



We salute the Aquarium of the Pacific for 20 years of cultivating wonder, respect, and stewardship of the Pacific Ocean's incomparable diversity and beauty. We're proud to have supported your vision and mission from the very beginning. You can count on our support in the years to come.

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Table Of Contents

- 8 As The Aquarium Of The Pacific Turns 20, President & CEO Jerry Schubel Looks To The Future
- 14 Aquarium Inducts First Female Board Chair, Kathleen Eckert
- **16** Aquarium Expansion To Become A New 'Icon For The City'
- **22** Fighting For The Future Of The Environment Today
- 26 No Man Is An Island: The Aquarium Expands Its Environmental Reach To Kiribati
- 28 Safe For Land And Sea: The Aquarium As A Green Facility
- **30** From Sea Lions To Squid: A Glimpse Of Life Behind The Glass
- 34 Engaging And Educating Youth Produces Future Stewards Of The Oceans
- **36** The Aquarium Of The Pacific A Center For Education
- 40 The Aquarium As A Gathering Place Annual Cultural Festivals
- 41 Art Collaborations
- **42** Aquarium Of The Pacific Serving The Community
- **44** Dancing With The Fish: The Aquarium As An Events Venue
- 46 From Then To Now: Early Supporters Reflect On The Aquarium Of The Pacific At 20 Years
- 48 Aquarium Of The Pacific Historical Timeline
- **54** Charter Staff And Volunteers
- 55 Thank You Advertisers

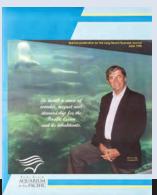
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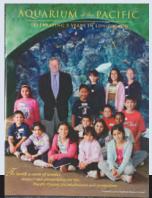
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Pre-opening 1998



5-Year Anniversary



10-Year Anniversary



5-Year Anniversary





Aquarium Of The Pacific Page 4



MAYOR ROBERT GARCIA

CITY OF LONG BEACH

Dear Friends of the Aquarium of the Pacific:

On behalf of the City of Long Beach, I am proud to congratulate the Aquarium of the Pacific on its 20th Anniversary.

The Aquarium is not only one of our city's greatest waterfront attractions but also a committed partner for advancing environmental sustainability, increasing our understanding of the climate, and promoting science education throughout the community and region. We are honored to have such an important resource right in our backyard!

For the past twenty years, the Aquarium has been an environmental leader, demonstrating to more than 1.7 million visitors annually the importance of protecting and supporting our ecosystem for generations to come. I especially want to thank Dr. Jerry Schubel, President and CEO, and the Aquarium staff, board of directors and volunteers for their hard work and many contributions over the years.

Congratulations on your anniversary, and I look forward to celebrating many more accomplishments in the future!

Sincerely.

Mayor Robert Garcia City of Long Beach

Congress of the United States House of Representatives Washington, DC 20515

March 2018

A connection to the sea has always been an important part of what makes Long Beach such a special place. From our city's very first days as a beach resort to the role we play today as one of the world's ocean shipping hubs, Long Beach has always looked to the sea.

Twenty years ago, the Aquarium of the Pacific began its mission to explore that sea, to explain it, and to teach us why it is so important.

A generation of parents and children have now traveled through the Aquarium, learning about the teeming life beyond the shore and our connection to it. Children who once wondered at the life along their coast, are now introducing their own children to the same amazing views thanks to the Aquarium. Today, the Aquarium is also at the forefront of explaining the role we play in preserving the environment and how we will have to adapt to rising sea levels in the near future.

I want to congratulate the Aquarium of the Pacific on twenty years of creating excitement, encouraging exploration, and fostering wonder about the sea around us. I wish you continued success and know that you will continue to be a jewel in the Long Beach crown.

Sincerely,

Wan Lowenthal Alan Lowenthal Member of Congress

Mission:

To instill a sense of wonder. respect, and stewardship for the Pacific Ocean, its inhabitants, and ecosystems.





is proud to support the

Aquarium of the Pacific

on the occasion of their

20th Anniversary

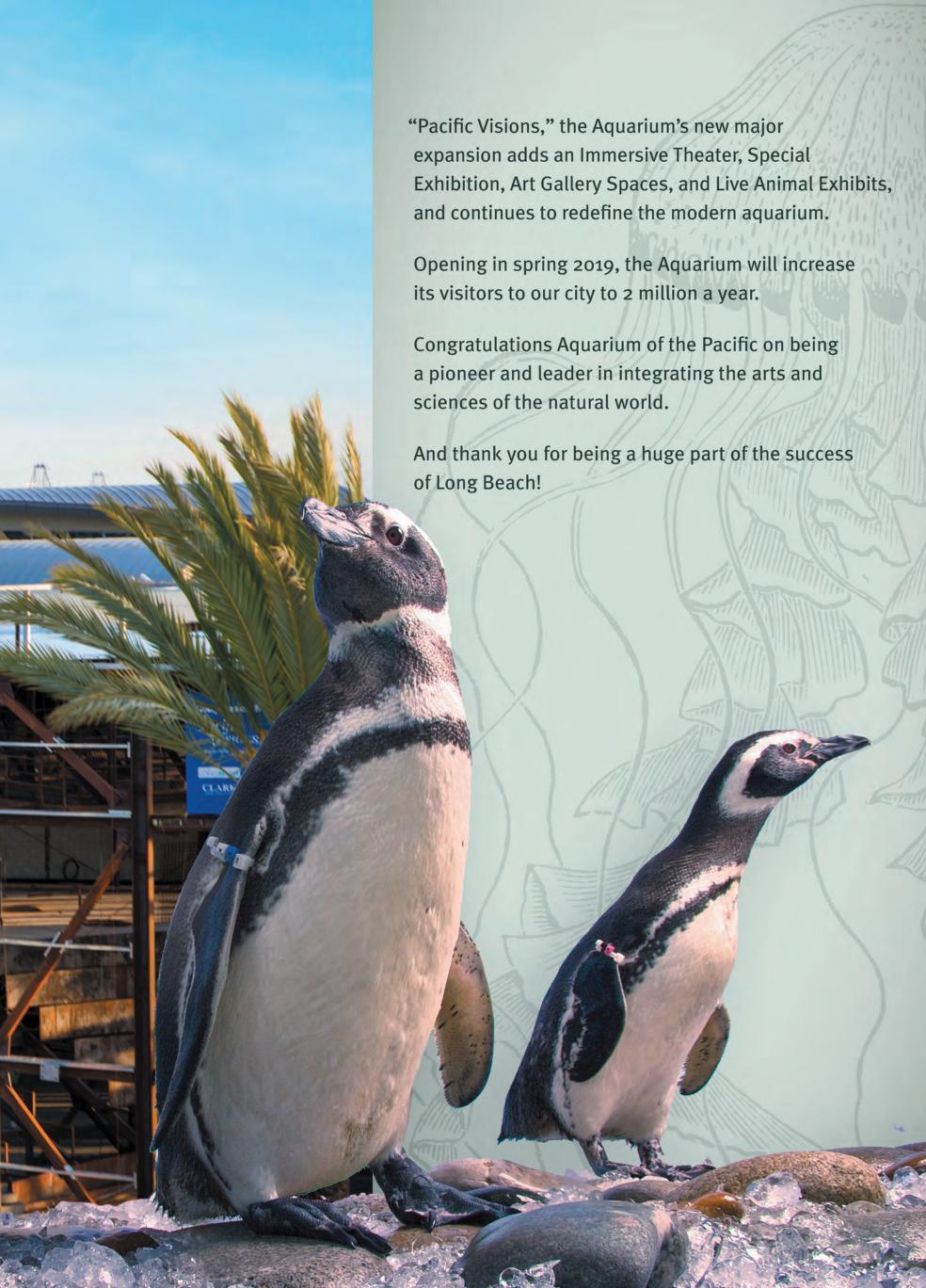


Congratulations
Aquarium of the Pacific for 20 years of amazing seascapes.



OUR 400 TOURISM BUSINESSES







As The Aquarium Of The Pacific Turns 20, President & CEO Jerry Schubel Looks To The Future

■ By SAMANTHA MEHLINGER

EDITOR

Reflecting upon the Aquarium of the Pacific's 20th anniversary in a Q&A with the Long Beach Business Journal, President and CEO Dr. Jerry Schubel emphasized the important role the institution has taken in educating the public about the effects of human interactions with the environment and how to create a more sustainable future for coastal communities.

Schubel was selected as president and CEO of the Aquarium of the Pacific in 2002 after the founding president, Warren Iliff, retired. Schubel has an academic background, having served for 20 years as the dean of

Stony Brook Sciences Research Center and as an adjunct professor, research scientist and associate director of the John Hopkins University Chesapeake Bay Institute. Prior to leading the Aquarium of the Pacific, he served as president and CEO emeritus of the New England Aquarium. Schubel has published more than 225 scientific papers and is a member of the California Ocean Science Trust Board of Trustees.

Since taking over leadership of the Aquarium, Schubel has led the institution in developing partnerships with many national agencies, both private and public, as well as with organizations around the globe. As he points out, the Aquarium – which opened on June 20, 1998 – is not just an attraction; it has become a top Long Beach cultural institution and a place of learning.

LBBJ: Looking back on the past 20 years, how do you feel the Aquarium has evolved as a community resource?

Schubel: Well, I think it was always a community resource. Warren Iliff, who was the first president, made sure that it was embedded in the community. But as you know, we went through a difficult time. The bonds had to be refinanced. The city took over the debt. And we have evolved in every way. I have been here now 16 years. We have increased the attendance by 700,000, and we have increased the budget. We have a wonderful array of programs. It's much more diverse than it ever was. And they are programs for people of all ages, not just kids. We started with kids, but now we have really robust programs for adults. We have lectures, about one a week. We have the Aquatic Academy, where we give two short courses each year: one in the spring and one in the fall. We have the Aquatic Forum, which brings together scientists, policymakers and stakeholders to examine different issues that are either local, regional, statewide and even national, to come up with some recommended approaches to dealing with these issues. I think it's quite unlike other aquariums in the depth and diversity of the programs it offers. That was one of the challenges when I was hired. I spent most of my life in academia. The search committee back then said,



"I think it's quite unlike other aquariums in the depth and diversity of the programs it offers."

'We want it to be more than a fish tank.' And I think that's why they decided to hire somebody who came out of academia rather than out of the aquarium/zoo business.

LBBJ: The Aquarium has always made it a point to promote sustainability for our oceans. In what ways does this continue to be a focus for the Aquarium?

Schubel: It's a primary focus. And I think what we do differently is that, if you look ahead with climate change, population growth, et cetera, we are going to have a very different relationship with the ocean well before the end of this century than we have now. This whole idea of 'keep your hands off mother nature' doesn't work. We've so transformed this earth that what we have to do now is to manage our activities to reduce our impact on nature. For some conservationists, the goal is to preserve the environment. I think that's crazy. Preservation should be for jams, jellies, old buildings, old cars and pictures. Conservation means that you keep the rate of change as close to what it would have been in the absence of humans as possible, so nature can keep up with the pace. Right now, it's too fast, so we are losing species on land 100 to 1,000 times more rapidly than at any time in the 300,000 years of human history. We have to take a pause, slow things down.

We are focusing on things like aquaculture. If you're going to feed a growing population and give them a safe, secure, sustainable source of healthful protein, we need to have more seafood. It won't come from wild capture fisheries. But it can come from farming the sea in a responsible way. California ought to be a leader. We have one of the most thoroughly studied coastal environments, both in state and federal waters. We should lead the nation. We have got the No. 1 agricultural economy in the states, but it comes at a cost. Agriculture in California takes 70% of all of our developed water, and 25% of the total land area. And if you look at agriculture in the U.S., we devote almost

THANK YOU FOR 20 YEARS OF ENVIRONMENTAL LEADERSHIP



Lyon Living is proud to continue the work of The Aquarium of the Pacific by restoring vulnerable wetlands in the City of Long Beach. Together, we can improve our future and restore balance in our ecosystems. To learn more, visit loscerritoswetlandsrestorationplan.com







This 2013 image shows Edie, an anatomically correct 88-foot fiberglass model of a female blue whale that still hangs in the Aquarium of the Pacific's Great Hall. The model of a blue whale calf hanging behind her is called Edison. Designed and built by the Larson Company in Tucson, Arizona, the models were transported in seven pieces. John Heyning, director of research and collections and curator of mammals at the Natural History Museum in Los Angeles, served as a consultant. (Business Journal Photograph)

(Continued From Page 8)

half of this country's land mass to agriculture. It takes a toll on the environment. And we have been able to show that in less than one-tenth of 1% of our exclusive economic zone – [which stretches] from the coastline out 200 nautical miles – we could produce an amount of seafood equivalent to the total annual global wild catch of seafood. The problem is getting the permits and getting all the testing protocols so we can make this happen.

We have had so much success in doing things a certain way up to this point. We wouldn't enjoy the lifestyle we do without fossil fuels. But things are different now. We are in this period that is called the Anthropocene – the first geologic epoch in which human influence rivals that of natural processes. We are a global force, and we have to use that influence to shape a different future.

LBBJ: The Aquarium has become a center of learning, with its ongoing forums and guest speakers. Soon, the Pacific Visions addition will expand upon these efforts. How does this direction set the Aquarium apart? Why do you believe this is the best future for the Aquarium?

Schubel: When we decided to go in the direction of Pacific Visions, there were two competing proposals on the table. One was a tra-

"We are in this period that is called the Anthropocene – the first geologic epoch in which human influence rivals that of natural processes. We are a global force, and we have to use that influence to shape a different future." ditional expansion as an aquarium – bigger tanks for bigger animals. And the other was to build a platform where animals are important, but they play a supporting role. It was to build a platform to tell the really big stories of the relationship of humans with the earth and the ocean and what it would take to make it sustainable. And that's what makes this aquarium distinctive.

LBBJ: How many people visit the Aquarium each

year, and how many do you expect to visit once Pacific Visions opens?

Schubel: The last two years, we have had a little over 1.7 million visitors a year. We expect when Pacific Visions opens, we will go above 2 million a year. **LBBJ:** What are your hopes for Pacific Visions and what it will mean for the future of the Aquarium and the communities that visit it?

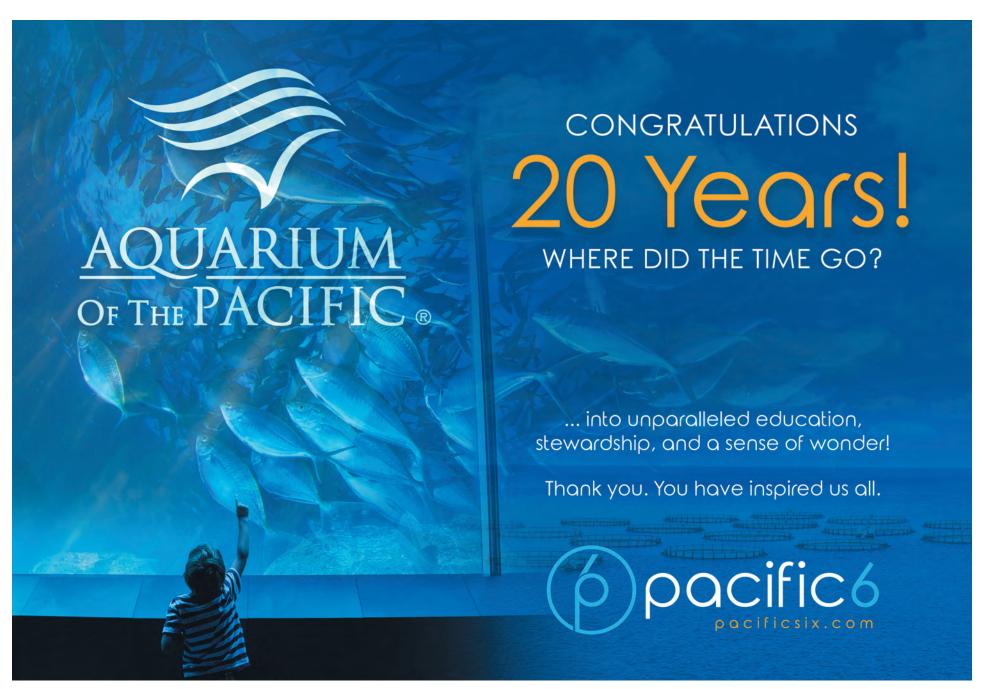
Schubel: I hope it will redefine what aquariums, science centers, natural history museums need to do in engaging and informing the public about the issues we face as a society. Pacific Visions is designed to let people explore alternative pathways to the future and how our actions will determine the future we're going to live in. The three basic things are the kinds and amounts of energy we use, the ways we grow and harvest our food both on land and in the ocean, and how we use our water. And they're all tightly intertwined. Pacific Visions isn't a didactic learning experience. Nobody is going to lecture. People will discover for themselves. And maybe they will eat one less hamburger and a little more seafood, and so on.

LBBJ: Under your leadership, the Aquarium has also become a place where culture and the arts are celebrated and integrated with the Aquarium's vision. Why has this been a priority for you?

Schubel: It has been a priority for all of us on the staff and on the board. My background is as









a scientist. But often, science is not the best way to engage the general public emotionally in these issues. So we have tried to combine art in all of its modalities – the performing arts, the visual arts, the musical arts – to give people an emotional gut connection to some of these issues, and then use the science to show the way forward. It's going to require very different strategies going forward than in the past. We have got 7.6 billion people on the planet. We are on our way to 10 billion before the end of the century. We use globally 70% of all the water, and more than half of the ice-free land surface to grow our food. There's not enough land, there's not enough water to feed another 2.5 billion people. So, we have to reexamine our relationship to the ocean. California ought to be the leader.

LBBJ: What have been some of the challenges you have faced leading the Aquarium, and how did you approach them?

Schubel: I think because we were founded as a traditional aquarium, when the board decided at a retreat

"There's not enough land, there's not enough water to feed another 2.5 billion people. So, we have to reexamine our relationship to the ocean. California ought to be the leader." that we were going to go off on this new path, people here for very legitimate, understandable reasons who have spent their lives caring for animals wondered, 'Why are we doing this? Why don't we build a wing with bigger tanks and more animals?' Getting buy-in was one of the big challenges. There are probably still a few people who would like to kill me [laughs].

We have a wonderful staff, and it's a unified staff of employees and volunteers. And I think most all of them now are excited about the new direction that we're taking. They realize, I think, the animals

that we have in our captivity, they're not the ones that really matter. It's the animals out there [in the ocean] that matter. And if we can use our animals and these stories to help protect the animals in the ocean, then we have done something really good.

LBBJ: What do you look back on as some of the major turning points or milestones for the Aquarium?

Schubel: I think the decision to do Pacific Visions was a major one. The other thing that has evolved over time and has been very important is, lots of institutions think they have all the expertise they need in house. We have always brought the best minds to the table. Whenever we do a new exhibit, a new program, a new film, we bring some of the best minds to the table and we ask them, 'What are the things that the public needs to know?' Our expertise largely in the Aquarium is in packaging stories and delivering them to a general audience. That has evolved over time and now I think we're at the point that nobody would ever think of doing a new exhibit without bringing in the experts.

LBBJ: What do you hope the lasting impact and legacy of this Aquarium will be on Long Beach and the communities it serves? **Schubel:** It already is the most visited cultural organization in Long Beach. We outdraw all the others combined by a factor of three. I think the new building is an iconic building. It will be an architectural icon that will bring people to Long Beach. We always wanted to be part of the city. Long Beach is a big enough city to have national impact, but it's small enough to be manageable. Some cities aren't manageable. They're too big. This one should be manageable. And we sit in a very unusual – I think even unique – place along the coastline. This is the perfect example of an urban ocean – lots of people living along the ocean making diverse and multiple and intense uses of the ocean and living in pretty good harmony with marine life. We want to reinforce that. Because pretty soon, the whole world is going to be an urban ocean. Fifty percent of the population of the earth lives along the coast. In California, it's 70%. And the relationship to the coast will change with sea level rise and we would like to be at the forefront of that.

California is doing its fourth climate assessment right now. This time, different parts of the report will deal with different geographic areas. So Ventura County, Los Angeles County, Orange County is one [section]. And I was asked to write the section on ocean and coasts. If you look ahead to the end of this century, sea level will be anywhere from three to five feet higher than it is today. Many of our wetlands will be, if not scrunched, they will be drowned entirely. Beaches will be narrower. It's going to take a big toll on tourism, because so much of our economy comes from tourism associated with beaches. So, we're trying to raise people's awareness and help them look at alternative ways to adapt and to reduce what could be a very large impact.

LBBJ: Is there anything you would like to add or emphasize?

Schubel: It has been a great ride. I have just thoroughly enjoyed it. I can't believe it has been 16 years for me [as president and CEO]. I have totally, thoroughly enjoyed it. We have a wonderful staff, as I said. We have always had a good board. We have always had a good relationship with the city. And I wouldn't trade it. ■





Aquarium Inducts First Female Board Chair, Kathleen Eckert

■ By **Samantha Mehlinger**Editor

Kathleen Eckert became the Aquarium of the Pacific's first female board chair at the end of February. Now in her fourth year as a boardmember, Eckert is excitedly focused on the Aquarium's Pacific Visions expansion and what it means for the institution as an educational resource for the community.



Kathleen Eckert, pictured with Aquarium of the Pacific President and CEO Jerry Schubel, recently became the Aquarium's first female board chair. She has served on the board since 2014. (Photograph by Caught In The Moment)

Eckert is a former marketing executive for Kraft Foods, as well as the former senior vice president of information resources for a marketing research firm. A Palos Verdes resident, Eckert said she hadn't been too familiar with Long Beach before her friend, Steve Young, an Aquarium boardmember and partner with the Long Beach law firm Keesal Young & Logan, suggested that she join the board. "He just spoke so highly of the cause and of the people who were involved," she recalled. In her time on the board, the Aquarium's close relationship with city hall has expanded her knowledge of Long Beach and its community, she said.

"One of the things that intrigued me about getting to learn more about this place and then deciding to join the board was the passion of the people who are here," Eckert said. "On the staff side, of course Jerry [Schubel, president and CEO] is the living manifestation of that. All the board people come from very diverse backgrounds and come to this place with different perspectives, [and] I have learned so much from them. . . . Everyone is very passionate about what they do. It's always fun to be around people like that," she reflected.

"It's such a magnet for people to come into the city. Obviously, it's a beautiful location," Eckert said of the Aquarium. Last year, the Aquarium had just over 1.7 million visitors and took in about \$38 million in revenue, she noted.

Eckert said that the Aquarium of the Pacific has been a "trailblazer" in terms of its focus on education, a mission she said resonates with her,

personally. "It's not just a

place for the public to learn about the animals and to preserve them and that sort of thing. It's also a place to teach people about a lot of issues that they might not normally [learn about]," she said. Educational programs range from reduced-rate field trips for school children, a lecture series with world-renowned guest speakers, adult classes and more.

The Pacific Visions expansion currently under construction will grow the Aquarium's educational focus by providing a platform for guests to learn about the impact of humankind's interactions with the environment. "I think it is going to be an unparalleled experience," Eckert said of the expansion. "It's [going to be] such a wonderful teaching tool about the issues surrounding the oceans and the climate and the environment," she said.

Charter Animal Profile

Name: Brook

Species: Southern Sea Otter (Enhydra lutris nereis) Exhibit: BP Sea Otter Habitat, Northern Pacific Gallery

Birth date: June 8, 1997 (approx.)

Brook came to the Aquarium from the Monterey Bay Aquarium's (MBA) Sea Otter Research Conservation Program. She was orphaned and then rehabilitated and cared for by the MBA staff until



the Aquarium of the Pacific was selected to be her permanent home. Brook is known for her regal manner and photogenic looks. Her life at the Aquarium has been well documented in volunteer Hugh Ryono's blog on the Aquarium's website. At over 20 years old, Brook has exceeded the average life span for her species in the wild (12 to 18 years for females, 10 to 14 years for males). She is the oldest female southern sea otter living at a zoo or aquarium.

Aquarium of the Pacific Board of Directors

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For 20 years, the Aquarium of the Pacific has taught generations about the importance of our oceans and its creatures. Thank you.

You offer to all who walk through the doors a truly memorable and fun experience filled with remarkable sea life. We are grateful for you and proud to be your partner.



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Congratulations to the Aquarium of the Tacific on 20 inspiring years!





Construction on Pacific Visions, the Aquarium's first major expansion since opening in 1998, is slated for completion in spring 2019. (March 8 Photograph by the Business Journal's Pat Flynn)



Aquarium Expansion To Become A New 'Icon For The City'

■ By Brandon Richardson

SENIOR WRITER

Discussions about expanding Long Beach's Aquarium of the Pacific began in 2005, seven years after its doors were first opened, during a board of directors retreat.

"We all recognized that we needed to expand because our attendance was growing and the ability to deliver a good experience was being compromised," Jerry Schubel, Aquarium president and CEO, said. "So, the question then became, 'how do we expand?' There was a very spirited debate that went on for some time."

The most common expansion for aquariums is constructing bigger tanks to house bigger animals, according to Schubel. Larger tanks and animals or adding swim-throughs that allow customers to snorkel with marine life were considered. Ultimately, it was decided the expansion should be an education-based space utilizing science and art to tell stories related to human impacts on the world's oceans and marine life.

The result of this decision is the \$53 million, 29,000-square-foot Pacific Visions wing currently under construction at the Aquarium. For the expansion, the board returned to San Francisco-based EHDD, the architecture firm that had designed the original Aquarium more than 20 years ago. Duncan Ballash, the firm's president, said the initial design of the Aquarium was inspired by the ocean and made to resemble waves moving into Long Beach.

"With the new addition, it's more of a deep ocean theme," Ballash said. "Staying with the water metaphor, we came up with the biomorphic form that is a contrast to the existing [structure's] form. What we are looking for is variability, depth and luminosity that is reminiscent of light passing over the deep ocean surface."

To achieve the deep-ocean effect, EHDD's design utilizes 800 glass panels of various sizes placed at different angles to mimic the reflective qualities of the deep ocean. Reflected light will change based on time of (Please Continue To Page 18)



CONGRATULATIONS

on your

20th ANNIVERSARY

Jerry R. Schubel
President & CEO

Aquarium of the Pacific

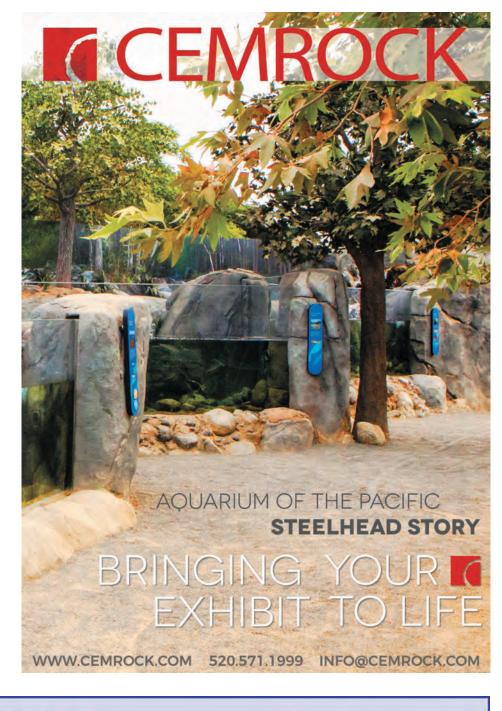
on behalf of



Joseph F. Prevratil
President and CEO

Board of Directors

Staff



Congratulations to Long Beach's Aquarium of the Pacific

for 20 "sea"-riously cool years!

From our dolphin to yours, MemorialCare Miller Children's & Women's Hospital Long Beach is happy to congratulate the Aquarium of the Pacific on its 20th year of bringing marine life not only to the city of Long Beach, but to our patients and families.

The Aquarium of the Pacific has partnered with us to provide distraction and relaxation techniques, which are crucial to our patients' wellness, through live Aquarium feeds, monthly playroom educational activities, and an interactive, live aquarium show in the hospital.

Their support of our efforts to raise awareness of chronic illnesses is instrumental in helping us meet the unique health care needs of the children in our communities.



MemorialCare
Miller Children's & Women's
Hospital Long Beach



Aquarium Of The Pacific Page 18

day, clouds passing by and the position of the sun. In terms of building operations, Ballash said the mechanical system designs, such as lighting and water filtration, are energy efficient and environmentally friendly.

Pacific Visions will feature an art gallery, an orientation gallery, an immersive theater and a culmination gallery, which visitors will pass through in that order to gain the full experience of the stories being told.

Ballash said this type of experience – live and interactive exhibits combined with multimedia platforms and art – is the future of aquariums, especially when it comes to highlighting larger species that aren't appropriate to have in captivity.

"It starts with an art gallery, because our experience over the years is that often science isn't the best way to engage the public," Schubel said. "The idea in the orientation gallery is to make it clear to everyone that we all have a connection to the ocean no matter where we live. We want people to understand that the actions we take will determine the future we will live in."

Visitors will exit the orientation gallery and enter the 320-seat Honda Pacific Visions Theater. The immersive space will include a 32-foot-tall, 180-degree arc, 130-foot-long digital projection wall and a 30-foot diameter floor projection disc. The theater also will utilize mist, wind, scent and seat rumblers to bring audiences into the action of the content produced by Emmy Award-winning Cortina Productions.

According to Schubel, the film will be

According to Schubel, the film will be relatively short – about eight minutes – to keep the flow of visitors moving through the Pacific Visions experience. The storyline is still coming together, but Schubel explained that the film will give audiences two visions of the future: one that we are destined for if human impacts on oceans continue down their current path, and one of a "glorious future" in which people have taken steps to better care for the oceans and the life they contain.

Outside the theater, visitors will gather in the culmination gallery where they will make commitments as to how they will work toward ensuring a brighter future, Schubel explained. He said the gallery will include live animal exhibits, videos, interactives and a game related to improving Southern California's water resilience.

(Please Continue To Page 20)





After exiting the Honda Pacific Visions Theater, visitors will enter a changing exhibit gallery, which will include live animals and an interactive digital wall. (Aquarium of the Pacific Rendering)







A toast to the Aquarium of the Pacific.

Congratulations on your 20 years of seafaring hospitality!

Thanks for letting us be your partner providing locally sourced,

California fresh experiences. Your atmosphere, service, and

cuisine helps make this city the go to – year-after-year.







Aquarium Of The Pacific Page 20

John Molina (right), pictured with Aquarium President and CEO Jerry Schubel, is the outgoing board president and a major donor to the Pacific Visions wing. Molina and his family offered a \$5 million matching grant, which was met. (Photograph by Caught in the Moment Photography)

The Dr. Allen and Charlotte Ginsburg Foundation donated \$1 million for the construction of the \$53 million Pacific Visions expansion. In honor of the donation, the Aquarium's main entrance has been named for the couple. (Aquarium of the Pacific Rendering)

"I think it's going to be very important for Long Beach. When we open Pacific Visions, we will be over two million visitors per year," Schubel said. "It will be an architectural icon for the city. I think it will have a big and positive impact on Long Beach and that it will cast a very long shadow."

Funding for the expansion is still between \$2 million and \$3 million shy of the \$53 million needed. However, Schubel said proposals for additional funding are out for consideration and that he is confident funding will be secured to complete the expansion by the slated spring 2019 opening.

Funding has been accrued through a \$15 million matching grant from the City of Long Beach, a \$5 million matching grant from John, Michelle, Mario and Theresa Molina, \$5 million from American Honda Motor Co. Inc., and \$1 million-plus in donations from Dr. Allen and Charlotte Ginsburg, James and Marilyn Simons, the Don Temple Family Foundation, PREMIER/SMG and an anonymous donor. Dozens of other donations from corporations, foundations and individuals have been made to make the project possible.

"It's a pretty daunting task. [It is] unlike raising money for a children's hospital because, you know, who doesn't want to help the kids?" John Molina, a Long Beach resident and the outgoing chair of the Aquarium's board, said. "So, I think we as boardmembers who have the capacity to donate should do so. My [family] and I put in [the matching grant] and we are happy to see that it has been met. We are very, very close

to finishing up the funding for it."

Molina said the expansion will attract more visitors to the city, increasing its prestige and creating jobs. The surge should put the Aquarium as one of the top five aquariums and museums in the country, according to Molina.

Those living in Southern California can't help but concern themselves with climate change and rising sea levels, Molina said. This concern, coupled with the importance of the topic to future generations, was the reasoning behind what programming will be presented at Pacific Visions.

"When people think of an aquarium, they think of a

bunch of fish tanks. They don't think about art, they don't think about telling stories," Molina said. "So, it's going to be the whole experience of walking into the art gallery, to being immersed in things in the theater and then coming out into the culmination gallery. It's very well thought out and very exciting."

The Dr. Allen and Charlotte Ginsburg Member's Entrance will welcome members into the Aquarium. Charlotte Ginsburg has been a boardmember for three years and the foundation has been actively involved with the Aquarium for 12 years.

More so than the physical expansion, Ginsburg said the partnership and collaboration within the community is her favorite aspect of the Pacific Visions project. She explained that, in addition to working with local artists for the art gallery, groups such as the Long Beach Symphony, Long Beach Opera and Long Beach Ballet will be able to bring their talents to the theater during special events for children and families to enjoy.

"It's just another beautiful entertainment area to educate people about the oceans and the problems that we're having. I believe they can be solved, but only if organizations like this get involved," Charlotte said. "My husband and I are deeply committed to the world's oceans and helping to preserve the planet. We're just very excited to see it come together and it's just a joy to be involved." ■





Charter Animal Profile

Name: Shelby

Species: Pacific Harbor Seal (Phoca vitulina)

Exhibit: Seals and Sea Lions Habitat, Southern California/Baja Gallery

Birth date: March 22, 1996

Shelby is one of the Aquarium's original pinnipeds. She was three years old when the Aquarium opened and enjoyed peering out at all the visitors through the underwater tunnel. She was so full of energy and curiosity that the original marine mammal staff decided that they needed to train her

to do a lot of high-energy behaviors to take advantage. Shelby is the mother of two harbor seals born at the Aquarium, Bixby and Toby. Bixby, a female, was born in 2012 when Shelby was sixteen years old. Toby was born in 2013.



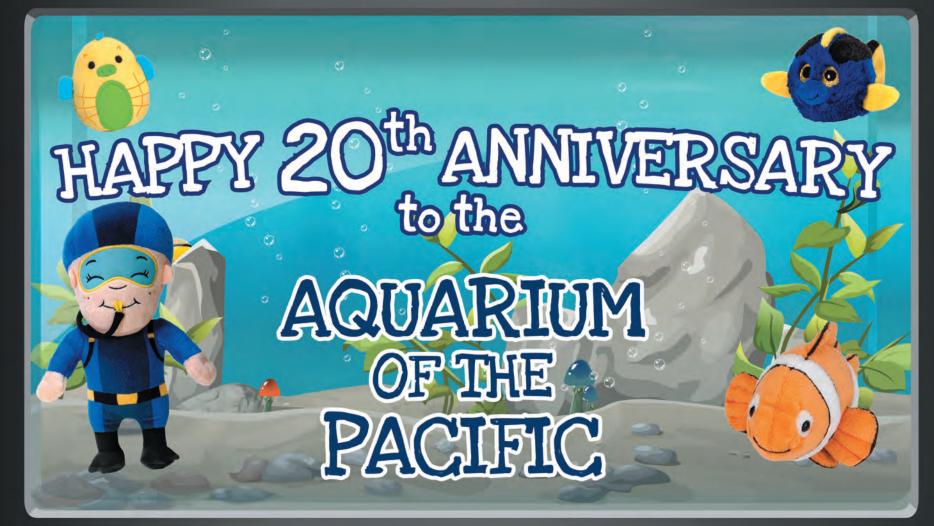
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Fighting For The Future Of The Environment Today

■ By Brandon Richardson

SENIOR WRITER

Since its inception, the Aquarium of the Pacific has been a vocal advocate for protecting the environment and has worked toward a vision of healthier, cleaner oceans. In order to spread this message, the Aquarium attempts to bridge the gap between complex scientific messages and the general public, according to Sandy Trautwein, interim vice president of husbandry and curator of fish and invertebrates.

"What we're finding now is that aquariums and zoos can play a much bigger role in facilitating conservation and research, particularly in the area of species recovery," Trautwein said. "Many zoos and aquariums have very rare and endangered species and, through the propagation of those species, sometimes it's the only chance for the survival of a particular species."

Internally, the Aquarium puts an emphasis on maintaining a sustainable animal collection, thereby reducing the demand for removing animals from the wild for its displays. The Aquarium has a program in

which it breeds and cultures its own fish in order to repopulate its exhibits.

The Aquarium's sustainable animal collection efforts serve more than itself. For example, AOP veterinarian Dr. Lance Adams focuses on the artificial insemination of zebra and bamboo sharks with the hopes of propagating the species in an aquarium setting to fulfill zoo and aquarium needs nationwide and internationally. His work led the Aquarium to become the first to successfully artificially inseminate and produce a zebra shark.

"We were also the first aquarium to breed and raise weedy seadragons, which is an endangered species off the southern coast of Australia," Trautwein said. "They are a pretty rare species but we were able to breed that species here and then share them with other aquariums throughout the world, including Germany."

In general, Trautwein said the Aquarium is not a conservation and research institute in and of itself, but rather that it facilitates such activities by providing an outlet for outside researchers and conservation biologists. The Aquarium has an in-depth application process in which proposals can be submitted for consideration. Trautwein said many proposals are from local university professors or graduate students looking to partner with the Aquarium and utilize its resources.

For example, Trautwein explained that, if a university professor hoped to study sharks in partnership with the Aquarium, a research proposal would be submitted to a committee to ensure it is in line with the Aquarium's mission and vision. If approved, the Aquarium would then assist in the research however possible.

One of the Aquarium's biggest research and conservation projects is its work

with the National Oceanic and Atmospheric Administration helping in the recovery of the endangered white abalone. Trautwein said the Aquarium is culturing white abalone onsite in order to out-plant them in the wild and recover the natural population. The Aquarium also works with reef restoration in Guam with its nonprofit partner SECORE (SExual COral REproduction). The efforts revolve around helping to spawn and culture corals in an aquarium setting to be out-planted in reefs around Guam annually.

"Our philosophy has always been that, if we can offer a unique, engaging experience to our guests through exciting animal displays or even interactive experiences like touching sharks and jellys, that can help facilitate envi
(Please Continue To Page 24)



Sandy Trautwein, interim vice president of husbandry and curator of fish and invertebrates, examines coral off the coast of Guam as part of the Aquarium's partnership with SEC-ORE, an organization dedicated to the conservation of the world's coral reefs, to help spawn and culture corals in an aquarium setting to be out-planted in the reef. (Aquarium of the Pacific Photograph)



Left: The Aquarium of the Pacific was the first aquarium to successfully artificially inseminate and produce a zebra shark. Right: A zebra shark bred at the Aquarium is introduced to its new home in Shark Lagoon. (Aquarium of the Pacific Photographs)





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(Continued From Page 22)



Aquarium Of The Pacific Page 24

Aquarium President and CEO Jerry Schubel holds a recognition plague commemorating the 10th anniversary of The Climate Registry, a nonprofit organization dedicated to the global reduction of emissions, presented to the Aquarium on May 17, 2017. The plaque reads: "In commemoration of their vision and environmental leadership as both a founding member of The Climate Registry and a participant in Southern California Edison's Cool Planet Project." (Aquarium of the Pacific Photograph)

ronmental stewardship," Trautwein said. "The more people we can engage and say, 'Look, here are the beautiful animals but also they're in trouble and need your help,' the more we can hopefully inspire change. I think we can really make a positive difference for our future."

Other conservation efforts at the Aquarium include upgrades to the space itself to be more environmentally friendly, studying sustainable seafood production, whale research, its scientific dive program, reducing single-use plastics, and working toward a climate-resilient Long Beach.

In 2015, Mayor Robert Garcia announced his intention of making Long Beach a climate-resilient city and requested the Aquarium to conduct an assessment related to climate change. The result of the Aquarium's effort was an 89-page report, which indicated the greatest impacts of climate change on the city.

"Around the globe there are general things that are going to happen because of climate change but every location might see a slightly different acute effect based on that location," David Bader, director of education at the Aquarium, said. "Here in Long Beach . . . in the coming years heat, drought, air quality and sea level rise are going to be the major impacts of climate change that will be the largest threat."

Last year, to bring the climate resilience conversation to the community, Aquarium educators launched a Twitter page, @resilientLBaop, traveled throughout the community with a special booth and released pamphlets as quick reference guides to the data they have gathered on climate change impacts on Long Beach. These efforts were funded by grants from the National Science Foundation and funds from the California Coastal Commission's Whale Tail license plate program.

The Aquarium holds Community Conversation workshops to engage community leaders in the discussion about climate resilience in order to highlight the need of the public to think and act upon strategies to become more climate resilient as a city, as the impacts of climate change worsen. Bader explained that climate change mitigation efforts have an effect over a long period of time,

whereas climate resilience efforts have a much more immediate impact, such as water conservation in order to prepare for increased droughts.

Bader said that, through the process of developing its report, Aquarium staff realized cultural science institutions such as the AOP can play a much larger role in the communities they are based in. Being located in Long Beach, Bader said the Aquarium can connect with and engage the city's residents regarding topics such as climate change and climate resilience in ways it can't with other communities.

"We ask people what they love about Long Beach and then what they would be willing to do to protect it from climate change in the future. Having those kinds of conversations and focusing on the aspirations of our communities, we can be a better neighbor," Bader explained. "We can be a better servant of Long Beach to support the various diverse communities to be resilient and be able to bounce back in the face of the challenges we are going to have because of climate change."



Charter Animal Profile

Name: Charlie

Species: southern sea otter (Enhydra lutris nereis) Exhibit: BP Sea Otter Habitat, Northern Pacific Gallery

Birth date: March 1, 1997 (approx.)

Charlie came to the Aquarium from the Monterey Bay Aquarium's (MBA) Sea Otter Research Conservation Program. He was orphaned and then rehabilitated and cared for by the MBA staff until the Aquarium of the Pacific was selected as his permanent home. He has a habit of sucking his paw. At over 20 years old, Charlie is the oldest male sea otter living at any zoo or aquarium. Charlie was the first otter in the world to give a voluntary blood sample. Animal care staffs at zoos



and aquariums previously thought sea otters too active and temperamental to cooperate for a blood draw. Aquarium of the Pacific staff members successfully trained Charlie to sit still for the procedure by rewarding him with clams, his favorite food. Charlie's excellent response to training made him the top candidate for a two-year study of sea otter hearing. In 2011, Charlie was temporarily loaned to the Long Marine Lab at University of California, Santa Cruz, to participate in the study. He returned in 2013.

Species overview: Sea otters, the smallest and most recently evolved of all marine mammals, are in the family Mustelidae that also includes weasels, ferrets, badgers, skunks and minks. Southern sea otters are found along the coast of northern California just south of San Francisco to Santa Barbara County in central California. These coastal animals spend almost their entire life at sea and most of the time on the water's surface. They range from three to four feet in length and weigh between 35 and 90 pounds. In the ocean, sea otters eat 25% to 30% of their body weight each day. Otters mostly feed on invertebrates such as sea urchins, squid, octopus, crabs, mussels, abalone and other mollusks. Sea otters are the main predators of kelp-eating species such as sea urchins and abalone. Without sea otters, kelp forests are greatly reduced, resulting in the loss of habitat for many fish species. The coastline would also lose its buffer against storms.

<u>Conservation</u>: Sea otters have faced many threats over the years. Hunting nearly wiped out the entire population by the early 1900s. Now a protected species, California's sea otters have grown from a group of 50 in 1938 to about 2,800 today. But they continue to face many serious risks, and the help of a caring public is needed to ensure that the species thrives.



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No Man Is An Island: The Aquarium Expands Its Environmental Reach To Kiribati

■ By ANNE ARTLEY
STAFF WRITER

The Aquarium of the Pacific in Long Beach has extended its conservation efforts across the ocean to the island nation of Kiribati, located approximately halfway between Australia and Hawaii. The Long Beach icon joined the board of the Phoenix Islands Protected Area (PIPA), one of the world's largest marine protected areas, which covers one of three island groups that make up Kiribati.

Anthony Brown, the Aquarium's vice president of finance and chief financial officer, made a trip to the islands in December. Kiribati (pronounced Kiri-bas) is made up of three archipelagos: the Gilbert, Phoenix and Line islands. The Aquarium plans to focus its efforts in Tarawa, Kiribati's most

developed island. Brown will oversee the finances related to PIPA initiatives.

"The people seem very happy," Brown said of Tarawa, located in the Gilbert island chain. "The island is beautiful, but faces a lot of challenges like cleanliness and the long-term answer to the rising sea level. Unfortunately, there's a lot of trash that washes up on the beach. There's zero tourism because there are a number of conservation issues this country is faced with."

According to information from the Aquarium, the PIPA protected area was created in 2006 to safeguard the coral reefs and preserve the ecosystem, which is largely free of human impacts. The protected area is

about 157,626 square miles and is located five degrees south of the equator. Only about 25 people live on the Phoenix Islands, and they are government employees and their families.

One goal of PIPA is to establish a learning center for conservation-related issues at Betio Elementary School, located in Betio, Tarawa's largest city. The school has already implemented programs to teach recycling.

"We hope to extend our goal of teaching conservation," Brown said. "Tarawa is subject to sea level rise. The island is projected to be uninhabitable in 35 to 50 years. Nearly 60,000 people somewhere down the line are going to become refugees, and it's the kids who're going to have to make those tough decisions. It's not immediate, but the best that can be done is to educate everyone, and especially the kids."

To improve the environment, PIPA established the Clean Green and Blue Project in Betio. Its slogan is "clean, to green, to blue." One of its past initiatives was to plant mangrove trees to assuage the sea level rise. Mangroves thrive in hot,

trees to assuage the sea level rise. Mangroves thrive in hot, salty conditions that would kill most other plants. Their thick, intertwined roots serve as a barrier for rising water, according to Brown. The Clean Green and Blue Project has also organized beach cleanups.

"We saw firsthand how kids at Betio Elementary are participating in a reuse and recycle program. They were making things out of plastic," Brown said. "I saw a big rice bag converted into a handbag. It was a very creative effort."

To encourage education, the PIPA board awarded a scholarship to a Kiribati native who is studying marine biology at Scripps College in Claremont, California.

"When the island sinks, [the people] need to have the skill knowledge to be sustainable somewhere else," Brown said. "There's no silver bullet solution. And they have to live there [in Kiribati] in the meantime. Efforts toward education and conservation have to go a long way."

According to Brown, the Aquarium may feature an exhibit on Tarawa and the environmental challenges the residents are facing. Kiribati is also expected to have more representation in the Aquarium's annual Pacific Islander Festival in June. The event features music, dance and cultural crafts from island nations such as Fiji, Hawaii and Tahiti. The next meeting of the PIPA board and Kiribati government officials is expected to take place at the Aquarium next month.





The island nation of Kiribati is made up of three archipelagos: the Gilbert, Phoenix and Line islands and is located approximately halfway between Australia and Hawaii.







Safe For Land And Sea: The Aquarium As A Green Facility

■ By Anne Artley

STAFF WRITER

Reducing plastic straws and bottles, installing plants that require little water and employing sustainable construction practices are some of the ways the Aquarium of the Pacific is conserving water, plastic and energy to maintain its status as an environmentally friendly facility.

"It has been a sustainable facility since it opened," John Rouse, the Aquarium's vice president of op-

erations, said. He added that, "Back in 2004 or 2005, when energy costs went up dramatically, it was a catalyst for the Aquarium to work harder on [lowering] energy use."

For 16 years, the Aquarium has used waterless urinals and dualflush toilets, which Rouse estimated has saved 960,000 gallons of water every year. The facility's 6,000 square feet of gardens also houses plants that require little water. The drip irrigation system ensures that minimal water is wasted, and an irrigation controller customizes the watering schedule based on the weather each day.

The Aquarium aims to impart the conservation message to visitors through its "Our Water Future" exhibit. A three-dimensional model of the Los Angeles and San Gabriel River watersheds simulates rain to teach visitors the path of water in the region once it exits the clouds. The exhibit educates on individual water-saving practices as well as how to maintain the supply of water needed in Southern California.

The SAVOR Watershed Classroom, located within the exhibit, serves as an example of sustainable architecture. The structure's lights and ceiling fans are powered by solar energy. According to Rouse, the classroom is the first building in Long Beach to obtain a Leadership in Energy and Environmental Design (LEED) Platinum designation, which is LEED's highest rating. Earning this worldwide green building accreditation requires fulfillment of about 45 environmental standards, Rouse said. These include features to conserve water and

power as well as the use of recyclable construction materials.

Rouse said any energy-saving project "absolutely" saves the Aquarium money. "It's a good motivator, along with the environment," he explained.

The Aquarium has partnered with Southern California Edison on a number of initiatives. One of these projects is a chilled water loop that creates air conditioning for the tanks. According to Rouse, the Aquarium invested \$100,000 into the project and received a

"We've gotten rebates for our greening strategies to reduce our energy use, which has been flat for the past few years," Rouse said. "Our energy cost for kilowatt hours [a unit of measure for energy use] has been flat over the last 10 years."

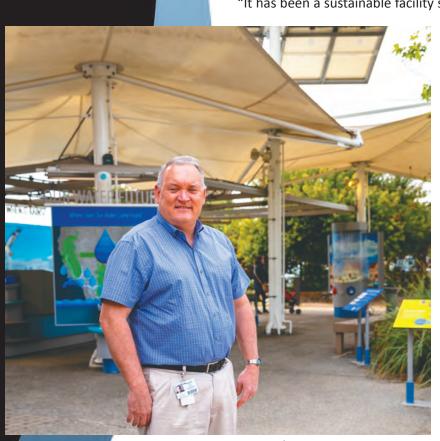
The Aquarium also participates in Edison's Demand Response Program, for which businesses reduce energy consumption on peak power usage days to relieve stress on the electricity grid. Rouse estimated that on these days, usually in the summer, the Aquarium cuts its energy use by about 200 kilowatts. For perspective, the average dishwasher uses 1.2 to 1.5 kilowatts every year and the average oven about 2.15 kw, according to Modernize Home Empowerment.

The Port of Long Beach has also invested in the Aquarium's sustainability. About three years ago, the port granted the Aquarium approximately \$300,000 to replace all of its boilers, which reduced greenhouse gas emissions, Rouse said.

The Aquarium of the Pacific is a member of the Aquarium Conservation Partnership, a national organization made up of 27 different institutions. Its current project is reducing plastic straws in the ocean, which is in line with the Aquarium's goal to cut back on plastic bottles in its dining areas. "By 2020, we'll significantly reduce our 20-ounce drinks in plastic bottles and replace them with fountain drinks. Our cups are paper and compostable," Rouse said.

Another future goal is to add fuel cells to the Aquarium. These provide another energy source by generating electricity through a chemical reaction. Rouse said the Aquarium's new Pacific Visions wing, due to open next spring, will earn Green Globes for sustainable construction. Green Globes is an environmental building certification program used in Canada and the United States. It ranks buildings with "Green Globes" based on the number of sustainable practices incorporated.

"Our goal is to maintain current water levels even though we're expanding by about 27,000 square feet," Rouse said. "Our energy goal is to not add more energy usage to the grid." ■



Vice President of Operations John Rouse is pictured in front of the "Our Water Future" exhibit, which educates guests on water conservation. Reducing water use is an ongoing project at the Aquarium. The goal is to maintain current water levels even though the facility is expanding, Rouse said. (Aquarium of the Pacific Photograph)





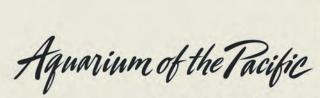




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Page 30

From Sea Lions To Squid: A Glimpse Of Life Behind The Glass

■ By **Anne Artley**Staff Writer

The Aquarium of the Pacific houses a total of 500 species, which include fish, mammals, birds and invertebrates, according to the Aquarium's interim vice-president of husbandry, Sandy Trautwein. To care

for the animals, the Aquarium retains about 50 people in the husbandry department. These are positions that require a "jack of all trades," Trautwein said.

"Not only do you have to know about animal husbandry and how to best care for a species, but you also have to know about plumbing, filtration, lighting, water chemistry and diving," she said. "It's a multi-dimensional position that attracts a lot of people because every day is different." Trautwein is also the curator of fish and invertebrates, which are defined as any animal without a spinal column. These can range from insects and spiders to crustaceans, squid and octopuses.

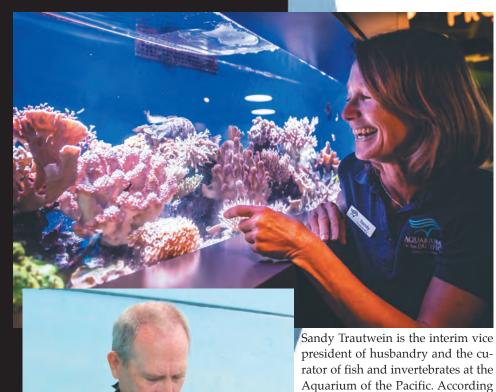
The job responsibilities of the animal care specialists include feeding the animals up to four times per day, working with them in training sessions and diving into the exhibits several times per week to clean them. The Aquarium's smallest exhibit has about 10 gallons of water and the largest about 350,000, according to Trautwein. The animals also have a vitamin regimen, Wigdahl said. The Aquarium employs a full veterinary staff on site.

"We have to be here 365 days, seven days per week. The animals don't know whether it's a holiday or a vacation. They don't have Christmas off," the Aquarium's curator for mammals and birds, Dudley Wigdahl, said. "This job is taken up by a lot of dedicated people who have a strong interest."

According to Wigdahl, the sea lions and the sea otters are the most popular exhibits. The Aquarium offers behind-the-scenes tours in which guests can feed and learn about these animals in a more intimate setting.

"Sea lions and sea otters are the biggest winners with our guests," Wigdahl said. "[Sea otters] are cute, and you don't get to see them locally since they're found north of Santa Barbara." He noted that the southern sea otter is an endangered species, and that the Aquarium possesses two of the oldest in captivity: Brooke and Charlie, who are both 21 years old.

In addition to the sea otters, the Aquarium supports other threatened species with the aim of reintroducing them into the wild or giving them to other aquariums if needed. Trautwein said a program is underway to cultivate the white abalone, an endangered species of sea snail. The Aquarium is working with the National Oceanic and Atmospheric Administration to integrate them back into their natural habitat. Sea dragons, which are found in only one region of Australia, are another endangered species that guests have the opportunity to encounter. (Please Continue To Page 32)



Dudley Wigdahl, the curator of birds and mammals at the Aquarium of the Pacific, cradles a southern sea otter. The otters are one of the most popular exhibits and also an endangered species. (Aquarium of the Pacific Photograph)

to Trautwein, the Aquarium houses a total of 500 species and employs

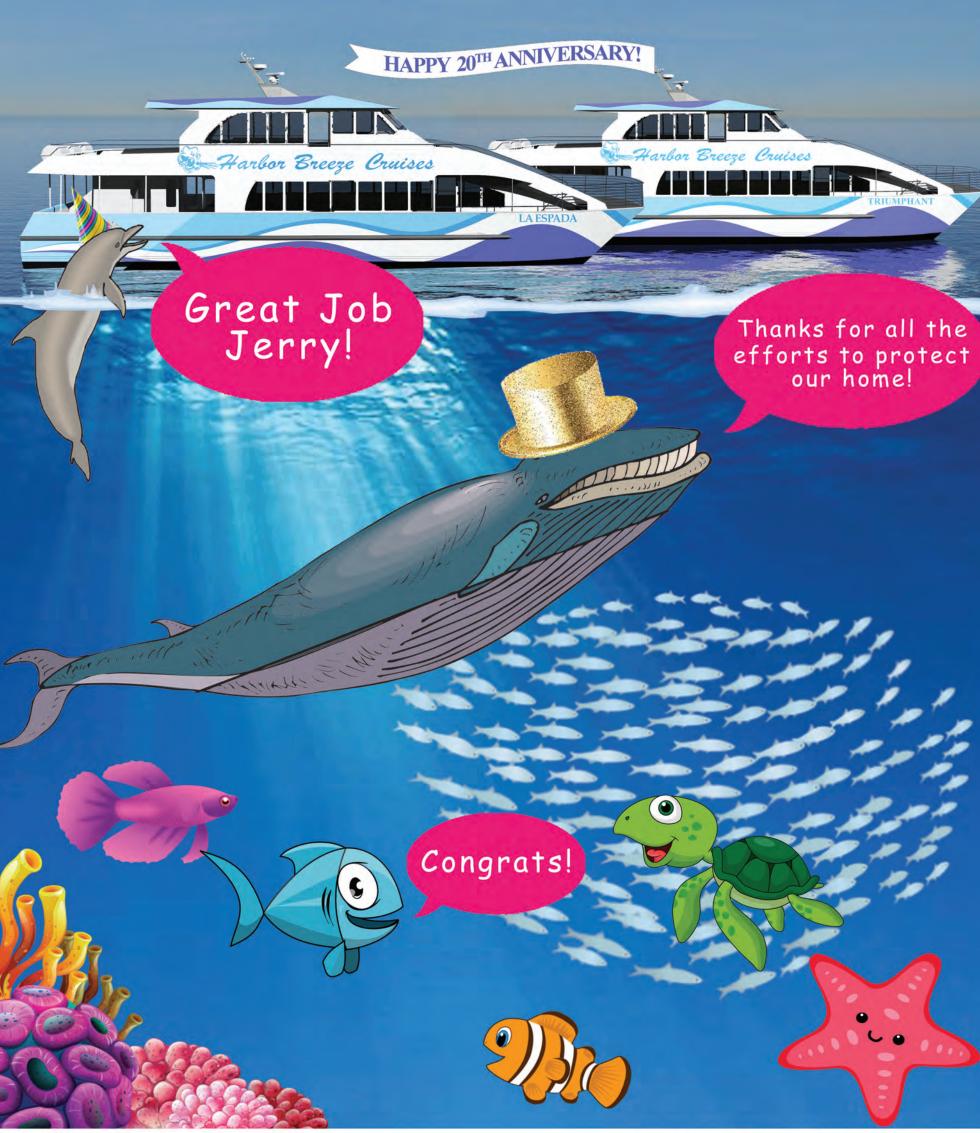
about 50 people in the husbandry de-

partment to care for them. (Aguar-

ium of the Pacific Photograph)



A sea turtle receives a meal. The animal care specialists feed the animals up to four times per day. A group of sting rays come up for food. The animal care specialists are on the job seven days per week, said the Aquarium's curator for mammals and birds, Dudley Wigdahl. (Business Journal Photographs)





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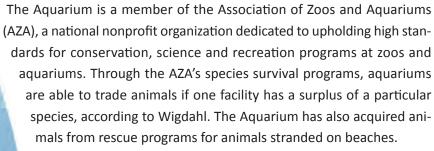
Aquarium Of The Pacific Page 32

Left Side From Top

- Wrasse
- Guam Kingfisher
- Magnificent Tree Frog
- Lorikeet

Right Side From Top

- Porcupinefish
- Queensland Grouper
- Giant Japanese Spider Crab
- Balloonfish
- Unicorn Surgeonfish
- Black-necked Stilt (Aquarium of the Pacific Photographs)



"Some animals can be rehabilitated and returned to the wild, but some of them can't," Wigdahl said. "Maybe this

is due to blindness, or maybe a loss of a flipper due to a shark bite."

Other means of acquiring animals include breeding them within the facility or obtaining a government permit to collect them from the wild. Wigdahl said the Aquarium has never had to collect them from the wild.

When planning an exhibit, the Aquarium staff takes into account the interests of guests as well as the message or theme they are trying to communicate, according to Trautwein. An upcoming exhibit, "Tentacles & Ink," focuses on cephalopods, a group that includes squid, octopuses and cuttlefish. It is set to open May 25. The main theme is biodiversity of tropical environs.

 $\hbox{``When people think of tropical environs, they think}\\$

of coral reefs, but we want to celebrate other species,"

Trautwein explained. "[Cephalopods] are considered the more intelligent invertebrates. We'd like to talk about how their intelligence and evolutionary strategies have allowed them to persist for so long. Now, they make up a large part of [life in] tropical reefs."

Trautwein said that, with each exhibit, the Aquarium aims to engage the guest or offer a new perspective. Visitors have the opportunity to touch sharks and moon jellyfish. One exhibit monitors the motions of

jellyfish and translates them into music.

"It's really amazing and beautiful," Trautwein said. "People are amazed to learn that, as these jellies pass in front of sensors . . . [they] are actually converting their movement into sound. It's an incredible experience."

In addition to entertaining the guests, Wigdahl explained that one of the Aquarium's goals is to connect the experience to larger environmental themes, such as global warming, pollution and overfishing.

"When guests come in, we have an opportunity to enlighten them on things they can do from their own home, let them know the state of the world, and sensitize them to the environment," he said. "Hopefully we can make an impact so we're better off with the next generation."







Name: Ellie

Species: Atlantic Harbor Seal (Phoca vitulina)

Exhibit: Seals and Sea Lions Habitat, Southern California/Baja Gallery

Birth date: May 16, 1989

Ellie was born at the New York Aquarium in Brooklyn, where she was named Elga in honor of a local philanthropist. When she came to the Aquarium of the Pacific in 1998 for the grand opening, she was renamed Ellie. At the time, Ellie was the largest harbor seal in the exhibit. She has an easygoing personality and is easily distinguished from the two larger Pacific harbor seals, Shelby and Troy. Ellie has a vision disability so she relies on her

sensitive whiskers to navigate and explore their world. The whiskers are highly sensitive to vibrations so they act like tactile antennae to movement in the water.

Species overview: Pacific harbor seals are found in the Pacific Ocean from the southern coast of Alaska to the northern portion of Baja, Mexico. Atlantic harbor seals are found in the Atlantic Ocean from the Canadian Arctic to New York, and occasionally off the Carolinas. They range in size from 4 to 6.6 feet long and weigh between 110 to 375 pounds. They may spend up to 85% of the day diving for prey, primarily schooling and bottom-dwelling fishes, although they are also partial to some invertebrates including cephalopods and crustaceans. They can live up to thirty years.

<u>Conservation:</u> Harbor seals are protected by the Marine Mammal Protection Act. While the species is not currently listed as endangered or threatened, harbor seals are very sensitive to human encroachment.



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Downtown Long Beach Alliance wishes the Aquarium of the Pacific a happy 20th anniversary!

For 20 years the Aquarium of the Pacific has inspired and educated visitors of all ages. But beyond the milestones, it's the countless smiles and looks of wonder that matter most. Here's wishing another 20 years of smiles and wonder created by our friends and neighbors at the Aquarium of the Pacific.



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Engaging And Educating Youth Produces Future Stewards Of The Oceans

■ By Brandon RICHARDSON SENIOR WRITER

In order to achieve its mission to instill a sense of wonder, respect and stewardship for the Pacific Ocean, the Aquarium of the Pacific (AOP) continues to introduce new educational tools and programs to engage its visitors. A primary target for these educational efforts are its young attendees.

"It's important to engage the breadth of society in becoming stewards for the Pacific Ocean and helping to fulfill the mission and vision of the institution," David Bader, director of education for the Aquarium, said. "But often youth are more engaged in taking those actions, so they are a prime audience for us to engage with."

Every year, about 165,000 students and teachers from the

Greater Los Angeles Area visit the Aquarium for field trips. According to Bader, these attendance numbers make the AOP one of the most highly attended aquariums in terms of school visits. Annually, around 30,000 students and teachers visit the Aquarium as part of a scholarship program in which donors cover the cost.

Of the total field trip visits, between 60,000 and 70,000 include onsite classroom programs where students participate in a 45- to 50-minute lecture and activity. Programs range from basic invertebrate classes for K-2 students to squid dissections for high school Advanced Placement Biology students. All scholarship students participate in a classroom program. The AOP offers some pre-K and college programming as well.

Outside of the classroom programs, field trippers enjoy the same experiences as general guests to the Aquarium, which houses more than 50 exhibits showcasing more than 11,000 species native to the Pacific Ocean. However, school field trips are just the tip of the iceberg when it comes to youth and student engagement at the Aquarium.

"We have some of our youth that are doing what is called Science Cafe, where they decide on a topic they want to hear about and we help them to get an expert to speak about it," Bader said. "They are responsible for inviting their friends to come and listen to a science lecture on a topic they created. It's been a really successful program. We're seeing and serving an audience that we don't typically see and serve – students who are coming out because they are passionate and interested in learning about marine life."

For families with children ages 2 to 6, the Aquarium offers parent-and-me classes related to sharks, penguins, octopuses and otters. For "junior biologists" (ages 7 to 12), the Aquarium offers Kids Adventures classes on birds and reptiles, fish, marine mammals, invertebrates, sharks and conservation. In addition, various summer and winter camps are available for youth ages 3 to 15. The

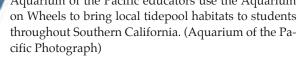
mer and winter camps are available for youth ages 3 to 15. The

Aquarium even has a partnership with local Cub Scout and Girl Scout groups that allows troops to earn badges. Birthday parties, tours, animal

Teens ages 13 to 17 may sign up to job shadow an Aquarium mammologist, veterinarian, marine biologist, or penguin and lorikeet biologist. For high school students, the Student Eco-Ambassador program is available, which includes a travel-abroad experience to Ecuador. The Aquarium's VolunTEEN program helps high school students achieve required service learning hours for graduation.

"Engaging youth is a great way of ensuring future ocean stewards and people who take action to support ocean conservation," Bader said. "But we also have to recognize that our audience is not monolithic. We serve everyone from kids who come with their families to adults who come on their own to participate, and we need to be able to engage with all levels to ensure we're being as impactful as we possibly can."







Students touch marine life as part of Tidepool Animal Exploration aboard the Aquarium on Wheels. (Aquarium of the Pacific Photograph)

encounters and overnight stays are also available.

Experience!



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The Aquarium Of The Pacific – A Center For Education

The Aquarium of the Pacific is more than just a venue to view marine life – it is also a center for education. The Aquarium is regularly host to a variety of guest speakers and academic forums, and features a variety of ongoing programming designed to educate guests about the world's oceans and the environment.

Guest Speaker Series

AQUARIUM OF

Former Los Angeles Times food writer and columnist Russ Parsons speaks during an Aquarium forum. (Aquarium of the Pacific Photograph) The Aquarium's Guest Speaker Series invites a broad spectrum of experts in the fields of science, marine biology, oceanography, conservation and government, as well as artists, photographers, authors and explorers to share their experiences with the public. Attendees have the opportunity to hear directly from these experts and ask them questions, receiving up-to-date information and learning about the latest discoveries relating to the speaker's topic. Each presentation is broadcast live on the Aquarium's website. Tickets are \$5; Aquarium members, teachers, students with valid ID and seniors ages 62 and above receive free admission. For a schedule of upcoming lectures, visit www.aquariumofpa-

cific.org/news/lectures.

Aquatic Forums

The Aquarium regularly hosts scientists, policymakers and others in forums to search for solutions to the most pressing and complex problems facing the ocean and environment. Past forum topics include

aquaculture, climate change in Southern California, California's drought, extreme weather, coastal and marine spatial planning, and the urban ocean. Reports from these meetings are available by request and at aquariumofpacific.org/mcri/category/forums.

In 2017, the Aquarium partnered with founding sponsor

Honda to develop two forums. The first was held in March and focused on oyster restoration. The second forum in November, "Sato-Umi in the Anthropocene," examined a Japanese principle for coastal management and how it might be applied in Southern California. In March 2018, the Aquarium will host a forum on how sea level rise will redraw the world's coastlines, and in September a forum will be held with the Aquarium's Seafood for the Future program on the topic of marine aquaculture and sustainable seafood. American Honda is the Aquarium's forum sponsor.

(Please Continue To Page 38)



Aquarium President and CEO Jerry Schubel speaks during an Aquatic Academy event. (Aquarium of the Pacific Photograph)

Charter Animal Profile

Names: Theo and Lou

Species: Olive Ridley Sea Turtles (Lepidochelys olivacae) Exhibit: Tropical Reef Habitat, Tropical Pacific Gallery

Birth date: January 19 and 21, 1995

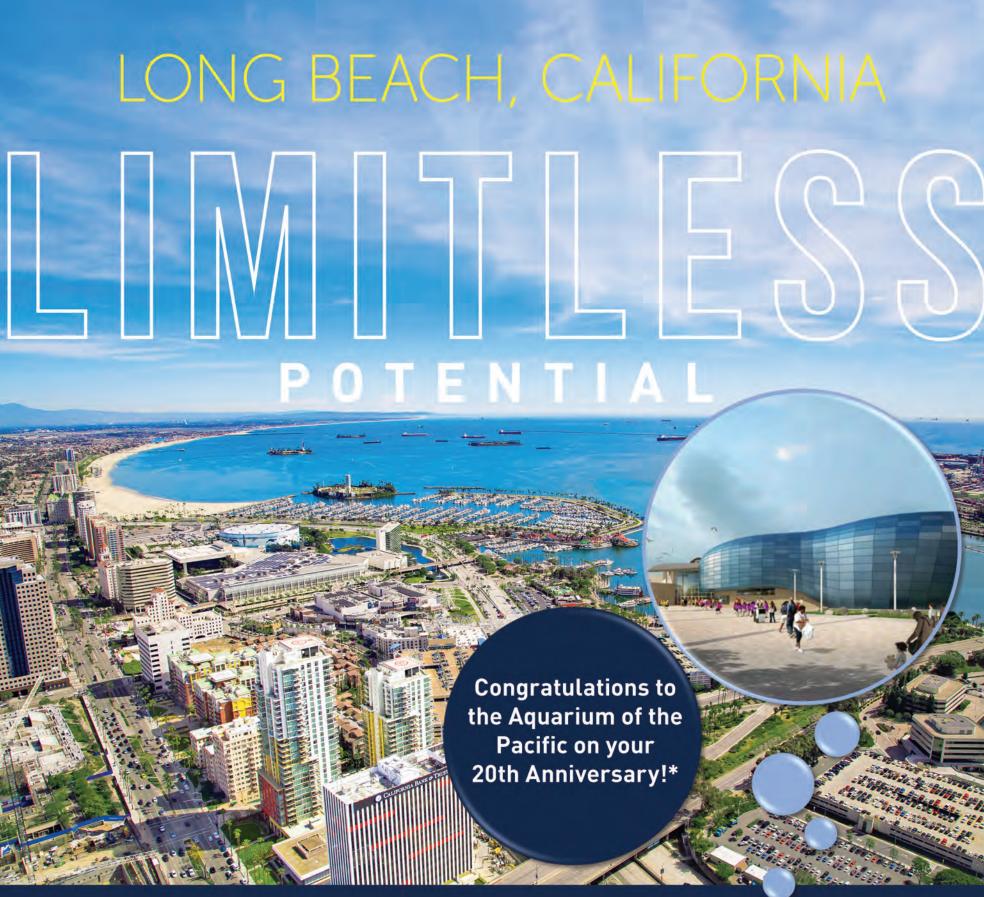
The Aquarium of the Pacific received two olive ridley sea turtles in June 1999 from the Texas State Aquarium in Corpus Christi. They were originally seized as eggs by Fish and Wildlife agents at the Dallas Fort Worth Airport on November 23, 1994, from a woman who was traveling back to the U.S. from Guatemala. A routine baggage inspection re-

vember 23,1994, from a woman who was traveling back to the U.S. from Guatemala. A routine baggage inspection revealed a plastic jar with thirty sea turtle eggs inside the woman's suitcase. The eggs were given to her by a friend or relative who had collected them from the west coast of Guatemala, where they are commonly used as food. The eggs were transferred to the Dallas Zoo, where five hatched in January of 1995. Two of the five hatchlings survived, and it was hoped they would be released back into the ocean, possibly in Costa Rica. Eventually, it was determined that they were unreleasable, and the Aquarium of the Pacific made arrangements for them to be transferred here. Upon their arrival, the turtles were thought to be female and named Thelma and Louise. It was later discovered they were in fact male and they were renamed Theo and Lou.

Species overview: Olive ridley sea turtles are the smallest and most numerous of the seven sea turtle species. The 'olive' in their common name comes from the coloration of the adults. Males usually spend their entire lives at sea while females characteristically only leave the water to lay their eggs, usually on the beach where they themselves hatched. They live in tropical waters of the Pacific and Indian Oceans, and along the south Atlantic coast of east Africa and South America. Olive ridley sea turtles have a upper shells that grow up to 2.6 feet long and weigh 80 to 100 pounds. These turtles, which are equipped with powerful jaws, are omnivores, feeding mostly on a wide variety of invertebrates such as shrimp, sea jellies, lobsters, and crabs. They also prey on fish. These turtles are migratory, sometimes traveling several thousand kilometers (miles) between feeding grounds and nesting sites. It is believed they can live 50 to 60 years.

<u>Conservation:</u> The olive ridley sea turtle is an endangered species. They have a naturally high mortality rate as hatchlings and juveniles, compounded by human threats, including encroachment on their nesting areas, entanglement in trash or derelict fishing gear, and being accidentally caught by commercial fishing boats, such as shrimp and fish trawlers.





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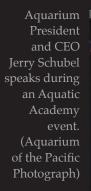
(Continued From Page 36)



Aquarium Of The Pacific Page 38

Aquatic Academy (Adult Education)

The Aquarium fosters lifelong learning and dialogue on complex and pressing issues related to the ocean and environment through its Aquatic Academy. This program offers short series of courses for adults that bring together experts in science, business, conservation, policy, and academia to share their knowledge and experiences with attendees. The Aquarium typically holds two Aquatic Academy sessions each year, each comprised of a series of four evening classes in which attendees hear presentations and panel discussions by scientists and other experts. Participants get in-depth information about timely environmental





topics and the most current data and interpretation from the speakers. Previous Aquatic Academy courses have covered genetically modified organisms (GMOs), ocean exploration, integrating art and science to tell stories about the environment, extreme climate-related events, and other ocean and environmental issues. The Aquatic Academy in March 2018 is slated for four consecutive Wednesdays starting March 7, 2018. The topic is sea level rise and its global impacts on coastlines.



The Aquarium's Ocean Science Center uses the National Oceanic and Atmospheric Administration's "Science on a Sphere" to "explore [the] planet and tell stories about ocean phenomena and their impacts," according the Aquarium website. (Aquarium of the Pacific Photograph)

Ocean Science Center/ Science On A Sphere

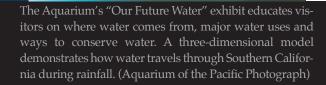
Climate literacy is a major emphasis for the Aquarium. The Aquarium's partnership with the National Oceanic and Atmospheric Administration (NOAA) led to the installation of Science on a Sphere®, a display system NOAA created to help the public better understand global ocean, climate, and weather phenomena. Science on a Sphere displays visualizations built on near-real-time data and images collected by satellites and other instruments around the world. The Aquarium has created more original programming for the Science on a Sphere® than any other of the more than 100 institutions around the world that house one. Journey around the globe to explore the atmosphere, ocean, and continents

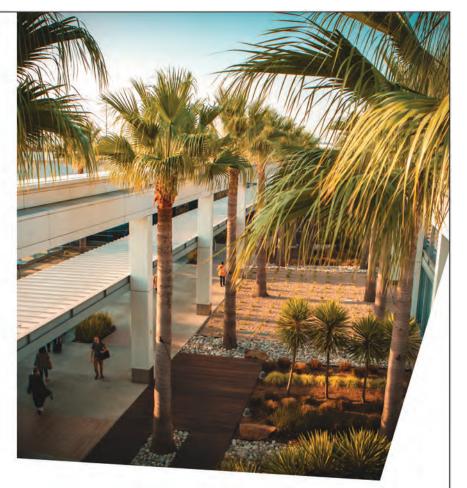
with an immersive exhibit that uses technology to take you on a virtual exploration. You'll see how climate change and maritime trade and ports impact our lives no matter where we live on the planet. Other shows cover the topics of sustainable seafood, El Niño, extreme weather, ocean exploratio, and more. The Ocean Science Center uses state-of-the-art technology from NOAA. In 2018, the Aquarium will debut a new show for Science on a Sphere on human migration.

Our Water Future

The Aquarium's former Our Watersheds: Pathway to the Pacific exhibit area has been renovated and transformed into the new Our Water Future exhibit. The newly themed area opened on May 26, 2017, and features interactive exhibits, digital displays, a monarch butterfly garden, and other components.

The aim is to help visitors understand where our water comes from and what conservation issues we face with our water supply now and in the future. Guests can find out what they can do to conserve water and which actions are most effective.





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2

Aquarium Of The Pacific Page 40



The Aquarium As A Gathering Place – Annual Cultural Festivals

Cultural festivals have been a part of the Aquarium's calendar of events for most of its history and highlight the institution's role as a community gathering place. These festivals celebrate our region's diversity and bring various groups together to share their connections to the ocean and our planet, their cultural traditions and their talents, including performing and visual arts and artisanal crafts. For an updated schedule of festival events, visit www.aquariumofpacific.org/events/category/festival.

January: Festival of Human Abilities

The Festival of Human Abilities is a celebration highlighting the creative talents and abilities of people with disabilities. This event will feature free classes and performances including wheelchair dance, live music, sign language choirs, art demonstrations and accessible scuba diving demonstrations.

February: African-American Festival

The African-American Festival celebrates the rich diversity of African-American and African cultures and features live entertainment and arts and crafts. Festival performers include Mardi Gras second line dancers, hip hop and break dancers, jazz musicians, interactive drum circles, West African dancers, and story tellers.

March: International Children's Day, Noche de Estrellas

International Children's Day is a festival celebrating the amazing talents of

children of many cultures. Enjoy live children's performances, along with martial arts demonstrations and an international children's choir. Kids of all ages can partake in crafts and games. The Aquarium will also honor a local youth with its annual Young Hero Award in recognition of his or her efforts to make our planet a better place.

Noche de Estrellas is the Aquarium's Latin-themed late night, with discounted admission and live bands, DJs, Mexican cuisine, and underwater dive shows.

April: Earth Day Celebration, Urban Ocean Festival

Learn what you can do to help our ocean planet at the Aquarium's annual Earth Day Celebration, featuring booths

from various earth-friendly organizations and hands-on learning demonstrations for people of all ages.

The annual Urban Ocean Festival includes art exhibitions, a fashion show, mural painting, poetry readings, live music, educational activities and a contest for designs using recycled materials.

June: Pacific Islander Festival

Discover the rich and diverse cultures of the Pacific Islands. Experience traditional island music, dance, and cultural crafts. Enjoy hula, Tahitian drumming, and Hawaiian games. See artisans demonstrate their traditional art of weaving.

September: Moompetam Native American Festival, Baja Splash

The annual Moompetam Festival features traditional cultural crafts, storytelling, educational programs, live demonstrations,

music, and dance celebrating the indigenous California maritime cultures, including Tongva, Chumash, Acjachemen, Costanoan, Luiseno, and Kumeyaay.

In celebration of National Hispanic Heritage Month and Mexican Independence Day, the Aquarium hosts its annual Baja Splash Cultural Festival featuring live entertainment, crafts, and educational programs. Mariachi music, Mexican folkloric and Aztec dance troupes, interactive mural painting, Salvado-

ran dance, Guatemalan performances and other special programs are featured. Guests can also learn more about the animals of Baja, Mexico, and how to help protect them.

October: Southeast Asia Day

Southeast Asia Day highlights the beauty and diversity of the cultures of Cambodia, Thailand, Vietnam, Myanmar, Laos and Indonesia. Guests will enjoy live performances, including music, dance, and cultural craft demonstrations. Children will have the opportunity to partake in arts and crafts.

November: Autumn Festival

Autumn Festival highlights the traditions and cultures of Japan, China, Korea and the Philippines through a weekend of learning opportunities and family entertainment celebrating the rich diversity of Asian and Asian-American cultures.







Exemplifying Human Abilities: Haben Girma

The Aquarium presented Haben Girma with the Glenn McIntyre Heritage Award at its Festival of Human Abilities on January 28, 2018. The daughter of East African refugees and the first Deafblind person to graduate from Harvard Law School, Girma is an advocate for equal opportunities for people with disabilities. She works as a consultant and public speaker, combining her knowledge of law, sociology and technology to teach her clients the benefits of fully accessible products and services. She is advising the Aquarium on ensuring that the new Pacific Visions expansion is fully accessible. Until 2016, Girma worked as a civil rights attorney. President Obama named Girma a White House Champion of Change in 2013, and Forbes recognized her in Forbes 30 Under 30 in 2016. Girma currently serves on the board of directors for the Disability Rights Bar Association and Helen Keller Services.



This sculpture of marble and wire was

part of a 2017 art exhibition at the Aquar-

ium meant to highlight the challenges as-

sociated with climate change. The piece by artist Lilleane Peebles is entitled, "Tip-

ping Point Climate Change." (Aquarium

Art Collaborations

The Aquarium of the Pacific has become known not just as an attraction and center for environmental and marine education, but also as a cultural venue. The Aquarium often partners with regional arts institutions, marrying the arts and the sciences to create unique modes of storytelling about the Pacific Ocean and our planet.

Museum Of Latin American Art

In January, the Aquarium and the Museum of Latin American Art (MoLAA) hosted a joint lecture series on the integration of art and science. Through this partnership, the Aquarium hosted a lecture on January 18 by JD Talasek, the director of Cultural Programs of the National Academy of Sciences. He discussed how creating better dialogue and collaboration between art, science, engineering, medicine and the humanities is an opportunity to challenge perspectives and inspire impactful change. He also provided an overview of some of the activities occurring in the National Academy of Sciences' Office of Cultural Programs that explore the integration of art, science, and other creative inquiries. On January 24 MoLAA, hosted a lecture by Sasha Huber, who discussed the roles of artists and scientists in society. She focused on the impacts of colonialization on the environment.

ArtCenter College Of Design

The Aquarium has partnered with the ArtCenter College of Design in Pasadena, California, for nearly a decade. Students in the Designmatters program work with Aquarium experts to learn about ocean and environmental topics to create projects that address these issues. In 2016, the two partner institutions were awarded a grant from the National Endowment for the Arts to develop projects focusing on climate change and coastal resiliency. The Aquarium and ArtCenter developed the Resilient Coastal Cities Studio to challenge students to conceptualize, design, and create an exhibit that would effectively communicate a call to action for the residents of Long Beach and other coastal cities for resiliency in the face of climate change. The outcome of this seminar will be used in future exhibits at the Aquarium.

Art Exhibits

Throughout the year, the Aquarium exhibits artwork that illustrates our connection with the planet through painting, drawing, photography, sculpture or installations. In 2017, an art exhibition called "Weather on Steroids: The Art of Climate Change Science" from the La Jolla Historical Society was displayed in the Aquarium's Great Hall. Visual artists collaborated with climate scientists to create the artwork in this exhibition, which explores the question of consequences, challenges, and opportunities that arise from the changing climate on our planet.

In 2018, the Aquarium will exhibit artwork from the Schmidt Ocean Institute's Artist-at-Sea program. The exhibit features artwork made from and inspired by the science done on the Falkor, the institute's research vessel. Media include watercolor paintings, drawings, photography, fiber art, comics and data visualizations by artists Rebecca Rutstein, Molly Homberg Brown, Kirsten Carlson, Michelle Schwengel-Regala and others. The Schmidt Ocean Institute, a nonprofit foundation established to advance oceanographic research, operates its Artist-at-Sea program to apply artists' storytelling abilities to ocean science and conservation. The program provides a platform where experts from different disciplines are brought together and cross-pollination of ideas can transform both the scientists' and artists' work. Priority goes to artists who incorporate elements of technology or cutting-edge methods into their techniques or media. Artists work side-by-side with scientists to



The Long Beach Chorale sings in front of the floor-to-ceiling tank in the Aquarium of the Pacific's Great Hall. The Aquarium often partners with local performing arts groups in order to foster emotional connections with the ocean and the environment. (Aquarium of the Pacific Photograph)



This year, the Aquarium is exhibiting artwork from the Schmidt Ocean Institute's Artist-at-Sea program, which features artwork created on the institute's research vessel. (Aquarium of the Pacific Photograph)

to-day ship life are asked to tie these experiences together through conceptualization, data collection, and application.

Performing Arts

produce meaningful

collaborations.

Artists immersing themselves in day-

The Aquarium has hosted performances by the Long Beach Ballet, Long Beach Symphony Chamber Orchestra, Long Beach Opera, Long Beach Chorale, various dance companies, theater ensembles and other groups. The Aquarium has also commissioned new works that help create emotional connections to the ocean and environment and interpret our relationship to the planet.



Aquarium Of The Pacific – Serving The Community

The Aquarium of the Pacific has a variety of programs aimed at community inclusion, such as discounted admission days, programs for children at a local hospital and even a special day for children with autism.

Discounted Aquarium Admission

The Aquarium offers several opportunities for people to visit at a discounted rate during extended hours. This ensures that an Aquarium visit is accessible to all in the community. District nights are available to each member of the Long Beach City Council. On these nights, the councilmember can invite residents in his or her district to visit the Aquarium at no cost. Discounted late nights are scheduled throughout the year, especially around national and school holidays. Shark Lagoon Nights offer the chance for people to visit Shark Lagoon for free. Shark Lagoon Nights often feature live music, and drinks and snacks are available for purchase. Abilities Night, held annually, offers free admission after 6:00 p.m. for people with disabilities. Autism Families Nights, held twice annually, offer discounted admission after 6:00 p.m. to families with adults or children with autism.

Night Dive

Night Dive is the Aquarium's popular adults-only event featuring live bands, DJs, art installations, special performances, food trucks, and mini-lectures and science activities. Night Dive is held several times a year and on New Year's Eve. Special performances have included aerialists, drag shows, puppet shows and artists painting and sculpting live.

Pacific Pages At Long Beach Public Library

Pacific Pages is a new program with Long Beach Public Library that rewards you for reading books related to topics such as the ocean, conservation, marine mammals and more. Once you have read five books from

the official list, fill out your official Pacific Pages bookmark and take it to the Aquarium ticket window to receive \$10 off adult or senior admission, or \$5 off child admission. Limit one discount per completed bookmark. Offer available at all Long Beach Public Library branches while supplies last. Valid from January 8 to May 25, 2018. For more information, go to pacific.to/pacific-pages.

Miller Children's & Women's Hospital

In a long-running partnership with MemorialCare Miller Children's & Women's Hospital, the Aquarium provides live streaming educational shows for patients at the children's hospital through a program called Aquarium Live. Patients watching the show can call in to ask questions and play games with the educator hosts. The Aquarium also provides ongoing activities in the hospital's playrooms and special events and tickets for long-term patients and their families to visit the Aquarium during their stay in Long Beach. The Aquarium was presented with the 2017 Friend of Child Life Award from the hospital in July 2017. The hospital selected the Aquarium for the award in recognition of the resources the Aquarium shares with pediatric patients and the services provided to educate the community about marine life, sustainability and conservation of natural resources.



Patients and parents at MemorialCare Miller Children's & Women's Hospital Long Beach watch a live-streamed presentation by an Aquarium staff member. Patients are able to interact with the Aquarium host by calling in questions and playing games. (Aquarium of the Pacific Photograph)

Charter Animal Profile

Name: Fern

Species: Zebra Shark (Stegastoma fasciatum)

Exhibit: Shark Lagoon
Birth date: 1995 (approx.)

Fern arrived at the Aquarium in 1997. Today she is 140 pounds and seven-and-a-half feet long. She can be seen swimming in the Aquarium's Shark Lagoon exhibit with other large sharks. Visitors can also meet Fern up close in the Sharks Animal Encounter and VIP Experience programs. Fern is trained to come to the surface for food and to voluntarily participate in medical exams. Fern became a mother to two female pups in 2014, when the Aquarium of the Pacific became the first to successfully reproduce zebra sharks through artificial insemination.



<u>Species overview:</u> Zebra sharks, often called leopard sharks in Australia, are found in the Indo-West Pacific Ocean. This includes the Red Sea and waters off of East Africa, New Caledonia, Japan, Australia and Tonga. This species of shark grows to be 5.5 to 11.5 feet in length. Zebra sharks are nine feet long on average. They are nocturnal foragers, feeding on snails and bivalves, crabs, shrimp, and small bony fishes. Young juveniles are dark brown or black with narrow yellow or white vertical bars resembling a zebra's stripes. When they begin to develop their adult features, the juvenile shark's bars fade, becoming dots or open circular designs no longer resembling a zebra. Zebra sharks can live about 25 to 30, but face many threats in the wild.

<u>Conservation</u>: This species is listed as vulnerable to extinction under the International Union for Conservation of Nature (IUCN) Red List, mainly because of human activities. Overfishing poses a big threat, as these sharks are sold for human consumption or fish meal. Livers are processed for vitamins, and there is a large market for their fins.







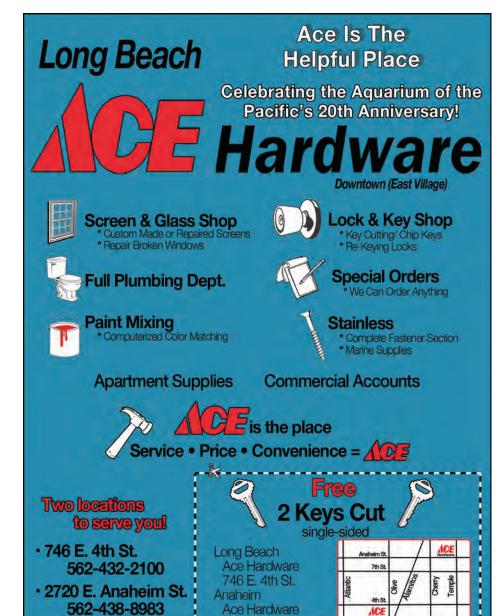


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Aquarium Of The Pacific Page 44

Two young visitors absorb their aquatic surroundings while attending the Aquarium of the Pacific for an event. According to Special Events Manager Erica Noriega, the Aquarium hosted 140 events last year. Personal events, such as weddings and birthday parties, made up about 30% of them. (Aquarium Photograph by Lori

Shepler)

Dancing With The Fish: The Aquarium As An Events Venue

■ By ANNE ARTLEY
STAFF WRITER

In addition to a tourist attraction, the Aquarium of the Pacific is also a spot for milestone events. Guests attending weddings and proms dance and dine alongside the animals. Even corporate events allow vis-

itors the opportunity to engage with the Aquarium, and learn something new about the environment or a particular species of animal.

Last year, the Aquarium hosted 140 events, according to Special Events Manager Erica Noriega. She estimated the breakdown at about 40% corporate events, such as offsite meetings, luncheons and out-of-town conventions; 30% school events, including homecoming dances, proms and winter formals; and 30% personal events such as weddings and birthday parties.

"People love the unique factor, especially those coming in from out of town," Noriega said. "It's something different you won't have in most cities."

The Aquarium provides its own catering service, called Premier, which specializes in sustainable cuisine. The catering packages come with wait staff and bartenders, but allow guests to bring in other vendors. Noriega noted that the Aquarium is open to customizing food choices to accommodate any dietary restrictions.

"We have a staff person who's constantly researching what's sustainable and choosing the greenest options," Noriesga said. "Our chef is very well versed in sustainable seafood." She added that the Aquarium employs environmental practices such as featuring locally grown food and produce that is in season. The latter reduces the energy consumption used to transport food.

During weddings, Noriega said most couples choose to use the entire interior for the event. A typical wedding starts with a ceremony in front of the Honda Blue Cavern, a three-story, 142,000-gallon exhibit featuring species found off of Catalina Island. A cocktail hour may take place upstairs in the Tropical and Northern Pacific Galleries before dinner in the Aquarium's Great Hall, which features a model of a blue whale suspended from the ceiling. The wedding package includes a choice of dining options, a four-hour site rental, a complimentary cake cutting service, a champagne or cider toast, and accommodations for up to 200 guests. A Saturday night ceremony costs \$1,000 and a Friday or Sunday ceremony comes out to \$750. The cocktail hour pricing depends on the location, but

The pricing for weddings and conventions starts at \$85 per person and prom pricing is kept around \$45 per person. For smaller events, guests have the option of using the rooftop verandah, which starts at \$65 per person and seats about 50 to 80 people. The pricing includes the fee to use the venue and covers food and beverages. Noriega said the Aquarium compares its pricing to other event venues in Los Angeles to ensure it is competitive.

"We close to the public at 6 p.m. and open for events at 7 p.m., so they only have an hour to set up," Noriega said. "We have vendors that we recommend that are used to setting up in that time frame who know the venue."

Noriega estimated that the Aquarium hosted 15 to 20 school-related events last year. The bigger proms usually result in a turnout of about 600 guests, she said. In addition, the Aquarium stages about 55 marriage proposals every year and 12 invitations to prom. The most popular choices are the sea lion and diver proposals.

starts at \$750 for the California Terrace, which is where the penguins are located.

"They're pretty popular. I still get a Christmas card from a proposal couple that was one of the first ones we did about nine years ago," Noriega said. "I feel like I've watched their family grow up."

Noriega also said she has noticed an increase in demand for corporate events, as people are becoming more interested in environmental issues and their impacts, such as global warming and the rising acidity of the ocean.

"People like to come here because guests can be entertained but they also get to learn something," she said. "For example, they can take a picture with a penguin, and we'll give a short presentation on penguins and where they come from. People like that they're not just sitting in a ballroom. They like something hands-on and different."

Charter Animal Profile

Three Blacktip Reef Sharks (Carcharhinus melanopterus) Exhibit: Shark Lagoon, Tropical Reef Habitat

Birth date: 1997 (approx.)

The Aquarium has two female and one male blacktip reef shark that have all been on exhibit since the Aquarium opened in 1998. They were originally acquired from a wholesaler.

<u>Species overview:</u> The blacktip reef shark is a common inhabitant of tropical reefs and lagoons, frequently observed in relatively shallow water. They are curious and will investigate things that are not common their habitat. Although neither a solitary or schooling fish, it is frequently seen in small groups, especially when feeding. This species is found in tropical waters of the Indo-Pacific, from the Red Sea to Hawaii. They are named for the distinct

black markings on the end of their fins. They seldom reach over six feet in length and prey mostly on reef fishes and octopuses.

<u>Conservation:</u> Blacktip reef sharks are not endangered. However, as residents of coral reefs, they rely heavily on the health and survival of coral reefs, which face serious threats worldwide.

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From Then To Now: Early Supporters Reflect On The Aquarium Of The Pacific At 20 Years

■ By **Samantha Mehlinger**Editor

When the decision was made to develop Downtown Long Beach's waterfront with an aquarium as its anchor, the city was in somewhat of a state of limbo. The recent departure of the U.S. Navy and the loss of a potential development by Disney had left the city and its downtown waterfront, which was then nothing more than a tidal mudflat, with somewhat of an identity crisis. In 1994, recently elected Mayor Beverly O'Neill made moves to solve that dilemma by bringing together a group of Long Beach stakeholders and leaders for a project that would ultimately bring millions of visitors to the city and create a significant cultural institution for the community.



"We were in a stage where we were losing our major source of revenue when the Navy left, and we were planning how we were going to revitalize ourselves," O'Neill recalled. "Many people in the city had different ideas with what we should do down there. Some people said, 'Don't touch it. It's the duty of Long Beach to have a native-looking waterfront.' So there were differing views. But it has been a project that has been so accepted by the city. Now, they are so proud of it."

As then-City Manager Jim Hankla recalled, the idea for an aquarium on the waterfront was plucked from the conceptual plans for DisneySea, a failed attempt to develop Long Beach's waterfront as a marine theme park. "We decided that we would use their architects and decide how we could cherry-pick their ideas and see what we could come up with," he said.

"My view was that we had this wonderful shoreline. . . . And I believed very strongly that we ought to build some icons of excellence," Hankla said. "I thought the Aquarium from the get-go was a great idea to do that."

In a meeting at The Madison restaurant on Pine Avenue, now known as The Federal Bar, Hankla and O'Neill scribbled names on a napkin – names that would ultimately make up the founding nonprofit board tasked with raising the money to build an aquarium. Doug Otto, one of the founding Aquarium of the Pacific boardmembers, was on the city's planning commission at the time. "I knew that, for Long Beach to take the next step forward to be a successful community, what it needed to do was to develop some gravitas in some area – and that was a logical area," he said of downtown's waterfront. "I used to tell people that, if you looked out on where Rainbow Harbor and Queensway Bay are, that I never saw anything legal going on out there while I was growing up in Long Beach."

Jim Gray, then the chairman and CEO of Harbor Bank, became the founding chairman for the Aquarium board in part as a favor to O'Neill. "When Beverly O'Neill was talking about running for mayor, I talked to her and . . . I said, 'If you run, I know you'll get elected. I'll do any one project you want,'" he recalled. After she was elected, O'Neill called Gray to tell him she was creating a nonprofit board to raise money for an aquarium, and that she wanted him as its chair.

"I said, 'Bev, before you go any further, I had two goldfish once and they both died," Gray said. "And she said, 'Well, that has nothing to do with it. All you have to do is raise 100-and-some million dollars and hire a director and build the thing and fill it up with fish."

Unlike other aquariums in the country that were built largely with major donations, the Aquarium of the Pacific had to be built by raising the money through the sale of municipal bonds. Russ Hill, chairman and CEO of downtown-based investment firm Halbert Hargrove, kidded that O'Neill tricked him into joining the board. He and Gray were largely tasked with overseeing the sale of the bonds, which ultimately sold out within about two hours.

"As an economic development, it seemed like a great idea," Hill said. "There was a statistic that came out which was that the average third grader in Long Beach, if you go up 15 or 20 blocks, had never seen the ocean. . . . And so I thought, if you want to have an informed citizenry, it's a little hard to have people vote for conservation when they have never seen any of this stuff. So those were the motivations, and it seemed like a great idea."

Steve Young, a partner with down-town-based law firm Keesal Young & Logan, joined the board in 1997, a year before the Aquarium opened. He pointed out that the Aquarium has helped transform the Long Beach waterfront from the "rougher, tougher" Navy town it once was.

"It was a great accomplishment to open the Aquarium," Young said. "It's a lot easier to open an Aquarium when somebody wants to give you a couple hundred million dollars to do it. And we did it the hard way. And the risky way. It was a good gamble, and a lot of people rolled up their sleeves and opened their pocketbooks and were good citizens and supported the endeavor."

Young added, "There were people

who in 1997 or 1998 said . . . 'Oh my gosh, they will never pay the debt and this will be a disaster for Long Beach.' They wrung their hands, but they were wrong. And we have proven that we are something that makes Long Beach special."

The board selected Warren Iliff, a zoo executive from Phoenix, as the founding president of the Aquarium of the Pacific. "When we hired Warren Iliff, he was the perfect hire," Gray said.

"We were blessed with a great CEO to begin with, Warren Iliff, who I love and will always remember," Young said. Iliff retired in 2002 and passed away in 2006. "He had so many great attributes and he played such an important part in our early success."

When the Aquarium of the Pacific opened, it took steps to ensure that local school children would be able to visit. "We made sure no kid would be rejected because they were at a disadvantaged school or whatever," Gray said. "We set up scholarships to make sure everybody was going to get in. . . . Watching those kids who had never even looked at an aquarium in their lives and seeing the looks on their faces, it was great."

About 1.8 million visitors came through the Aquarium of the Pacific in 1998, the year it opened, according to Hill. But the facility couldn't accommodate that many people at the time, and the experience wasn't pleasant for attendees as a result. To address the issue, the Aquarium has since expanded with new exhibits and areas such as the Lorikeet Forest, Shark Lagoon, the Molina Animal Care Center and more. It now comfortably accommodates about 1.7 million visitors per year.

Dr. Jerry Schubel was selected as Iliff's successor in 2002. "We did a search for a replacement and we found Jerry Schubel, who comes from academia and is a Ph.D.," Young said. "He had done a lifetime's worth of writing and research about the ocean and about the environment and was very knowledgeable."

Under Schubel's leadership, the Aquarium developed several academic programs for youth and adults, a guest lecture series, and numerous cultural festivals and collaborations. "Right from the beginning, both Warren and Jerry thought that the Aquarium should be a place for all people of all races and nationalities and all different backgrounds and all different cultures. We have tried to make them all feel welcome," Young said.

The Aquarium's educational focus is now being expanded with a new addition to the Aquarium, Pacific Visions. The new wing, which is currently under construction, will combine technology, the arts, science and marine life to educate the public about humanity's impact on the world and its oceans.

"Jerry Schubel had this dream. He convinced the board that we needed to move with the progression of technology and science into additional opportunities for the public's participation," Hankla said of Pacific Visions. "I think it provides an opportunity for the Southern California population, the population throughout the state: an immersion in technology that they can find nowhere else."

Asked about the expansion, O'Neill reflected, "With the visionary leaders that we have had there, it has become a place that is not just where you go and look at the fish and the things of the sea. But it has been educational. . . . And then, when the new development comes, it will be the showplace of aquariums."

"My hopes are that we continue to try to be innovators and we try to continue to emphasize education and the environment and the ocean," Young said. "As I look back at raising children, and now raising grandchildren, I am so grateful to the Aquarium for everything that they have done for my family in making us better citizens and stewards of the environment. . . . It's such a special place and I urge people to take advantage of it."



Aquarium Of The Pacific Historical Timeline

Aquarium opens to the public on June 20, 1998 – After three years of construction, the Aquarium of the Pacific opens in Long Beach as the only aquarium in the world dedicated entirely to the Pacific Ocean. Its mission is to instill a sense of wonder, respect, and stewardship for the Pacific Ocean and its inhabitants. The word "ecosystems" is added in subsequent years to better reflect the Aquarium's more global approach to conserving the ocean.

1999

Sea Otter Summer celebration launches - In celebration of the arrival of a sea otter named Summer, the Aquarium features a summer-long program highlighting this newest addition to the Aquarium family.

2000

Association of Zoos and Aquariums (AZA) accredits Aquarium of the Pacific – The Aquarium of the Pacific goes through a rigorous accreditation process every five years. The Association of Zoos and Aquariums (AZA) accredits the Aquarium in March of 2000. Membership in AZA is important for many reasons. One of the most important is that the Aquarium receives an independent, unbiased review of its operations by expert industry professionals.

Special exhibit gallery opens with Jellies: Phantoms of the Deep - The first major addition to the Aquarium, the Special Exhibits Gallery, opens with Jellies: Phantoms of the Deep, an immersive exhibit featuring sea jellies. The Special Exhibit Gallery has since featured a variety of exhibits and starting this summer will house Wonders of the

2001

Lorikeet Forest opens – With the opening of this new aviary for birds, the Aquarium expanded its educational messages to animals that live along coasts. The Lorikeet Forest exhibit features various species of Rainbow Lorikeets and allows guest to hand-feed the birds with cups of nectar.

Aquarium establishes Marine Conservation Research Institute (MCRI) - The Marine Conservation Research Institute tute is created by the Aquarium of the Pacific in late 2001. Through MCRI, the Aquarium furthers its commitment to the understanding of the ocean, its inhabitants, and ecosystems through research, conservation, and education. MCRI hosts special presentations for the public and forums for policymakers and stakeholders on important marine issues.

Coastal America designates the Aquarium as a Coastal Ecosystem Learning Center – Coastal America is a partnership among federal, state, local, and tribal governments and private alliances that protects, preserves, and restores our nation's coastal ecosystems. The Aquarium of the Pacific is designated as a Coastal Ecosystem Learning Center, an honor which had only been bestowed upon fourteen other organizations in the nation.

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2002

Shark Lagoon opens – The Aquarium's Shark Lagoon exhibit opens as the nation's first full-scale shark exhibit that allows guests to touch sharks, helping to break the many stereotypes surrounding these important and easily misunderstood animals.

Aquarium awarded for being the first facility to successfully breed weedy sea dragons – Aquarium husbandry staff's work to propagate sea dragons culminates when it is discovered that a female weedy sea dragon had successfully transferred her brood of 47 eggs to a male named "Big Daddy" on May 5, 2001. The first tiny babies are born on June 9. Of the 47 eggs, 18 developed into baby sea dragons. This is the first time in the world that a weedy sea dragon successfully hatched eggs in a zoo or aquarium. The Aquarium receives the AZA's highest honor for this accomplishment, the Edward H. Bean Award, in 2002 for the successful reproduction of an animal species in a zoo or aquarium in North America.

Aquarium holds first cultural festival – The Aquarium holds its first cultural festival, Baja Splash, beginning an ongoing annual tradition of celebrating local communities and cultures through music, dance, storytelling, craft demonstration, and other live performances.

Aquarium holds first Aquatic Forum – The Aquatic Forum is established to foster exploration of complex ocean and environmental issues by serving as a venue where scientists, policymakers, and other stakeholders work together in a search for creative and sustainable solutions.

Aquarium establishes Aquatic Academy – The Aquarium creates the Aquatic Academy for all those who have an interest in and concern for the environment. The Academy provides four-week series of courses focusing on a particular issue, bringing scientists and other top expert speakers to the Aquarium to discuss these issues with attendees. The first course was titled "California and Water."



2003

Aquarium celebrates Pacific Island Summer – The summer of 2003 is dedicated to celebrating the rich cultures, food, arts, and animals of the Pacific Islands. Demonstrations representing Hawaiian, Tahitian, Maori, Fijian, Chamoru, Samoan and many other cultures are held daily in the Aquarium's Great Hall.

Aquarium wins the Los Angeles Regional Water Quality Control Board Award for Public Education in Water Quality —The Los Angeles Region of the California Water Quality Control Board honors the Aquarium of the Pacific with its 2003 Water Quality Award for Public Education. The award recognized the Aquarium for its educational programs for providing hands-on and often first-time introductions to the Pacific Ocean and the marine life it supports.

Association of Fundraising Professionals honors the Aquarium as Outstanding Volunteer Organization – The Los Angeles Chapter of the Association of Fundraising Professionals presents the Aquarium of the Pacific with its award for Outstanding Volunteer Organization. The Aquarium receives this award because of the dedicated efforts of Aquarium staff, including more than 750 volunteers who logged a total of more than 100,000 hours in 2003.

2004

Weird, Wild, and Wonderful exhibit opens — This year-long program highlights the strange-but-true ways ocean animals survive and thrive in their watery world. It presents bioluminescent pinecone fishes, the remarkable mudskipper that survives on land and in the sea, and a sea of other unusual creatures.

(Please Continue To Page 50)















Aquarium Of The Pacific Page 50

Premiere of Whales: Voices in the Sea – This interactive kiosk allows guests to listen to the songs of whales, imitate their calls as well as to hear interviews with cetacean experts. This exhibit wins the MUSE Silver Award for best new interactive science exhibit in the United States from the American Association of Museums in 2005.

2005

Rios de la Vida: Our Watershed Story mural and exhibits debut on Aquarium front plaza – The Rios de la Vida mosaic mural explores the journey of water from the mountains to the sea, starting at the rivers' headwaters in our local San Gabriel Mountains. The mural's images remind visitors of the diversity of wildlife that still call the Los Angeles and San Gabriel Rivers home.

Whales: A Journey with Giants multimedia show opens – This immersive experience in the Aquarium's Great Hall takes guests on a virtual tour through the world of a blue whale and her calf with the use of state-of-the-art lighting, video, and sound.

2006

Aquarium launches Dazzling & Dangerous exhibit and programming – This year-long program highlights the beautiful but dangerous animals that lurk in the ocean and on land. Dazzling and Dangerous—Venomous Creatures unraveled the truth behind the myths as to why venom is the weapon of choice for these animals.

Aquarium mourns the passing of Founding President and CEO Warren Iliff – The Aquarium of the Pacific reaches the end of an era with the passing of Founding President Warren Iliff on August 5, 2006. He leaves an important mark on the Aquarium and the entire zoo and aquarium industry with his kindness, humor, and achievements, including the successful launch of the Aquarium of the Pacific.

2007

Aquarium of the Pacific becomes the first among museums, zoos, and aquariums in the U.S. to join the Climate Action Registry – The Aquarium of the Pacific successfully certifies its greenhouse gas (GHG) emissions inventory with the Climate Action Registry, becoming the first among museums, zoos, and aquariums in United States to earn the status of a Climate Action Leader™. By joining the Registry, the Aquarium of the Pacific demonstrates its concern regarding global climate change by measuring, certifying, and voluntarily reporting its GHG emissions to the Registry and to the public.

Shorebird Sanctuary opens – Designed to resemble a tidal wetland, this outdoor exhibit features Black-Necked Stilts, Black-Bellied Plovers, Western Snowy Plovers, a killdeer, and Ruddy Ducks.

Premiere of Catch a Wave exhibit and programming – This exhibit and program highlights the power and heauty of waves

Premiere of Catch a Wave exhibit and programming – This exhibit and program highlights the power and beauty of waves. Guests learn about tsunamis and what creates the waves right here in Southern California. It explores how animals survive in the surf and captured the heart-pounding beauty of surfing as well as showcasing local surf culture.

2008

Enhanced Gulf of California exhibit opens in partnership with the World Wildlife Fund — Because the Gulf of California is in need of protection in terms of both the natural habitat and the livelihoods of the local peoples, the Aquarium of the Pacific partners with World Wildlife Fund (WWF) to protect this treasure found between the Baja Peninsula and mainland Mexico. The Aquarium opened its Gulf California exhibit to provide public education on this important habitat.

Aquarium celebrates tenth anniversary, highlights top ten ocean issues — The Aquarium of the Pacific celebrates its tenth anniversary. In its first decade the Aquarium achieved many milestones, including successes in animal breeding, ocean education, celebrating cultural diversity, volunteerism, and more. During its year-long anniversary celebration the Aquarium opens a special exhibit called Ocean on the Edge: Top Ten Ocean Issues, focusing on the most important issues affecting the ocean and, ultimately, all life on our ocean planet.

Our Watersheds: Pathway to the Pacific opens – This new exhibit focuses on the watersheds of San Pedro Bay, which include the San Gabriel and Los Angeles Rivers and the Dominguez Channel. Our Watersheds teaches about the choices that can be made at home to conserve water as well as what we can do.

2009

Aquarium launches Seafood for the Future program – Seafood for the Future is a nonprofit seafood advisory and promotional program based at the Aquarium with a mission of encouraging healthy and responsible seafood choices. Staff members work with restaurants, fishermen, and distributors to promote seafood from well-managed fisheries or farms.

Shark Summer highlights importance of these threatened predators — Throughout the summer, programs, exhibits, films, lectures, and kids' activities focus on the majesty and ecological importance of sharks. Visitors discover the characteristics of sharks and rays that have helped them survive on Earth for more than 400 million years, as well as the threats sharks face and what conservation efforts to take to protect them.



2010

Earth-Friendly Garden on the Front Lawn unveiled – The Aquarium of the Pacific opens its new 4,700 square-foot Earth-Friendly Garden on its front lawn. Illustrating part of the solution to Southern California's ongoing water shortage, the garden features California native and drought-resistant plants, as well as a water efficient irrigation system. This garden is made possible by grant funding from the United States Bureau of Reclamation and a partnership with the Long Beach Water Department.

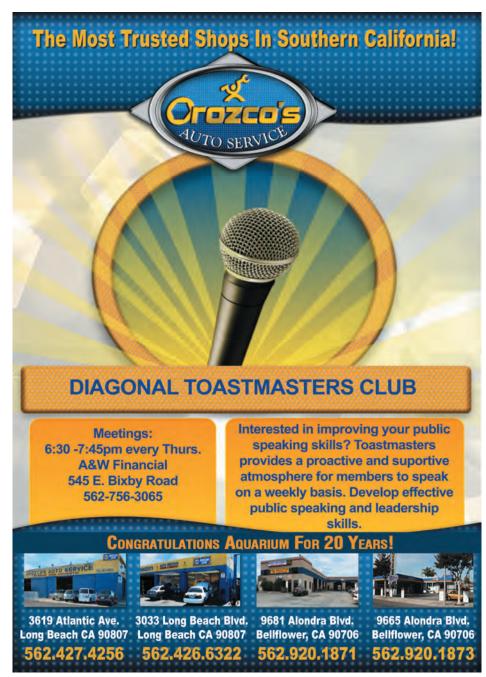
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The Aquarium transforms the sea otter
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more immersive for
guests. New features
include design elements to represent a
rocky coastline environment, lighting, new
seating, and the interactive Sea Otter Journey game.

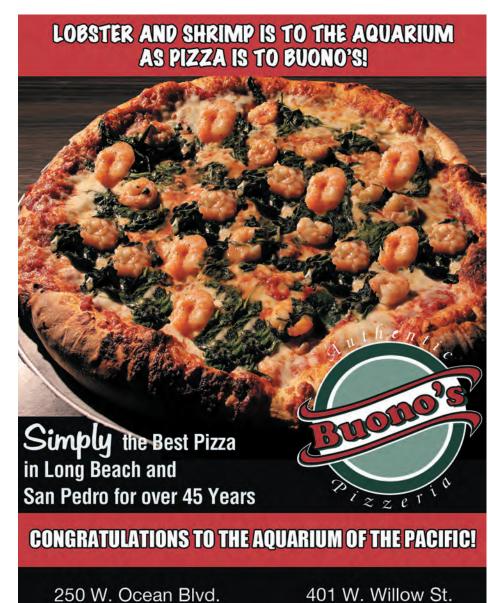
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Aquarium Of The Pacific Page 52

Molina Animal Care Center opens – The Molina Animal Care Center provides state-of-the-art examination, treatment, and recovery facilities for the Aquarium's animals. Funded by the Molina family and Molina Healthcare, the veterinary hospital also makes it possible for Aquarium visitors to watch animal exams and surgeries as they happen.

VolunTEENS program is established — High school students participating in this eighty-hour program receive special instruction on marine life and the Pacific Ocean. They earn service learning hours and work in the Aquarium's education department as interpreters at interactive stations around the facility.

2011

Arctic & Antarctic: Our Polar Regions in Peril exhibit debuts – The Arctic & Antarctic exhibit highlights the animals, plants, and people of these regions and investigated how climate change is putting these fragile ecosystems at risk.

Ocean Science Center opens –
The Ocean Science Center houses
the National Oceanic and Atmospheric Administration's Science on a
Sphere® (SOS), a six-foot-diameter
global display system. SOS shows play
daily on rotation in the Ocean Science
Center, featuring topics such as sea level
rise, maritime trade, and ocean environmental health.

Dr. J. Mario Molina (left), founder of Golden Shore Medical, is pictured in one of the Molina Animal Care Center's surgical areas with Dr. Jerry Schubel, president and CEO of the Aquarium. The medical center is one of the few places for the public to view aquatic medicine up close, from surgeries to exams. The 14,000-square-foot facility includes a veterinary hospital, a holding area for the animals and a public exhibit. The Aquarium's spring 2010 newsletter, "Currents," wrote about the facility: "As an institution that strives to maintain the highest quality standards for animal care, the Aquarium is proud of the addition of the Molina Animal Care Center. This new facility will enable our husbandry team to optimize their practices, while also providing our visitors with a new and interesting opportunity to understand more about our animal ambassadors of the Pacific Ocean." (Business Journal Photograph)

City of Long Beach in its Green Business Recognition Program awards certification – The City of Long Beach Office of Sustainability names the Aquarium of the Pacific in its Green Business Recognition Program. The Office of Sustainability includes recognition for the institution's most progressive, environmentally conscious practices. These include green building practices, purchasing sustainable products, using solar panels and natural light to reduce energy consumption, promoting the use of mass transit and biking, purchasing sustainable seafood, and providing climate change information to the public.

Roddenberry Foundation Education Videoconferencing Studio opens – The Roddenberry Foundation Education Videoconferencing Studio allows the Aquarium to send its programming to classrooms around the world. Teachers and other program planners can request videoconferencing sessions with an Aquarium educator in a screen-to-screen format similar to video chatting.

2012

Governor's Environmental and Economic Leadership Award — Governor Edmund G. "Jerry" Brown recognizes the Aquarium of the Pacific for its role in California's environment and economy. The Aquarium of the Pacific is the first among museums, zoos, and aquariums to receive the Governor's Environmental and Economic Leadership Award (GEELA). California's most prestigious environmental award program, according to the California Environmental Protection Agency, GEELA recognizes those responsible for conserving California's resources, protecting and enhancing the environment, and building private-public partnerships.

Bixby the harbor seal is born – Bixby, a female harbor seal pup, is born at the Aquarium on April 26, 2012. She is born to two of the Aquarium's harbor seals, Shelby and Troy. Shelby came to the Aquarium in 1998. Troy, the Aquarium's only male harbor seal, came to the Aquarium in 2007.

Aquarium opens the June Keyes Penguin Habitat with the first penguins in its collection — More than a dozen Magellanic Penguins call the June Keyes Penguin Habitat home. The permanent exhibit allows visitors to watch penguins both above and below the water and includes interactive touch-screens that provide information about the world's seventeen penguin species.

2013

Aquarium receives State Superintendent's Award for Excellence in Museum Education – The Aquarium wins a 2013 Superintendent's Award for Excellence in Museum Education for its interactive videoconferencing program. The Superintendent's Awards for Excellence in Museum Education competition is a joint project between the California Association of Museums (CAM) and the Office of the State Superintendent of Public Instruction. After a formal evaluation and scoring by three reviewers, California Superintendent of Public Instruction Tom Torlakson chose six recipients, including the Aquarium of the Pacific.

Aquarium Live debuts at Miller Children's Hospital – The Aquarium of the Pacific and Miller Children's Hospital Long Beach are partnering to bring the wonders of ocean learning to hospitalized children and their families. Through the new Aquarium Live education program, patients can take a live look at animal exhibits as they learn and interact with Aquarium staff in real time. Educators will deliver bi-weekly, thirty-minute programs on different ocean topics live from the Aquarium's state-of-the-art Roddenberry Foundation Education Videoconferencing Studio. Viewers can call in live to participate in the program, asking questions and playing games with Aquarium educators.

Ocean Exploration programs and Wonders of the Deep gallery open – The Aquarium of the Pacific highlights ocean exploration this summer and debuts a new Wonders of the Deep gallery. Visitors learn about what possibilities for discovery lie beneath the vast, unexplored ocean. Ocean Exploration programs include new films, live feeds from

ocean exploration vessels at sea, and a new smartphone app that uses augmented reality to bring exhibits to life.

Aquarium celebrates fifteenth anniversary in June 2013 – The Aquarium of the Pacific will celebrate its fifteen years of mission- and vision-driven programs and exhibits and honor three of the world's most renowned ocean explorers at the Ocean Conservation Awards on June 15, 2013.

(Please Continue To Page 54)

Aquarium of the Pacific President and CEO Jerry Schubel takes a moment to lend a hand with the facility's 2013 expansion, a \$50 million project that increased the Pacific Collections retail space by more than 50%. At the time, the Aquarium also released its first economic impact study since 2004. The report, prepared by AECOM [named one of the "World's Most Ethical Companies in 2012" by the Ethisphere Institute] showed a \$57 million impact in Long Beach and \$142 million for the Southern California area. Phil Bosl, a Long Beach resident and Aquarium donor, said: "Not only is the Aquarium bringing jobs to Long Beach and stimulating the local economy, it is also a community resource and champion on environmental stewardship. (Business Journal Photograph)



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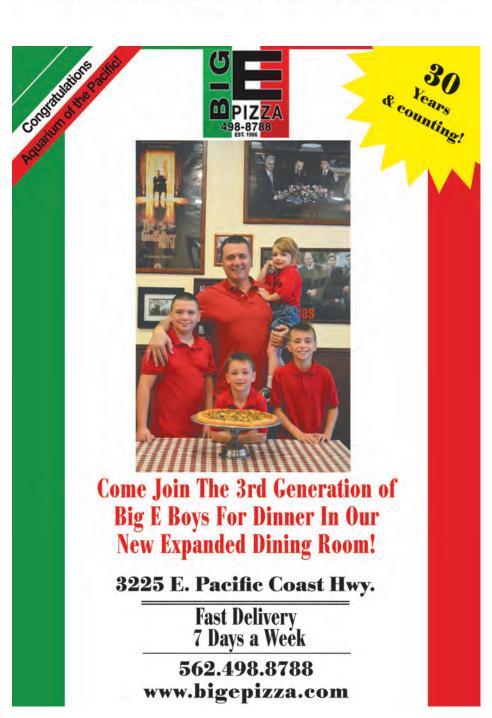
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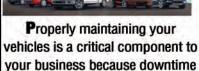
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Charter Staff And Volunteers

These lists reflects Aquarium staff members who were hired or volunteers as of June 20, 1998, and have had continuous service at the Aquarium.

Charter Employees

- Director of Volunteer Engagement SEAN DEVEREAUX
- Art Director BRIAN GRAY
- Event Coordinator MICHAEL KENT
- Housekeeping Associate **Amanda Martinez de Lopez**
- Senior Retail Buyer **NELLY MISSIOS**
- Assistant Curator of Mammals and Birds ROB MORTENSEN
- Vice President of Operations JOHN ROUSE
- Senior Facilities Technician BILL SARGEANT
- Guest Support Specialist ESTELLA SMITH
 Cash Control Manager ELLEN STEIN
- Curator of Fish and Invertebrates and
- Interim Vice President of Husbandry Sandy Trautwein
- Facilities and Maintenance Manager Tom VanTress
- Housekeeping Associate James Wilson

Charter Volunteers

Diane Blackford Richard Boberg Dan Dabelstein Linda de Ambrosio Steve Dodge Vicki Gausepohl Claudia Harden Paulette Hentzen Barbara Hill

Barbara Anders

Paulette Hentzen Debra Hill Val Hoffman **Rov Houston** Becky Katzen Michael Kohel Ken Kurtis Caron Laird Donna Lasher-Keller Robin Riggs **Hugh Ryono** Susan Schwartz Jeanne Sleeper **Betsy Suttle Gregory Tashima Bob Titus** Leah Young

2014

Exhibit highlights unique history and biology of Southern California steelhead – The Aquarium unveiled a new exhibit modeled on the habitats of the Southern California steelhead. A member of the salmon family, this fish reproduces in Southern California streams and has historically traveled up and down the Los Angeles, San Gabriel, and other local rivers to spawn and return to the ocean. After coming close to extinction, in 1997 the Southern California steelhead was listed as an endangered species under the Endangered Species Act by the National Marine Fisheries Service. The Aquarium's steelhead exhibit transports visitors along a mountain path, allowing them to view these fish in three areas, representing the species' journey from freshwater to brackish water, and finally to the ocean.

New aviary houses breeding pair of critically endangered Guam Kingfishers – Funded by donations made by the Aquarium's staff, a new aviary was built to house a breeding pair of Guam Kingfishers, a bird species that is extinct in the wild.

Volunteers reach 2 million hours of service donated – The Aquarium's corps of volunteers reached a significant milestone at the end of 2014, donating a total of 2 million hours of service to the institution.

2015

Aquarium opens new exhibits featuring sea jellies — The Aquarium opened new exhibits and programs highlighting sea jellies, with new species on display throughout the galleries and new jelly-themed educational programs, shows, lectures, and art projects. Visitors learned about jellies' role in the ocean, uses by humans, biology, reproductive cycle, habitats, conservation issues, and pervasive presence in the World Ocean. As part of the exhibit, the Aquarium launched a new interactive app called Jelly Lab, where users learn about jelly life cycles and how the Aquarium's staff cares for sea jellies.

Aquarium renewed accreditation – The Association of Zoos & Aquariums (AZA) announced that the Aquarium was granted accreditation by AZA's independent Accreditation Commission. To be accredited, the Aquarium underwent a thorough review to ensure it has and will continue to meet ever-rising standards for animal care, veterinary programs, conservation, education, and safety. AZA requires zoos and aquariums to successfully complete this rigorous accreditation process every five years to maintain their association membership.

Shark pups born after groundbreaking artificial insemination – The Aquarium's shark team moved two female zebra shark pups born via artificial insemination from the behind-the-scenes shark nursery to their new home in Shark Lagoon. The Aquarium of the Pacific was the first to be able to successfully reproduce zebra sharks through artificial insemination. Fern, a twenty-year-old zebra shark who has lived at the Aquarium since 1997, is the mother of the two shark pups.

2016

Aquarium opens Vanishing Animals exhibit – Vanishing Animals, housed in the changing exhibit gallery, was inspired by a paper published in the journal Science in January 2015 that detailed the possibility of mass extinction in the ocean. The Vanishing Animals exhibit translates the concepts detailed in the paper into a gallery of live animal exhibits, multimedia stations, exhibit panels, and videos for the public to learn more about this important moment in time.

Released report on climate resilience for City of Long Beach – In his January 2015 State of the City address, Mayor Robert Garcia announced that he wanted to make Long Beach a model of a climate resilient city. He asked the Aquarium of the Pacific to take a lead in assessing the primary threats that climate change poses to Long Beach, to identify the most vulnerable neighborhoods and segments of the population, and to identify and provide a preliminary assessment of options to reduce those vulnerabilities. The Aquarium released its report in early 2016.

Aquarium opens Horses and Dragons exhibit – The Horses and Dragons exhibits featured more than a dozen species of seahorses, seadragons, and their relatives, including babies. Two of the featured species—longsnout seahorse (also known as the slender seahorse) and dwarf seahorse—had never before been exhibited at the Aquarium. Visitors learned how these animals are bred and cared for at the Aquarium and about the conservation issues these animals face in the wild, including harmful fishing practices, the traditional medicine and curio trade, and habitat loss.

Aquarium successfully breeds giant sea bass – The Aquarium became the first public aquarium to successfully breed and raise giant sea bass when eggs hatched in October and a single juvenile survived past the Aquarium's previous record of forty-three days. The Aquarium's work to reproduce this species is particularly important because giant sea bass are listed as Critically Endangered on the International Union for Conservation of Nature's Red List.

Aquarium served as site for massive mural during POW! WOW! Long Beach – The Aquarium's nearly 2,600-square-foot front wall was painted by Portuguese street artist Pantonio (Antonio Correia) as part of the second annual POW! WOW! Long Beach festival. The mural was on view at the Aquarium until demolition began for the construction of the Aquarium's Pacific Visions wing. Pantonio, who hails from Lisbon, Portugal, is a street artist whose work is characterized by dark blue and black imagery reminiscent of the ocean and organic life forms. His dramatic, transformative mural at the Aquarium depicts manta rays emerging from a net.

2017

Aquarium breaks ground on first major expansion, Pacific Visions – A groundbreaking ceremony was held and construction on the Aquarium's expansion, Pacific Visions, began in spring. While the layout of some facilities has been adjusted, the visitor experience is unaffected by the construction. Visitors can see the site through portholes located in multiple locations in the fence surrounding it. Pacific Visions will open to the public in early 2019.

New exhibits highlight amphibians, archerfish, and California's water supply – The Aquarium opened new exhibits, including FROGS: Dazzling and Disappearing, an exhibit tracing the history of amphibians, detailing their life cycles, demonstrating the different environments they live in from deserts to rainforests, and highlighting the diversity of species and their surprisingly uncertain future. Our Water Future is an interactive space to help visitors understand where our water comes from and what conservation issues our supply faces now and in the future. The Aquarium also added an exhibit featuring archerfish on the Harbor Terrace overlooking Rainbow Harbor.

Charter Animal Profile

Bat Rays (Myliobatis californica)

Exhibit: Ray Touch Pool, Southern California/Baja Gallery

A team from the Aquarium collected the bat rays with the help of staff from the Southern California Marine Institute. They were collected near the Belmont Pier and the nearby oil islands.

<u>Species overview:</u> Bat rays live off the West Coast of North America, from Oregon to the Gulf of California in Baja, Mexico. They are bottom dwellers and live on shallow, sandy areas to depths of about 165 feet, often burying themselves in the sand. They can grow up to six feet wide and weigh up to 210 pounds. They feed on small bony fishes, snails, worms, shrimp, clams, abalone

and crabs. They can live up to 35 years. Bat rays have a venomous spine that can inflict a painful wound. At the Aquarium, these spines are clipped, a procedure which causes no pain to the rays.

<u>Conservation</u>: Bat rays have a wide distribution range and large populations. Fishing gear is regulated to avoid harming them.



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