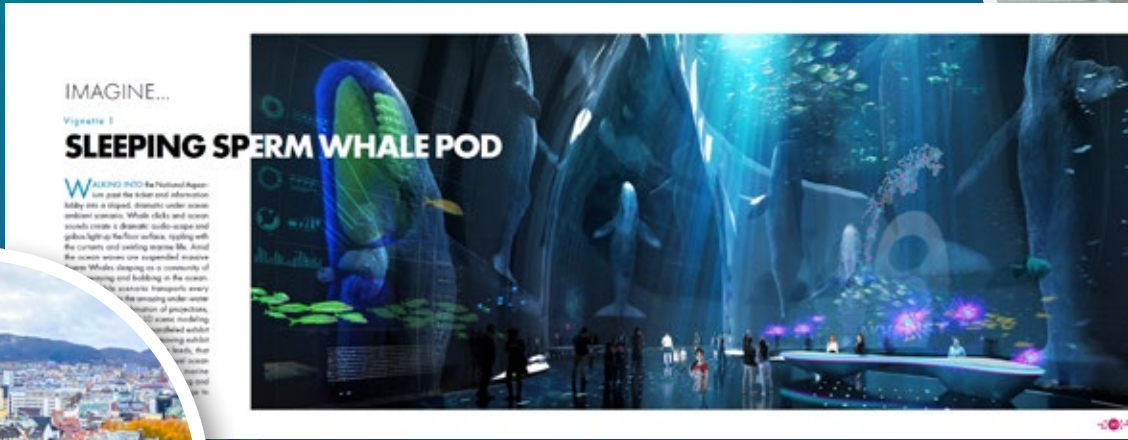


Proposal from MAD Architects for  
Dokken Rejuvenation Zone





Functional Brief developed by Aquarium of the Bay





George Jacob and Hunter Coughlin traveled to Bergen in Norway to attend sites assessment and workshops for the National Aquarium project.









## STUDIO AQUA

Studio Aqua was launched as a new division of BayEcoTarium in 2018. Since then it has steadily gained traction with its mandate to generate a unified Brand strategy, create digital archives, publications, scientific illustrations, banners, posters, social media presence as well as merchandise for our EcoStore. Significant design impetus can be observed in all internal and external communication, power point presentations, screen-messaging and input towards EcoXpeditions, visual backdrops and collaterals.

1. New gift store merchandise
2. Aquarium of the Bay custom design face masks
3. Concept Aquarium of the Bay guide robot, Octo-Bots



1.



2.



3.



1.



2.



1. Welcome back banners for aquarium reopening
2. Tala the porcupine launch banner
3. Annual report covers, 2017-2020
4. The Year in Water, 2018 & 2019 report
5. Business plan report for bank
6. Akvariet Bergen Functional Brief book
7. MUSEUM FUTURES: Corona Conundrum book
8. MUSEUM FUTURES: Gen Alpha book
9. Sea Lions in San Francisco book



3.



4.



5.



6.



7.



8.



9.



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



TALA the porcupine meets TAHOE the River Otter!  
 Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Smithsonian Affiliate  
**AQUARIUM OF THE BAY**  
 ASSOCIATION OF ZOOS & AQUARIUMS



Various mastheads from our support email campaigns during the 28+ week closure as a result of the COVID-19 pandemic



1.

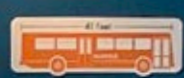
## MANTA RAY

*Manta birostris*

Giant oceanic Manta Rays are the largest rays in the world. They can reach widths of almost 30 feet and live up to 40 years!

These gentle giants live in tropical and temperate waters in coastal and open ocean environments, feeding on tiny plankton. Generally solitary animals, Manta Rays require long distances according to movement of plankton, current patterns, and water temperatures.

Sadly, human caused climate change is affecting the availability of plankton they eat making giant Manta Rays vulnerable as a species. By using renewable energy, we can help protect these beautiful animals for generations to come.



### Manta Ray Habitat

While Manta Rays are not found directly within the chilly waters of the San Francisco Bay, they are found in warmer waters surrounding the equator.



◀ Graphic designer Brian Harris, Studio Aqua, working from home during shelter-in-place





2.



3.

- 1. Manta Ray exhibit wall
- 2. Anniversary shirt
- 3. Yoga wear concepts

1. Three email signature banners
2. Web pop-up ad for our book, Museum Futures: Corona Conundrum
3. Promotional ad for Sea Lions in San Francisco
4. Tribute poster for Ernie Brooks
5. Escape the smoke social media campaign
6. Retail discount coupon
7. Face mask promotional poster

1.



2.

GEORGE JACOB

MUSEUM FUTURE'S

CORONA CONUNDRUM

Museums face new challenges ahead amid a global pandemic and changing technologies.

ORDER TODAY >>>

Limited Supply!

3.

30<sup>TH</sup> ANNIVERSARY

SEA LIONS IN SAN FRANCISCO

VIEW THEM AT

AQUARIUM OF THE BAY PIER 39

Discover stunning 6-foot Sea Lion statues painted by Bay Area artists at Aquarium of the Bay, PIER 39

Alaska AIRLINES

CH CHART HOUSE

LEARN MORE ONLINE [aquariumofthebay.org](http://aquariumofthebay.org)

TRIBUTE TO ERNIE BROOKS

SEA OF LIGHT

For over 70 years, the veteran ocean photographer Ernie Brooks (b. 1935) has dazzled the world with the magical life that thrives in the ocean depths below... winning international acclaim for underwater photography and audiovisual presentation. Recipient of a staggering array of honors and awards including: 1973 "Titan Award" Inner Space Pacific, Hawaii; 1975 "NOG" The Underwater Society of America; 1977 "National Award" Professional Photographers of America; 1979 through 1980 Hall of Fame elector Photographic Arts and Science Foundation; 1978 Camera Craftsmen of America; he has served on the National Advisory Council of the National Society of Arts and Letters; "Hall of Fame" Underwater Photographic Society; was honored by the Oceanic Community of 50 and Nikon for 5000 hours beneath the sea; "Platinum Pro Diver Award"; and "The 1996 Partner's Award," from the American Ocean Campaign, to name a few.

With over 15,000 ocean dives, his stunning works have been exhibited at the Metropolitan Museum of Art and the Smithsonian Institution, among others. He is a member of the Professional Photographers of America and is one of forty photographers in the world admitted to the prestigious Camera Craftsmen of America. A granite statue of Ernest H. Brooks II is on display at the Smithsonian Affiliated Aquarium of the Bay in San Francisco, alongside 13 Ocean Pioneers' hand blown by Borealis sculpture. Victor Borge once expressed our deep gratitude to Ernie: whose lifetime of dedication has illuminated the world of oceans forever.

“Photography affords us the tools to sculpt with light, to paint with textures and shapes and to write volumes into a single image – creating indelible, lasting impressions of where we have been, who we really are and where our future may take us...”

– Ernie Brooks

AQUARIUM OF THE BAY PIER 39

Smithsonian Affiliated

4.

UNIQUE FACE MASKS

6 UNIQUE DESIGNS INSPIRED BY LOCAL ANIMALS

AVAILABLE NOW

AQUARIUM OF THE BAY PIER 39

#SeaLionsLove

5.

ESCAPE THE SMOKE

ENJOY AQUARIUM OF THE BAY

TICKETS AVAILABLE ONLINE

Smithsonian Affiliated

6.

SAVE 15%\* ON RETAIL STORE MERCHANDISE

LOCATED AT PIER 39 | 415.623.5200 | [AQUARIUMOFTHEBAY.ORG](http://AQUARIUMOFTHEBAY.ORG)

\* Coupon must be presented at time of purchase. Not valid with any other offer. 15% merchandise discount at our retail stores only. Expires 3/31/21. Code: 144

7.



## SEA LION CENTER



Overlooking K-Dock in the marina adjacent to PIER 39, the Sea Lion Center interprets the colony of wild California sea lions now permanently established in this unusual urban location. The Center provides free educational programming on the natural history of California sea lions and the environmental threats they currently face.

1. Sea Lion Center staff giving a presentation outside near K-Dock
2. Child viewing exhibits at the Sea Lion Center
3. Free presentation at the Sea Lion Center
4. Sea lions from PIER 39
5. Visitors at PIER 39 watching sea lion at K-Dock



4.







## SEA LION CENTER

### Sea Lions in San Francisco

With Pinnipeds on the PIER 39 marking their presence for the 30th year, the dedicated team of professionals at the Sea Lion Center and the Aquarium of the Bay got together to conceive the largest public STEAM initiative in the State of California. The idea grew from a series of exhibit panels to a full-fledged public program that would invite 30 local Bay Area artists to leverage their talent towards environmental messaging with Sea Lions as ambassadorial mascots.

A public competition was announced inviting local artists to submit their design sketches in early 2019 that generated an overwhelming response of entries. A jury drawn from Aquarium of the Bay, the Golden Gates Parks Conservancy, SF Environment, PIER 39 and the Sea Lion Center, selected 30 winning entries.

Within months, six foot tall Sea Lion statues the size of an adult male sea lion, cast in fiber-glass, designed to meet out-door installation requirements, started arriving in a Sausalito warehouse by the Bay Model where artists and naturalists met to render their sketches and concepts to life. As the process of painting unfolded, Gray Line Northern California stepped forward to donate their time and resources to enable clear-coating of the finished works of art and science.

1. Sea lion statues ready to ship to San Francisco
2. Production of sea lion statues
3. Artist Amy Chin painting "Plight of the Sea Lions"
4. Artist Giorgio Landa painting "Maribel"
5. Artist Yi Lin Pei painting "Scavenger Hunt"



*Alaska*  
AIRLINES

CH  
CHART  
HOUSE











Painted sea lion statues start arriving at Aquarium of the Bay to celebrate the sea lion 30th anniversary at PIER 39



## SEA LION CENTER

### Mayor London Breed Proclaims January 16 as “SEA LIONS DAY” in San Francisco!

After recalling her childhood days of watching the frolicking sea lions and losing sense of time, enjoying their riveting presence, their bark and behavioral antics, Mayor London Breed releases a Proclamation marking January 16 as SEA LIONS DAY in San Francisco. The announcement was given during the sea lion 30th anniversary celebration held at the Chart House restaurant's Sea Lion Room, overlooking K-Dock at PIER 39. Taylor Safford, CEO of PIER 39, welcomed guests who had braved a downpour during the January 16, 2020 event.

Following the Prieta Loma earthquake, California sea lions started arriving at PIER 39's K-Dock mysteriously and soon made it their new home. Association of Zoos and Aquariums (AZA) accredited

Aquarium of the Bay (then known as Underwater World) built the floating decks that became the permanent home for the sea lions. The attraction drew thousands of tourists and visitors each year. The affiliated Sea Lion Center naturalists offer educational programs both on the K-Docks and at the learning center with interactive exhibits.

1. Local artists that painted sea lion statues meet during the sea lion 30th anniversary celebration
2. Guests celebrating the sea lion 30th anniversary launch event at Chart House on PIER 39
3. Signed Sea Lions Day Proclamation from Mayor London Breed
4. From left, Sheila Chandor (Marina Harbormaster of PIER 39), George Jacob (President & CEO of BayEcotarium), Mayor London Breed, and Taylor Safford (President & CEO of PIER 39)



2.



3.



4.





# SEA LIONS

in San Francisco

30 YEARS





◀ Sea lion statue poster

▼ Sea Lions in San Francisco team



## THE BAY INSTITUTE



The Bay Institute (TBI) is the policy, research and advocacy arm of bay.org. TBI's scientists and policy experts work to protect and restore the Bay estuary's endangered fish and wildlife; secure the flows, physical habitat, water quality and other conditions necessary to support a healthy estuarine ecosystem; and promote sustainable water management policies and projects.



### Active Program Areas During COVID-19 Crisis

- San Joaquin River restoration
- Endangered species protection
- Agricultural water pollution



1. California Brown Pelican (endangered)
2. San Francisco garter snake (endangered)
3. Mission blue butterfly (endangered)
4. Delta Smelt (endangered)
5. San Francisco Bay Delta Estuary
6. San Francisco Bay, Satellite View

### San Joaquin River Restoration

- 2006 agreement negotiated by TBI and its partners to restore flows and fisheries to dewatered upper river, which once supported state's largest Chinook salmon run
- TBI serves as technical advisor to federal Restoration Program overseeing implementation of river restoration agreement
- Helped develop schedules for releasing flows from Friant Dam to optimize habitat extent and temperature benefits for salmon
- Worked with Restoration Program and state regulators on ways to identify and prevent illegal diversions and other water losses
- Analyzed and commented on 16 local groundwater management plans to ensure that pumping does not harm river restoration
- Year round flows, salmon reintroduction begin in 2016
- First naturally returning adult spawners in seven decades in 2019
- 57 returning adults in 2020

## Endangered Species Protection

- Delta smelt: important forage fish and ecosystem health indicator; once most common, now rarest fish species
- TBI serves as technical advisor to federal-state-water user collaborative science effort to improve conditions for smelt and other species
- In 2020, helped develop conceptual model and list of 40 candidate actions to protect smelt
- Now initiating similar process to identify and implement candidate actions to restore healthy Central Valley salmon populations
- The “freshwater plume” that flows from the Bay to nearshore ocean waters has an important, but little studied, effect on highly productive coastal fish, seabird and marine mammal populations-
- In 2020, TBI began an intensive analysis of hydrologic, water quality and biological data sets to better understand and document the freshwater plume's role in maintaining the coastal ecosystem

## Agricultural Water Quality

- San Joaquin Valley is most impaired part of Bay's watershed due to combination of polluted agricultural runoff, excessive water diversions and groundwater pumping
- Irrigation of semi-desert soils leaches salts and toxic trace elements into shallow groundwater and surface waters and over long term threatens agricultural productivity
- In particular, selenium bioaccumulates in environment and causes fish and wildlife birth defects and mortality
- 1996 TBI-negotiated agreement reduced selenium discharges to San Joaquin River by 90% over time; no more agricultural discharge as of 1.01.2020, but stormwater runoff continues
- In 2020, TBI won agreement from dischargers to voluntarily manage stormwater to meet more protective 2 ppb selenium target, instead of current, inadequate 5 ppb standard
- TBI also worked with state regulators and dischargers to identify emerging water quality issues and improve performance monitoring and evaluation to prevent stormwater impacts on fish and wildlife





## THE BAY INSTITUTE



### New Publication: The Year in Water, 2018-2019

In order to understand both the health of the great San Francisco Bay estuary and the sustainability of California's water supplies it is essential to know a few key facts:

- How much water falls each year in the form of rain and snow throughout the Central Valley, and when;
- How much is captured by the state's massive water supply infrastructure system, and when; and,
- How much actually makes it all the way down the rivers and streams of the Sacramento and San Joaquin River basins to the Delta, and ultimately to San Francisco Bay, and when.



Knowing how much water actually flowed down rivers and through the estuary – as opposed to total precipitation – is especially important, because the viability of fish and wildlife populations is closely related to the amount of actual water movement that they experience. The large-scale storage, diversion, and transfer of water throughout the Bay's watershed (and to areas outside of it) radically alters the amount and timing of natural runoff, with devastating results to fish, wildlife, and their habitats throughout the Bay estuary and the river systems that feed it.



It's easy to find out how much total precipitation there was – whether it's a wet or dry year. But information regarding how total precipitation was shaped into the actual hydrograph – the magnitude and spatial-temporal extent of how freshwater runoff was altered – is harder to come by.

Visit us online for the latest publications from The Bay Institute.

[www.bayecotarium.org/publications](http://www.bayecotarium.org/publications)

1. Augmented summer flows and a change in the timing and pattern of spring flows impact riparian vegetation along the Sacramento River.

*Photo by Greg Reis*

2. Sack Diversion Dam

*Photo by Greg Reis*

3. Thanks to wet year flows exceeding minimum restoration flows and improving fish passage conditions at obstacles on the San Joaquin River, over 300 Spring-run Chinook Salmon that hatched and reared in the river returned in 2019 to spawn below Friant Dam.

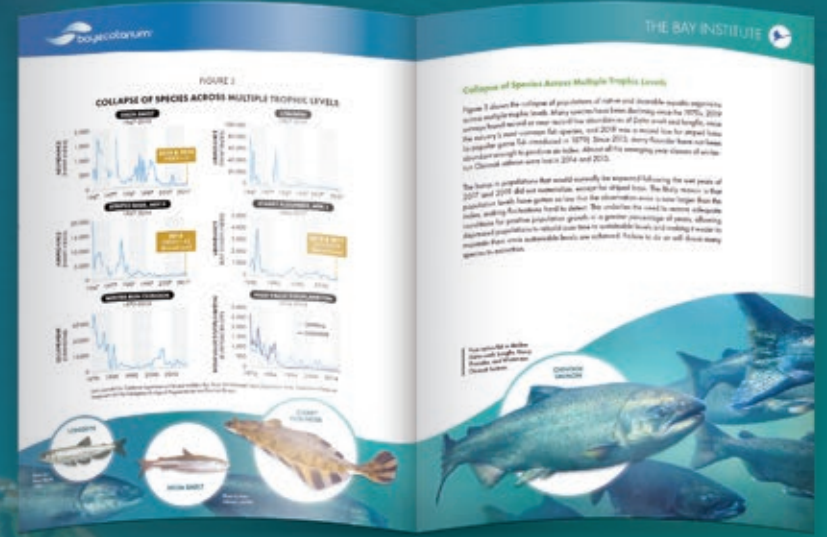
*Photo by San Joaquin River Restoration Program*

4. The Golden Gate Bridge in San Francisco

5. The Year in Water, 2018-2019 publication by The Bay Institute



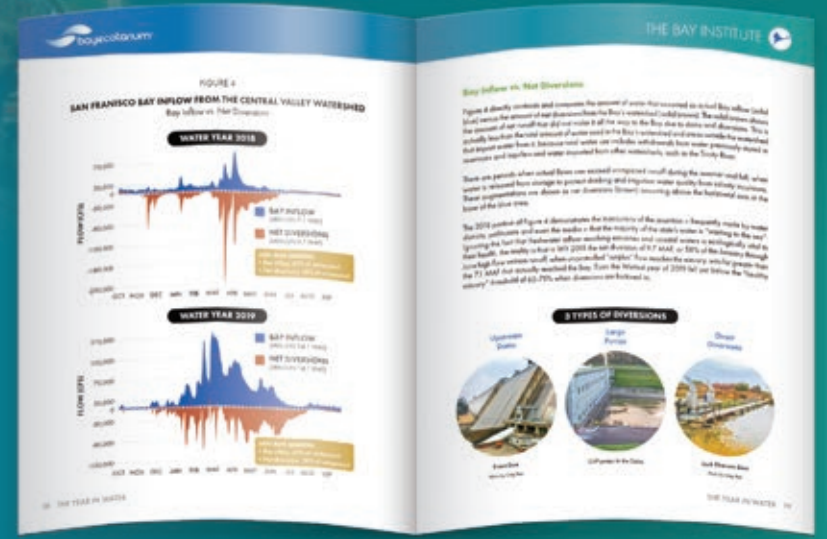




**Collapse of Species Across Multiple Trophic Levels**

Figure 2 shows the collapse of populations of salmon and steelhead smolts originating in the Central Valley for steelhead. Many watersheds have been declining since the 1970s. 2019 was the worst year for steelhead smolts since 1970, and 2018 was a record low for steelhead smolts since 1970. Since 2013, many Northern Basin watersheds have declined enough to produce no fish. Almost all of the remaining steelhead smolts in the Central Valley were from 2014 and 2015.

The decline in populations that would normally be expected following the wet years of 2017 and 2018 did not materialize, except for silver steelhead. The Bay Area steelhead population has been growing as has the steelhead smolt-to-sea survival rate. The Bay Area steelhead population has been growing as has the steelhead smolt-to-sea survival rate. The Bay Area steelhead population has been growing as has the steelhead smolt-to-sea survival rate.

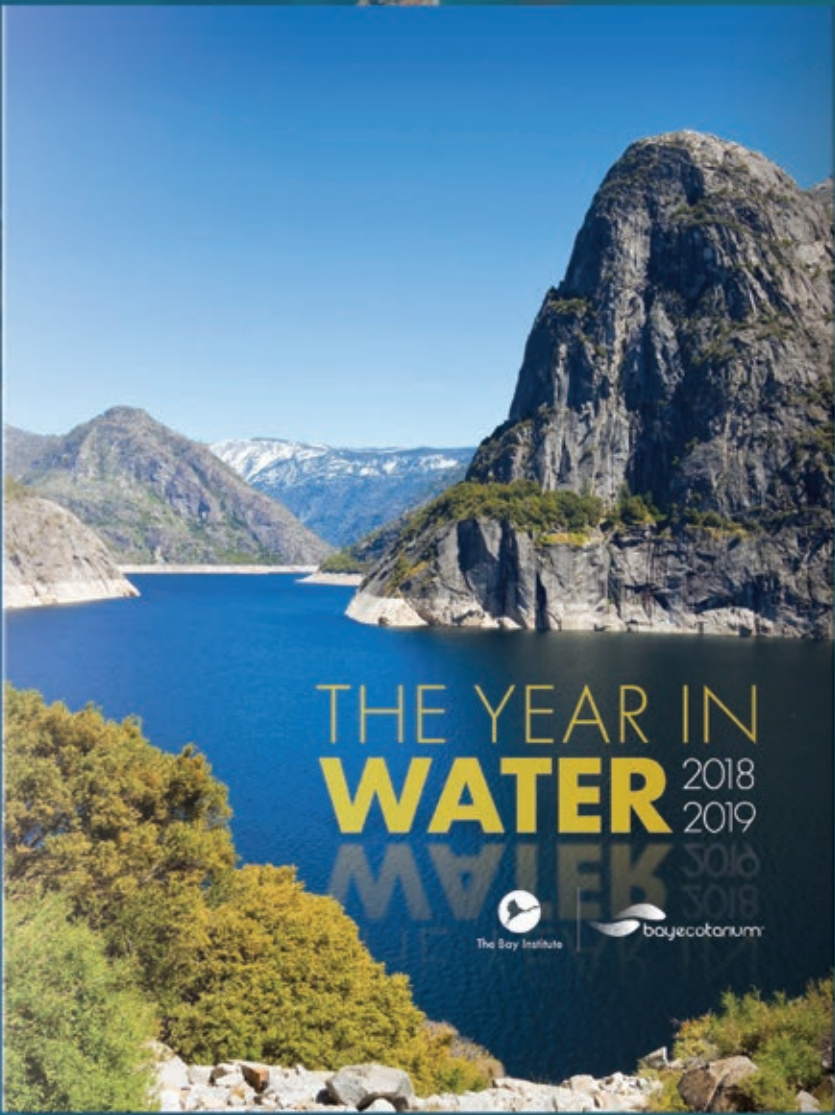


**Bay Inflow vs. Net Diversions**

Figure 4 identifies and compares the amount of water that is diverted to the Bay versus the amount of water that is diverted from the Bay to the Central Valley. The central valley shows the amount of water that is diverted from the Bay to the Central Valley. This is a critical factor for the Bay Area because it is the primary source of water for the Bay Area. The central valley shows the amount of water that is diverted from the Bay to the Central Valley. This is a critical factor for the Bay Area because it is the primary source of water for the Bay Area.

There are periods when central valley net diversions are high during the summer and fall, when water is removed from storage to prevent flooding and improve water quality from utility reservoirs. These diversions are shown as red bars below the horizontal axis at the bottom of the bar chart.

The 2019 central valley net diversions are the highest in the history of the data system. This is largely due to the fact that the central valley net diversions are the highest in the history of the data system. This is largely due to the fact that the central valley net diversions are the highest in the history of the data system.





## BAY MODEL ALLIANCE

The Bay Model and the Bay Model Visitor Center form a research and education facility built by the U.S. Army Corps of Engineers. Inside is one of the most fascinating scientific tools you'll ever see: a working hydraulic model of San Francisco Bay and the Sacramento-San Joaquin River Delta systems that simulates tides, currents, and sediment movement the Bay Model is used by scientists and engineers.

What makes the model special is that its pipes and hydraulics make it a real simulation of the water environment of San Francisco Bay and the Delta. The analog model is used to simulate the effects of everything from oil spills to upstream dams, and from water diversions to floods caused by global warming. The Bay Model Visitor Center provides a variety of public events and educational programs each month.



The location provides for a stunning venue for of special events and presentations. Tours are available for groups with advanced reservations, and can be tailored to the technical sophistication of the group. The Corps of Engineers also makes the Visitor Center available to scientific and educational groups for meetings and seminars. As part of the alliance, bay.org assists in retail and merchandise.



1-6. Photos at the Bay Model Visitor Center



Land and Water

3.

S. S. MISSION SANTA  
BUILT FOR  
U. S. MARITIME COMMISSION  
HULL NO. 1275



4.

5.



6.



## BAY ACADEMY



On March 16, Dr. Dayne Buddo (the Academy's first Director) was appointed and also given the responsibility of the education programs at the aquarium. Unfortunately, this was also the day that the Shelter-in-Place was announced to be effective the following day. Regardless, this challenge was met with optimism in this new reality that we were facing as an organization.

### E-Learning Modules

The Academy developed and launched its first two e-Learning modules – Bioacoustics and Environmental Justice. These are built on an ArcGIS Platform and covers the salient concepts of each topics, demonstrated using case studies from the Bay Area and globally.

The Bioacoustics module brings into perspective the various habitats in the Bay Area and associated wildlife, sonar communication among marine creatures, the types of human-generated ocean noise and how these interrelate and result in negative impacts to ocean-dwelling animals. The module on Environmental Justice brings into focus the Bayview Hunters Point neighborhood, the environmental issues and associated negative impact on the lives of the residents. It also draws on similar case studies across the nation, including a Call to Action.

### Partnerships with International Organizations

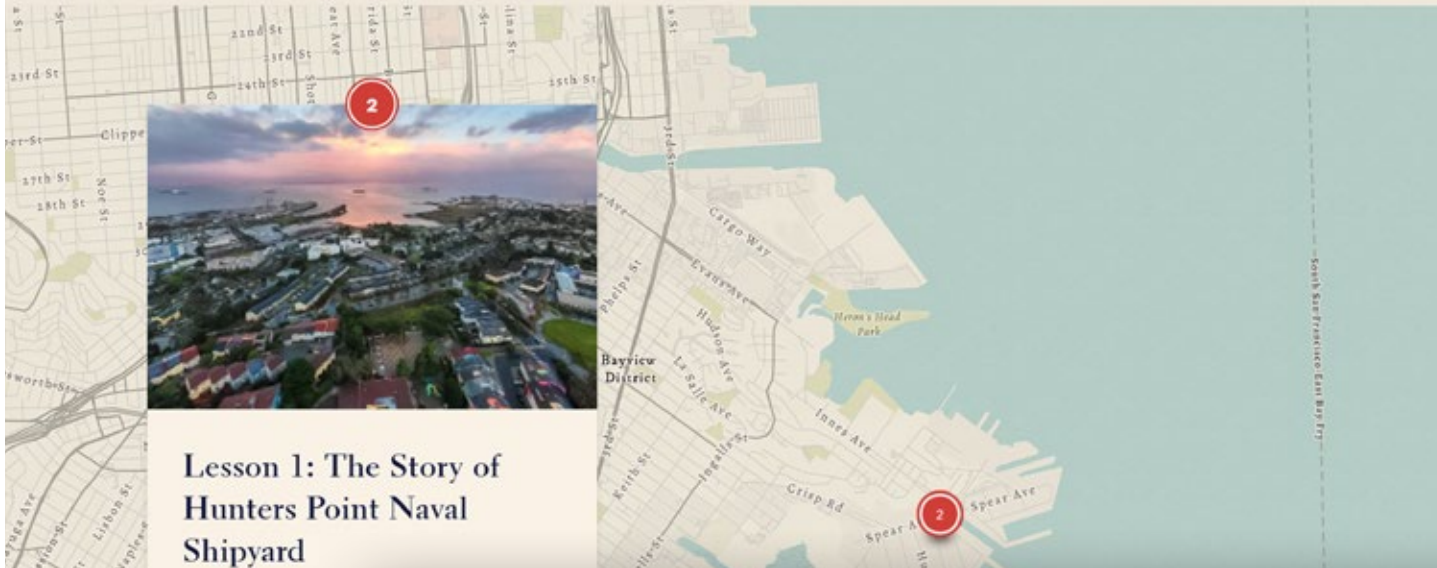
The Bay Academy sought to establish key partnerships to develop and advance a robust program on Climate and Oceans. The partnerships are centered on providing mutual opportunities for research, teaching, staff/student exchange, joint funding initiatives and information sharing. Through this effort, the BayEcotarium signed 5-Year Memorandum of Understanding instruments with:

- Sophia University, Japan
- Pontificia Universidad Javeriana, Colombia
- Misión Tiburón (NGO), Costa Rica



1. George Jacob receiving ROV from SoFAR Ocean Technologies, present by their Technical Lead, Zack Johnson
2. Dr. Dayne Buddo doing fish survey in Cabo Pulmo National Park, Mexico
3. Partnership with Sophia University, Japan





## Lesson 1: The Story of Hunters Point Naval Shipyard

Activists in the Bayview neighborhood are concerned that the shipyard is a source of environmental injustice. In this lesson, students will look at articles to construct a timeline of what happened at Hunters Point.

**Learning Goals:**  
To create a timeline and evaluate multimedia information presented in various formats and media.



## 4 Lesson 3: SF Bay Marine Animal Communication and Human Noise

In lesson 3, students will engage with fish sound productions and whale vocalization. They will learn how animals make and use sound for survival.

The students will listen to animal communication and learn the negative effects of noise pollution from shipping, offshore drilling, and outboard boat motors.

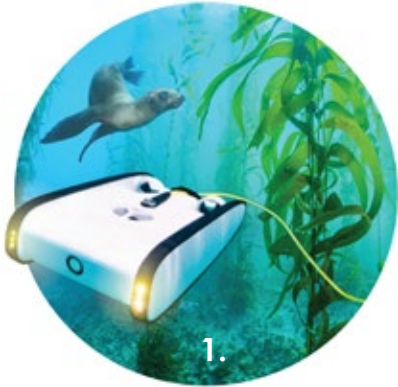


▲ Snapshot of Environmental Justice e-Learning Module

▶ Snapshot of Bioacoustics e-Learning Module



## BAY ACADEMY



### BayEcotarium Ed-Ventures

With the educational system switching to a virtual platform, the Bay Academy developed a product where students as well as the general public, can embark on a virtual field trip to dive the waters of Northern California. This is accomplished with the use of an underwater remotely operated vehicle (ROV), which was acquired through a donation from SoFAR Ocean Technologies. The ROV is deployed in the field, with an underwater naturalist narrating the dive based on what is seen through the lens of the ROV. This footage and narration are shared virtually real-time with the audience, allowing an interactive session while the ROV is active underwater.



The Bay Academy, with strong support from the Sales and Marketing Team has developed and will lead an annual Expedition Series. This program is specifically designed to immerse the participants in the frontline of climate change and ocean conservation initiatives around the world. These specially designed trips will be targeted to a wide audience from University-level students to the general public who want hands-on exposure in a remarkable location, working with a marine scientists and other local experts. On each expedition, participants would

be trained in the various techniques needed for the activities, such as shark-tagging, coral restoration, underwater visual fish surveys, marine invasive species control, marine protected areas management among others. The expeditions will be led by Academy Director, Marine Biologist Dr Dayne Buddo, who will take participants to locations such as Costa Rica, Mexico, Colombia, Marshall Islands, among others slated to begin in mid-2021.



1. Promotional graphic for BayEcotarium Ed-Ventures
2. Giant Sea Bass in Kelp Forest
3. Dr. Dayne Buddo measuring juvenile Tiger Shark in Costa Rica

Hunter Coughlin, Multimedia Promotions Specialist, sets up the ROV on shore as part of Ed-Ventures



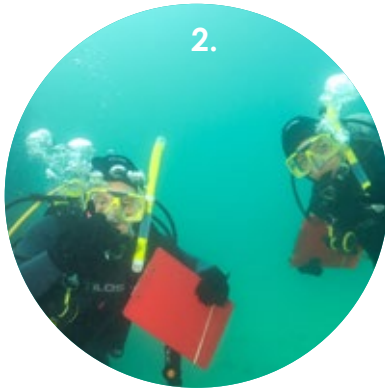


## BAY ACADEMY



### Diving for Citizen Scientists Course

In the Summer, the Academy designed and launched a new course for scuba divers who want to do more in marine conservation and to work more with the organization in its mandate. This included training in fish identification, underwater photography, animal care, and also included an Aquarium dive. In its first run, 8 participants successfully completed this course, and while doing so, earned three (3) PADI diving certifications. The course was taught by staff of the Academy and the Animal Care Team.



### Internship Program

The Academy hosted 4 College-aged Interns on a voluntary basis over the Summer and the Fall. These persons were in their final stages of their degree program in ocean and climate studies and wanted to learn from an established organization. The Academy benefited from their involvement through the development of content for our Island Sustainability Course, creation of a digital biodiversity catalog as well as the creation of a Podcast Series "Beyond the Pier". Following on from this, the Academy engaged another intern to develop content on UN Sustainable Development Goals and Ocean Conservation, also assisting with project implementation and grant writing.



### Podcast Series – "Beyond the Pier"



An inaugural Podcast Series was launched in the Summer and was named "Beyond the Pier". This series is available on popular podcast platforms such as Spotify, Google Podcasts and features episodes on marine life of Northern California, as well as the River Otters highlighting animals that we have at the Aquarium. The episodes have been released once every 2 weeks, and we create a bank of episodes to ensure continuity.

1. ROV about to be deployed
2. Students on Training Dive
3. Dr. Dayne Buddo teaching Underwater Photography

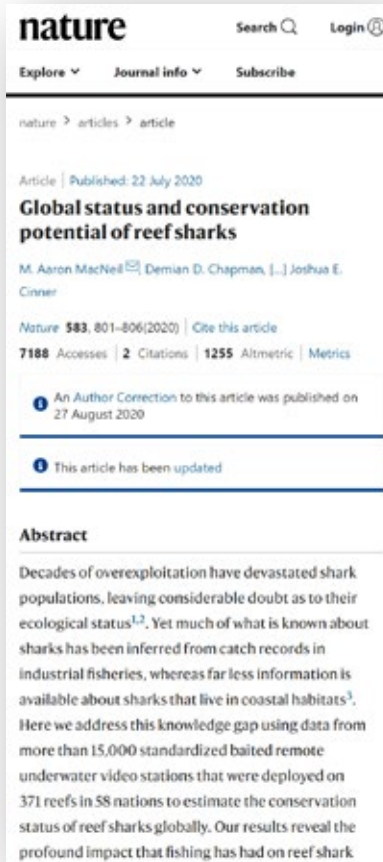


Diving for  
Citizen Scientists  
Course students





1.



1. Dr. Dayne Buddo was a co-author to a peer-reviewed publication, "Global Status and Conservation Potential of Reef Sharks"
2. Book cover  
MUSEUM FUTURES:  
Corona Conundrum

## Publications

As the world ushered in the New Year in 2020, no one could have imagined how dramatically life would come to a grinding halt globally within a matter of weeks. Sweeping changes to interactions, community engagement and conversations migrated rapidly to the internet and the ecosystem of Internet of Things (IoT) at an unprecedented pace. Museums by definition, are public institutions and destinations that attract visitors.

The COVID-19 pandemic has sent shock-waves through the world of museums, as institutions grapple and come to terms with a new reality hinging upon social-distancing, reduced staffing, lower operating budgets and shrinking philanthropy in conjunction with exploring new ways of doing business and sustaining membership offerings. From the nose-diving travel and hospitality numbers to the sudden spike of activity on social media to the skyrocketing use of Zoom, to the boom of Apps adopting to the new norm, museums, aquariums, science centers and other destinations of augmented learning are scrambling to unmask new means, methods and metrics.

As the efficiency models, heuristics and haptics get more sophisticated, Artificial Intelligence (AI) and Emotional AI driven world of the Alexa and Siri surrogates will become exponentially omniscient and omnipotent. The book takes a sweeping overview of remotely accessing

experiential human interaction and builds scenarios of alt-options and adaptive innovation stemming from societal quarantine. It argues that the time for reactive measures must be replaced with pro-active methods of progressive change, even as it re-defines museums as evolving dynamic souls of civil societies.

Dr. Dayne Buddo was part of a global team of 120 researchers across 58 countries and co-author of a peer-reviewed publication "Global Status and Conservation Potential of Reef Sharks". The study was published in one of the world's top scientific journals – Nature. The study reflects the connectivity of ocean conservation issues which require a holistic and coordinated approach across geopolitical boundaries. Conservation of this critical group of predator species is essential for the health of the oceans, and the ecosystem services they provide. For small island developing states (SIDS), the conservation of sharks converges with the cross-cutting issues of fisheries management, tourism and coastal development complicating the decisions of policy-makers.

Dr. Buddo currently has two other manuscripts under peer-review with expected publication in early 2021.



GEORGE JACOB

# MUSEUM F·U·T·U·R·E·S

**C**  **RONA**  
C O N U N D R U M





The background features a gradient from dark blue at the top to a lighter blue at the bottom. On the left side, there are stylized green leaves and stems of varying shades, some with small white spots, creating a layered, organic feel.

# APPENDIX A

2020 DONORS AND MEMBERS

## 2020 DONORS

### OVER \$25,000

---

Environment Now

Ben Hammett

Chart House

MSB Cockayne Fund Inc

### \$10,000 TO \$24,999

---

Jill V. Spangenberg and  
Jerome A. Barakos, M.D.  
Charitable Foundation Fund

Contra Costa County

PG&E Foundation

Rose Foundation

Roddy and Alexandra Lindsay

Anonymous

Steven Machtinger

John Powell

JJ Hanley

### \$5,000 TO \$9,999

---

Anthropocene Institute, LLC

Hal Candee

Reuben, Junius & Rose, LLP

John Reigle

Dean Morehous

### \$2,500 TO \$4,999

---

RC Investors, Inc.

East Bay Community Foundation

Benevity

Port of SF

Hap Dunning

Alexandra and Robert Lindsay

Ultimate Software

## \$1,000 TO \$2,499

---

The Schmitz-Fromherz Family Fund

Blue & Gold Fleet

Daniel Hyduke

Ben Bleiman

Philip Meyer

Sundeep Peechu

Fred Gellert Family Foundation

Margaret Ruxton Charitable Fund

Bradley Davis

## \$250 TO \$999

---

Alison F. Geballe

Amy Lee

David McIntosh

Elizabeth Krasnoff

Gabriella Schultz

John

Keefe Brockman

Lisa Koehnen

Leonard A. Fisher and Risa Teitelbaum Fund

Kathleen McEligot

Party For The Healthy Planet

Colleen Boyle

Glazier Rolls

Laura Carson

Roman Rosario

Carol Savary

Evelyn Nalley

Fran King

Janet Clyde

Margaret Bettner

Patricia Neumann

Paul Auerbach

Robert Phelps

Shaun Supanich

Shauna Wells

Sudha Pennathur

Tia Ghose

Danford Foundation

Casper de Clercq

Kay Carney

Lenore Cavellero

Rosalind Jackson

Albert Lau

Junghae Choi

Daniel Houghton

Keith Bloomster

Joshua and Lauren Lippman

Carolyn Kadyk

## 2020 DONORS

### \$249 AND BELOW

---

Beastly Threads LLC

Evelyn Tipton

Grace Rubenstein

Karen Atkinson

Matt Peterson

Michelle Kitlas

Richard Carson

Robynne Winchester

Sarka Volejnikova

Brian Zuzga

The Baird Family

Diane Forney

Colleen O'Rourke

Francis de Geus

Amazon Smile

Alan Bleiman

Alexandra Singer

Arlene Ho

Barbara Conner

Bethany Williams

Burgess Raby

Christine Linguanti

Cristen Elejalde

Dallas Rowsell

Debra Plousha-Moore

Elizabeth Bingham

Fatima David

Forster Family Fund

Fiscus Family

Florence M. LA Riviere

Giovanni Fnu

Hanna Brue

Helaine Reiner

Irene Voisin

Jason Chan

Jeri Noble

Jim Jones

John Lin

Kate Calvert

Kenneth Sorey

Kristina Razmara

Lamisa Parkar

Linda Grant

Lindy De Quattro

Lisa Roberts

Lynn Sinclair

Maria Ricciardi

Mary Helen Okajima

Matt Corvi

Michael McDermott

Michael Witherspoon

Myrtle Edmiston

Nadine Quan

Nathan & Marty Sasaki

Nicholas Urbonas

Nick Erker

Olivia Gomez

Pam Gumpertz

Paula And Chuck Collins

Perry Kent

Rachel Goldstein

Rebecca Emerick

Renee Miguel

Stefan Wanner

Steven Hibshman

Suzanne Kincaid

Suzanne Wiviott

Tamara Snyder

Terry Causey

The Post Family

Thomas Endres

Tiffany Oda

Wai Keung Kwan

William Pottinger

Charity On Top Foundation, Inc



Gail Kasovac  
Sara Armstrong  
Susan Dunn  
Victoria Shreiner  
Kim Pham  
Sara Rosario  
Alma Flores  
Alma Reinosa  
Annabelle Quan  
Ashley Luhrs  
Barbara Boccaleoni  
Billie Wyant  
Blair Swedeen  
Brian Feetham  
Carol Fong  
Don Lorenzen  
Duncan Ley  
Effie Seiberg  
Elizabeth Brandes  
Keith & Atsuko Bennett  
Giving Fund  
Janet Chiang  
Julia Thomsen  
Justina Michelle Emley  
Kathy Padow  
Kelli Yetsko  
Kristina Pappas

Linda Martin  
Mark Simmons  
Melanie Truan  
Michael Lerschen  
Mitchel Fong  
Nelly Merzheritsky  
Pam McReynolds  
Reina Fuji  
Richard Ives  
Ritva Laine  
Rowena Burger  
Susan Dugger-Mathison  
Susan Mathison  
Teresa Paden  
Thao Devine  
Victor Shepherd  
Vijay Erramilli  
Vijaya Chakravarthy  
Violet Cook  
Vivian Poon  
Wells Fargo Foundation  
Grant Davis  
Arnel Flandez  
Gogi Overhoff  
Morton Jonuschat  
VMware Foundation on  
behalf of D. Kim

Mimi Yuan  
Naomi Lidicker  
Vikki Prichard  
Alan Sun  
Amrit Kohli  
Amy Berryman  
Amy Siegfried  
Andrea Don  
Andrew Aude  
Ann Brown  
Ann Mulder  
Anna Kull  
Anne Mulder  
Barbara Stewart  
Beverly Toy  
Brian Mount  
Brian Reilly  
Bridget Schwartz  
Brigette Kwan  
Cara Ercolino  
Carly Kelley  
Carol Johiro  
Carol Ritzenthaler  
Chris Petersen  
Craig Frampton  
Craig Harter  
Danna Prosser

## 2020 DONORS

Danny Wilson

Daphne Close

Diana Mueller

Diana Pattillos

Dougie Colten

Elise Porter

Erika Reed

Ethel Newin

Eugene Corr

Gail Koza

George Brewster

George Kwong

James Morrow

Jennifer London

Karen Reyna

Kasarah Weinfeld

Kate Wilson

Kay Kirman

Kenneth Krasne

Kenneth Shaw

Kimberly Gilgenberg

Kyle Bloomster

Laura Horan

Laura Wideman

Leigh Tschirgi

Linda Compian

Linda Roth

Linda Santaella

Linda Scourtis

Mary Hunt

Megan Phoenix

Michael Kwak

Michele Donnet

Michelle Kirian

Ms. Mcelveen

Norma Jellison

Pamela Deely

Paresh Matmari

Patricia Martin

Patrick Hawthorn

Randall Reber

Rebecca Barker

Reed Nelson

Richard MacKenzie

Rong Fan

Sara Worden

Sarah Van Bavel

Sharon Carlos

Shawn Fisher

Taniyah Graham

Victoria Sperow

Zoe Dolinsky

OctopusFanClub.com

Carolina Padron

Cornelius Contreras

Dorothy Bennington

Elaine Frank

Goldstar Events Inc.

Kati Schmidt

Lynette Ridder

Stacy Hering Astor

Susan Thompson

Victoria Obenchain

Wendy Rasmussen

Zachary Gramana

Julia Egan

Merrie Triplett

R Thompson

Kalie Clowers

Mayumi Matson

Alexander Piccione

Amy Braga

Anjanette Mendoa

Ashley Grenier

Catherine Rivlin

Chris Romano  
Christy Breen  
Dick Ives  
Eliza Loweecey  
Eric Grace  
Glynis Yoneta  
Heather Iger  
Jennifer Ramsey  
Jessica Anderson  
Judith Lange  
Karin Hernandez  
Karyn Casaus  
Kenneth Yamal  
Linda Alcantar  
Lydia Sherrill  
Mojica Len-Mari  
Myung Kil  
Peyton Scott  
Phyllis Erickson  
Stephanie Niu  
Tiffany French  
Virginia Rogers  
Sage Sharp  
Joanne Roux  
Pamela Montiel

Andrew Abballo  
Aron Roberts  
Christina Juhasz  
Christine Susa  
Jason J.  
Kadi Doolan  
Nikki Ford  
Virginia Footlik  
Carlene Griffith  
Abraham Felix  
J C Gist  
Michael Sullivan  
Phoebe Morris  
Joshua Goldstein  
Brita Larsson  
Jenny Onley  
Kristen Cook  
Linda Grant  
The GE Foundation  
Francis de Geus  
Helaine Reiner  
Eric Carlson  
Harry & Susan Dennis Giving Fund  
Lorraine Platt  
Melissa Sasaki

Michelle Irwin Beardsley  
Paula Gross  
Robynne Winchester  
Robin Sease  
United Way of the Wine Country  
Dick Ives  
Douglas Daetz  
Julia Egan-Bell  
Kerri Niver  
Linda Scourtis  
Lydia Sherrill  
Matt Wakefield  
Monica DuClaud  
Richard Ives  
Tina Griffin  
Caitlin O'Brien  
Goldstar Events  
Heather Jackson  
Michael Stocker  
Trisha Varma  
Helen Pallegric  
Frances Wong

## 2020 NEW MEMBERS

Leesamarie Abad	Brandi Barnett	Bethany Campbell	Carlos Cortez
Eanas Abdelwahhab	Silvia Barragan	Inthira Capistrant	Sara Couser
Makristina Acibal	Raja Bathula	Lucia Caprani	Marc Cramer
Wendy Ackrell	Sofia Bayawa	Kathryn Cashman	Jessica Crough
Natalia Acuna Lopez	Mary Anne Baysac	Zuza Castaneda	Russell Curley
Asha Adams	Medelene Beasley	Margarita Castrillo	Lyndsey Dangerfield
Darcie Alaba	Kevin Becraft	Lisa Caudillo	Mark Decasper
Shelby Albrecht	Eric Benedict	Sasha Cave	Sandra Diaz
Angela Alvarado	Maria Benitez	Salva Chak	Kristine Dichoza
Jaqueline Alvarado	Elana Bennett	Young Chan	Brandy Dickinson
Hiiaka Ambose	Sandra Benson	Murina Chan	Toby Dixon
Naresh Andanamala	Elaine Bergonia	Michael Chang	Lindsay Droz
Bernarda Angara	Lillian Berman	Eliezer Chaparro	Susan Dugger-Mathison
Elisa Anzo	Erin Biane	Alex Cheng	Xuanhanh Duong
Yiutung Aoki	Doug Biggs	Jennifer Cheng	Tonya Edwards
Leina Aonuma	Marcie Bissell	Gina Cheng	Michael Elkins
Judith Araya	Cristina Biternas	Jongwon Choi	Ashleigh Emerick
Cynthia Arevalo	Irina Boguslavsky	Kapil Chopra	Rebecca Eros
Alec Atkinson	Kanako Bond	Jacky Chow	Derek Ervin
Nicole Austin	Elena Bonzani	Kyung Chung	Brenda Escobar
Shady Awadallah	Elisa Boutain	Ricardo Cisneros	Queenie Esguerra
Jacqueline Bahena	Ashley Bowles	Catherine Clement	Adan Espinoza
Melissa Bailey	Rache Brand	Sophie Clowez	Lucas Estevao
Sefik Balic	Sarah Brickey	Kenna Cobos	Mercedes Estrada-Ontiveros
George Balk	Esteban Buenrostro	Jasmine Comer	Faron Everett
Tabatha Barkley	Kate Burke	Tommy Conry	Jean Fagin
Prakash Barn	Chaniqua Butscher	Latoya Cook	Valentina Finn

Stephanie Fowles	hugo gutierrez	Joquel Hunt	Andrew Kerr
Jessica Frank	Trinlay Gyaltso	Edward Hurley	Jae rang Kim
Andre Gachet	Lindsay HAHN	Avner Husen	Elisa Kim
Ramani Gadde	Leigha Hall	Tana Hutchins	Christina Kim
Jean Gael	Jim Hallon	Ouh Hyunkyu	Susan King
Mike Galanter	Luke Han	Celestial Ibraeva	Chris Kline
Liliana Gallegos	Narmen Hanhan	Maria Isabel	Karin Knutson
Desiree Galos	Susun Hardel	Timothy Jacobs	Alyssa Koral
Erika Gamboa	Nicole Harden	Ali Jafarnia	Suman Kumar
Janell Gapinski	Lynn Harr	Vidyasagar Jampala	Yu-Hsuan Kuo
Erik Garland	Dawn Harry	Denise Jared	Mehmet Can Kurt
Sunil Gattupalle	Marnie Hascall	Anthony Jasmin	Quy Kyi
Marvin Gieber	Todd Heald	Marik Jensen	Maxwell Ladion
Charlotte Giovanni	Angela Hendricks	Eric Jepson	Stacey Lakin
Isaias Giron	Isa Herico Velasco	Karlee Johnson	Lindsay Lamberg
Kristin Glayzer	Marievi Hernandez	Candieda Johnson	Kelle Lanoha
Emily Glick	Janet Herrera	Jennell Johnson	Anna Lantan
Markos Glimidakis	Yesenia Herrera	Alexandria Johnson	Bryon Lee
Gaurav Goel	Gabriela Herrera	Wesley Jones	Jennifer Lee
Osiel Gonzalez	Patricia Hester	Sara Jones	Mikayla Lee
Thomas Goodwin	George Hilley	Thomas Jones	Michelle Lee
Kumaren Govindarajan	Matthew Hinz	Hyeyoung Joo	Szu-Wei Lee
Erin Graham	Reid Hirata	Melita Jung	Esther Lee
Linda Grant	Jeff Hittenberger	Niranjan Kamat	Briana LeGrand
Juana Guerra	Bethany Hom	Christopher Kane	Andrew Leslie
Christina Guerrero	Yung Hua	Nathan Karklins	Pei Li
Nicole Guerrero	Ken Hui	Jacquie Katzel	Biao Li

## 2020 NEW MEMBERS

Norma Lima	Elizabeth Vale Martinez	Chiyoko Mochizuki	Laura Nielson
Tim Lisk	Xiomari MARTINEZ	Michael Montoya	Masataka Nishiga
Jin Lit	Matthew Martinez	Samantha Morales	Alex Offerman
Vivian Liu	Olivia Martinez - Stewart	Daniel Moran	Afam Ogbunwobodo
Kimmai Lonardo	Simone Masson	Angienelle Morata	Damion Olson
Melissa Looney	Tabitha Mayfield	Blake Morgan	Alicia Omer
Kris Lopez-Atherton	Brittany Mccauley	Charlie Moss	Stephanie Orlando
Shirley Loss	Lucinda McEvilly	Naomi Most	Augusto Ortiz
Steven Lund	Chris McGann	Deepa Mungara	Susan Osullivan
NGA LY	Patrick McGinn	Ana Muniz-Laguna	Nelson Otero
Cheryl Maahs	Elizabeth McGraw	Bharanikumar Munuswamy	Colette Parrett
Quoc Chan Mach	Brendan McGuigan	Peggy Muraski	Terry Parsons
Navneet Maharaj	Kate McLean	Isla Murphy	Aditi Patel
Cheryl Maher	Deepa Mehta	Patricia Myers	Teresa Patino
Maya Mahrer	Nitu Mehta	Karthik Nagarajan	Maira Isabel Patino
Sonasi Maka	Amanda Melo	Vishaya Naidoo	Anneli Paulsson
Dawn Makley	Gabriel Mena	Juhi Nandwani	Kristin Pearman
Devender Manchukonda	Stephen Menaquale	Kian Narachi	Sara Pedisich
Elizabeth Mangalindan	Henry Mestaz	Lauren Nevins	Tammie Pereira
Julie Mann	Peter Michailidis	Marife Newton	Jacqueline Perez
Danny Mansukhani	Lori Michetti	Ann Ng	Jeffrey Perlow
Ivan Maranah	Jacob Midkiff	Kacee Ngo	Tiffany Peterson
Rikki Markson	Kelsey Miller	Lena Nguyen	Shawn Petruk
Leonor Marquez	Derrick Mitchell	Tram Nguyen	Irene Pizarro
Julian Martinez	Russell Miyashiro	Tu Nguyen	Richard Pon

Mabeyli Pool	Jessica Rothwell	Marc Snircich	Catherine Vendola
Warren Puffer	Adhham Salah	Cristopher Snyder	Chun hsuan Wang
Syed Quadri	Jose Salinas	Maisie Sokolove	Andi Wang
Kapil Raju	Karthik Sampath	Ana Soriano	Michelle Watson
Carolyn Ramirez	Freddy Sandoval	Chelsie Spacke	Ed Wetter
Nicholas Ramirez	Janice Sandoval	Kelly Squer	Bimo Wijoyo
Gustavo Rangel	Allyson Santos	Sterling Stephenson	Roger Williams
Remonda Rantisi	Yulia Sas	Susan Stoddard	Rebecca Wilson
Shaskikontha Rao	Mark Saturnio	Andrea Struzas	Jeremey Witkowski
Taraka Ravi	Jessica Seigel	Samuel Tan	Amanda Witz
Manoj Ravindran	Nicole Selcuk	Angelica Taskina	Anna Wong
Kyle Reid	Michelle Semba	Stephanie Taylor	Peter Woods
Tim Reynders	Hare Shah	Linda Thompson	David Wright
Cleora Risk	Inna Shatsky	Sarah Thomson	Athena Xenkins
Ester Rivas	Lucy Shepperd	Jerry Ting	Iselia Yanez
Sophia Rivera	Henry Shih	Annie Tran	Peter Yee
Ervin Rivera	Tim Sickles	Jennifer Trujillo	Seung Yu
Donavon Roberson	Stephanie Sims	Helen Tsang	Yuan Yuan
Matthew Roberts	Richard Sinad	Rebecca Valdez	Yi Yuan
Angie Robinson	Vanessa Slater	Arianna Valdez	Asif Yusufov
Princess Robinson	Adam Slotnick	Rosa Valencia	Wen wen Zhang
Angel Rodriguez	James Smith	Alex Van Wagner	Jiao Jiao Zhang
Lynn Rogers	Christopher Smith	Carol Ann Vance	Yi Zhou
Tanya Romero	Terryl Smith	Mark Vanvelzea	Quan Zou
Jennifer Rosa	Michele Smith	Sandy Vella	Brayan Zuniga





The background features a gradient from dark teal at the top to a deep purple at the bottom. Two large, organic, rounded shapes in a medium green color are positioned on the left side. A light blue, curved line with small white dashes, resembling a road or path, starts from the top left and curves downwards. Another similar line is visible at the bottom left.

# **APPENDIX B**

UNAUDITED REPORT 2019

# BAY.ORG

## 2019 STATEMENT OF ACTIVITIES (INCOME STATEMENT)

	<u>Jan-Dec 2019</u>
<b>Revenue</b>	
Development Revenue	
Development Revenue - Donations & Sponsorships	216,560.67
Development Revenue - Fundraising Events	62,025.00
Development Revenue - Grants & Contracts	287,799.15
Development Revenue - Memberships	151,322.95
Total Development Revenue	<u>717,707.77</u>
Operating Revenue	<u>6,477,926.53</u>
Group Sales Revenue	<u>1,826,217.40</u>
Retail Revenue	<u>1,120,317.11</u>
Special Event Revenue	<u>297,126.71</u>
Onsite Program Revenue	<u>12,914.00</u>
Offsite Program Revenue	<u>5,465.00</u>
Rental Income	<u>30,500.00</u>
<b>Total Revenue</b>	<b><u><u>10,488,174.52</u></u></b>
<b>Cost of Good Sold</b>	
Cost of Goods Sold - Retail	338,450.61
<b>Total Cost of Good Sold</b>	<b><u><u>(338,450.61)</u></u></b>
<b>Gross Revenue</b>	<b><u><u>10,149,723.91</u></u></b>

# BAY.ORG

## 2019 STATEMENT OF ACTIVITIES (INCOME STATEMENT)

	<u>Jan-Dec 2019</u>
<b>Expenditures</b>	
Salaries & Benefits	5,587,852.45
Contract Services	287,614.60
Professional Fees	379,511.34
Office Expenses	141,830.27
Travel Expenses	296,124.87
IT Expenses	258,353.66
Repairs & Maintenance	90,114.84
Utilities	559,202.01
Operating Expenses	411,118.25
Advertising Expenses	270,493.53
Taxes & Licenses	23,530.56
Insurance	115,900.22
Administrative Expenses	1,228,681.20
<b>Total Expenditures</b>	<b><u>(9,650,327.80)</u></b>
<b>Change in Net Assets</b>	<b><u>499,396.11</u></b>
<b>Other Income and Expenses</b>	
Other Income	10,483.22
In-Kind Revenue	15,234.00
Other Expenses	126,685.62
In-Kind Expenses	15,234.00
Depreciation & Amortization Expenses	834,689.66
<b>Total Other Income and Expenses</b>	<b><u>(950,892.06)</u></b>
<b>Net Assets</b>	<b><u>(451,495.95)</u></b>



Aerial of Aquarium of the Bay at PIER 39 with Alcatraz Island in the background

# BAY.ORG

## STATEMENT OF FINANCIAL POSITION (BALANCE SHEET)

as of 12/31/19

	<u>12/31/2019</u>
<b>Assets</b>	
Cash or Cash Equivalents	1,202,588.86
Accounts Receivable	184,051.99
Other Accounts Receivable	144,696.76
Inventory	98,732.51
Prepays	113,644.08
Fixed Assets	5,468,006.64
Other Assets	123,334.40
<b>Total Assets</b>	<b><u>7,335,055.24</u></b>
<b>Liabilities and Net Assets</b>	
Liabilities	
Accounts Payable and Other Current Liabilities	1,951,440.09
Long-Term Liabilities	3,185,000.00
Total Liabilities	5,136,440.09
Net Assets	2,650,111.10
Change In Net Assets	(451,495.95)
<b>Total Liabilities and Net Assets</b>	<b><u>7,335,055.24</u></b>





# APPENDIX C

ECOCURRENT NEWSLETTER, 2020



Above: Aquarium of the Bay launches Sea Lions in San Francisco. Below, George Jacob, President & CEO of bay.org with San Francisco Mayor London Breed, on right.



## Aquarium Launches Sea Lions in San Francisco - California's Largest STEAM Program

Mayor London Breed proclaims  
January 16: SEA LION DAY  
in San Francisco!





AQUARIUM OF THE BAY | Smithsonian Affiliate

# CURRENT

Newsletter of BayEcotarium and Aquarium of the Bay Vol. 35: 02, 2020



I hear you... Can you hear me?

SAVE THE DATE  
JOIN US ON THE BLUE CARPET  
**JUNE 8, 2021**

bayecotarium

AQUARIUM OF THE BAY  
SAN FRANCISCO

BLUE MARBLE™  
VENUE: HERBST THEATRE  
BMB@BAYECOTARIUM.ORG  
BAYECOTARIUM.ORG/BMB

THE BAY INSTITUTE 40 YEARS  
AQUARIUM OF THE BAY 25 YEARS







The Bay Institute



Aquarium of the Bay



Sea Lion Center



Bay Model Alliance



Bay Academy



Studio Aqua



CALIFORNIA  
TRAVEL  
ASSOCIATION



Smithsonian  
Affiliate

ASSOCIATION  
OF ZOOS &  
AQUARIUMS



SAN FRANCISCO  
GREEN  
BUSINESS