

# Aquarium of the Pacific

**2015 Annual Report**





# Message from the Chairman and President

The Aquarium of the Pacific is a world-class institution housing more than 11,000 animals and attracting 1.6 million visitors annually. Each year about 200,000 schoolchildren and teachers are introduced to the latest in science education and the wonders of the ocean. Everyone who walks through our doors encounters engaging messages about conservation and humans' relationship with our planet. Each exhibit, show, and program is designed to promote ocean literacy and increase the public's awareness of issues affecting the environment.

But the Aquarium is also an institution that goes beyond the scope of a traditional aquarium or science center. It is our goal to create an aquarium that conserves and builds nature and nature's services by building social capital, the interactions between and among peoples. The Aquarium is a place where leaders in the scientific community come to share their latest research and interact with the public to examine our relationship to our planet and develop solutions to the pressing environmental problems we face as we look to the future. A burgeoning human population and a changing climate make this particularly critical.

To bring the public into this dialogue, the Aquarium offers a year-round Guest Speaker Series, Aquatic Academy courses each spring and fall, a vibrant calendar of visual and performing arts programs that interpret science concepts, multiple volunteer citizen science opportunities, high-tech learning tools like the National Oceanic and Atmospheric Administration's (NOAA) Science on a Sphere®, and live webcasts with experts.

In 2015 the Aquarium offered many opportunities for the public to learn more about our planet, engage with leading thinkers and policymakers, and contribute to conversations surrounding ocean and environmental issues. You can read more about these programs and events on pages 4 and 5.

The Aquarium has the ties to leading scientists, policymakers, and science communicators and the robust base of supporters to take the next step and become the most distinctive aquarium in the country. These will all come to fruition in Pacific Visions, the Aquarium's planned front wing dedicated to investigating how our actions will affect our planet's future. The Aquarium could not make this bold move continuing its seventeen-year history of bringing science to the public without the ongoing support of our guests, members, partners, and donors.



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*Chairman, Board of Directors*



Jerry R. Schubel, Ph.D.  
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(AS OF 12/31/15)

# Vision

*Our vision is to create an aquarium dedicated to conserving and building natural capital, nature and nature's services, by building social capital, the interactions between and among peoples.*

## **Partnership Facilitated Exploration of the Ocean's Future**

The Aquarium has long partnered with geographic information systems (GIS) mapping firm Esri to help translate current ocean science for the public. In 2015 Esri presented its Special Achievement in GIS Award to the Aquarium in recognition of its innovative use of Esri's GIS technology in its exhibits and online story maps for public outreach. Also in 2015 Esri asked the Aquarium to contribute a chapter to a book of peer-reviewed scientific papers on the latest ocean science. The book, *Ocean Solutions, Earth Solutions*, presents research from the inaugural Esri Ocean GIS Forum. It includes sixteen papers that showcase the latest and best ocean and coastal science using spatial analysis and GIS. The Aquarium's chapter is significant in that it was the only one contributed by an informal science institution. In addition, the Aquarium's president chaired the opening panel of the 2015 Esri Ocean GIS Conference.

In February 2015 as part of its Guest Speaker Series the Aquarium hosted a conversation between Jack Dangermond, founder and president of Esri and recipient of the Aquarium's Ocean Conservation Award, and Richard Saul Wurman, architect and creator of TED and TEDMED conferences and the recipient of the Lifetime Achievement Award from the Cooper-Hewitt, Smithsonian Design Museum in New York City. These two leaders discussed the roles of maps, map-making, and GIS in charting a course to a better future. Wurman partnered with Esri to develop the Urban Observatory, an exhibit and app that allows users to examine and compare characteristics of cities to design better ones for the future. The Aquarium demonstrated the Urban Observatory and its capabilities on the Ocean Exploration Hub in the Tropical Pacific Gallery throughout the year.

## **Forum on Aquaculture Brought Together Key Players**

The Aquarium held a forum in April 2015 to develop the frames of reference and rationale for an offshore finfish aquaculture industry in Southern California. Participants included researchers and representatives from state and federal government agencies, universities, environmental groups, and the commercial fishing industry. Workshop participants were asked to share and prioritize concerns regarding the complex, high-stakes environmental and resource issues often associated with coastal development activities. While permitting remains a prolonged and uncertain process for offshore farms in California, all workshop participants were asked to work together to formulate specific recommendations to improve the process for reviewing permits and obtaining approvals for aquaculture development projects. The forum report is available on the Aquarium's website by searching "offshore aquaculture."

## **Aquarium Advised City on Climate Resiliency**

The Aquarium delivered a comprehensive report to City of Long Beach leadership detailing best practices in creating a climate-resilient city. The Aquarium gathered experts to identify those aspects of climate change to which Long Beach is most vulnerable, assess the extent of the vulnerabilities, and evaluate ways of mitigating and adapting to them. Based upon this analysis, the City will translate the findings into specific strategies and incorporate them into its plan.

## **Aquarium Hosted State Department's Fishackathon**

The U.S. Department of State partnered with the Aquarium and its Seafood for the Future program to host the second annual international Fishackathon at the Aquarium in June. The goal of Fishackathon is to solve the growing challenges throughout the seafood supply chain. The event calls for coders to create new applications and tools for mobile devices and phones that will help provide information in real-time to help fishermen work smarter, safer, and more sustainably.



## **Aquarium President Speaks at CERF Conference**

**Jerry Schubel gave a presentation at the Coastal and Estuarine Research Federation's 2015 conference in November called *Designing the Coast for the Future to Effectively Deal with Multiple Stressors.***

## Aquarium President Appointed to California Ocean Science Trust Board

Jerry Schubel was appointed in July to a two-year initial term on the Board of Trustees of the California Ocean Science Trust. Schubel serves as one of eight trustees appointed by the state's Secretary of Natural Resources and recommended for their broad knowledge of ocean resource management and science. The California Ocean Science Trust is an independent nonprofit that works across the traditional boundaries between government, science, and communities to build trust and understanding in ocean and coastal science. It submits annual reports to the State Legislature, providing independent science to policymakers to direct decisions made about the coast and ocean with the goal of maintaining a healthy, resilient, and productive ocean for the benefit of current and future generations. It also serves as an information resource for the public.



PAULA OLSEBY/NOAA

### Vaquita Awareness

The vaquita is a small porpoise native to the Gulf of California. It is the most endangered marine mammal in the world. Scientists estimate that fewer than 100 still inhabit the gulf.

## Seafood for the Future Raised Awareness of the Vaquita

Seafood for the Future, the Aquarium's sustainable seafood program, launched public outreach efforts to raise awareness of the vaquita, an endangered small porpoise native to the Gulf of California. These efforts included hosting a panel of experts at the Aquarium as part of its Guest Speaker Series and helping to create a public service announcement about the vaquita. With fewer than 100 individuals remaining, the vaquita is the most endangered marine mammal in the world and has the potential to represent a story of tragedy or of a hopeful future. The archived panel discussion, featuring experts from NOAA, World Wildlife Fund Mexico, and the seafood industry, can be found on the Aquarium's website by searching "saving the vaquita."

## Guest Speaker Series Served as Platform for Regional and National Thought Leaders

In 2015 the Aquarium's ongoing Guest Speaker Series continued to provide a platform for scientists, authors, and other experts to share their knowledge with the public and explore important topics affecting our future. In September Jon Christensen, editor-in-chief of *Boom: A Journal of California*, moderated a conversation on California's leadership in the Pacific world with Peter Kareiva, the newly appointed director of the Institute

of the Environment and Sustainability at the University of California, Los Angeles, and Jerry Schubel. Other notable events included the continuation of the Future of Food series with *Los Angeles Times* Food Columnist Russ Parsons and a series on sea level rise in conjunction with the *Sink or Swim: Designing for a Sea Change* exhibition from the Annenberg Space for Photography (see page 12).

## Evening Courses Involved Public in Policy Questions

In 2015 the Aquarium held two sessions in its Aquatic Academy series of evening courses for adults. In the spring session, attendees learned about the case for ocean exploration and the future of humans' relationship with the ocean. They met modern-day ocean explorers and learned what potential the ocean holds, from undiscovered life forms to natural resources, and which technologies might play a role in helping us better understand our World Ocean and life on our planet. In the fall attendees were presented with solutions for meeting the needs of a growing human population and demand for food through aquaculture. They interacted with scientists and experts to learn more about aquaculture's role in meeting the growing seafood demand, discussed the conservation implications of marine aquaculture, and joined in the discussion on California's potential role in stimulating a national aquaculture program.

## Aquarium Celebrated Cultural Heritage and Achievements With Festival Honorees

The Aquarium has a robust calendar of cultural festivals and special events that bring the local community together to celebrate our diversity, learn about each other, and connect people and the environment. These events provide an opportunity for the Aquarium to honor individuals and organizations that have contributed to the community through service, education, advocacy, and special achievements. In 2015 honorees included California State Senator Ricardo Lara for his work in environmental and social arenas, Aquarium volunteer and middle school student Caroline Edmonds for her science project investigating flashlight fish and bioluminescence, educator Jacque Tahuka-Nuñez for her work to share the history and perspectives of Southern California's indigenous peoples, and Thakhin Bwor for his work to connect the expatriate community of Myanmar through his publications and websites.



### Festival Honorees

2015 honorees included California State Senator Ricardo Lara, pictured here with Jerry Schubel.

# Pacific Visions



“

*The new Pacific Visions wing will be one of the most powerful venues in the world for communicating the challenges our ocean faces and the opportunities it holds. It will embolden the Aquarium's message, it will empower our visitors to do more for our planet, and it will redefine what an aquarium can and should do. When the Pacific Visions expansion is complete in late 2018, the Aquarium will have the capacity to serve 2 million visitors annually. This represents an unprecedented opportunity to educate the public about the relationship between humans and the World Ocean and to motivate people of all ages to act.”*

— Dr. Jerry R. Schubel

## Design

EHDD, the architectural firm that designed the Aquarium's original building, completed the construction drawings for the project in 2015. This involved detailing all of the floor plans and the 800-plus panels of the biomorphic glass façade as well as identifying materials, fittings, and fixtures.

## Exhibits

Cortina Productions, the project's media and technology exhibit designer, worked on the vision, design, and intent of the Pacific Visions Theater and some of the interactive exhibits for the changing exhibit gallery. Through a series of workshops and an “ideas lab,” a team of Aquarium staff members and other designers and experts garnered exhibit ideas and gauged understanding of the Aquarium's audience and what they want to feel through the Pacific Visions experience. Through this collaborative work, the opening film and interactive exhibits were envisioned to be cinematic, futuristic, minimalist, and modern in design.

## Pacific Visions Donors

as of December 31, 2015

### \$5,000,000+

Anonymous

### \$3,000,000+

City of Long Beach

### \$1,000,000+

Anonymous  
Dr. Allen and Charlotte Ginsburg  
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Aquarium of the Pacific Staff Campaign 2015  
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Kathie Nirschl

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Alex and Margie Norman  
In memory of Ada Helen Penny  
Dorothy J. Reiner  
Wendy Rothman  
Warren R. and Vonnice A. Schulten  
Stassani Family Foundation  
Marian F. Tang  
William Waterhouse and Barbara Long

## **Sustainability**

The first stage of assessment with Green Globes®, in which an assessor reviews all construction drawings, was conducted in 2015. The assessor verified the Aquarium was on target to achieve 2 Globes®, which is equivalent to LEED® Silver. Keeping with the Aquarium's commitment to sustainability, the project is designed to achieve 24 percent reduction in energy compared to similar buildings. Pacific

Visions will also produce its own energy through a clean energy fuel cell system, rather than drawing electricity from the local grid. Other sustainability features will include bird-friendly glass, energy efficient systems, recycling of construction waste, LED lighting, and environmentally friendly paints, carpets, adhesives, and sealants for clean indoor air quality.

# Donor Highlights

## **Molina Family Challenge Grant Pledge**

Longtime Aquarium supporters, the Molina family stepped forward with a challenge grant of \$5 million for Pacific Visions in January 2015. Board Director Mario Molina and his wife Therese and Board Chairman John Molina and his wife Michelle will match all donations up to \$5 million, which will help inspire individuals, corporations, and foundations to support the project. This challenge grant was given in honor of Jerry Schubel and in recognition of his visionary leadership and commitment to the ocean.

## **Charlotte and Allen Ginsburg**

At the Aquarium's October 2015 Board meeting, Board Director Charlotte Ginsburg announced a \$1 million gift to Pacific Visions from her and her husband, Dr. Allen Ginsburg. The couple has supported the Aquarium since 2002 and named the Aquarium's Members Entrance in 2006. Charlotte has also served in a volunteer capacity as the co-chair of the Trustees of the Pacific for two years and served on committees for the Aquarium's annual Gala, Sea Fare, and other special projects.

## **American Honda Motor Co., Inc.**

A founding Aquarium sponsor, American Honda Motor Co., Inc., made a \$350,000 contribution to the Pacific Visions wing in 2015. Honda has provided support to the Aquarium's environmental education and conservation initiatives since the Aquarium opened, and their partnership is reflected throughout the Aquarium, including the Honda Blue Cavern exhibit. By advancing their support with this gift, Honda will continue to aid the Aquarium in engaging and educating millions of visitors each year.

## **Los Angeles County Board of Supervisors**

A \$300,000 leadership gift from Fourth District Supervisor Don Knabe of the Los Angeles County Board of Supervisors in January 2015 provided pivotal support to Pacific Visions. Pacific Visions is a project that will meet the growing needs of Los Angeles County. Supervisor Knabe's support will expose thousands of constituents from throughout the county to the most important environmental issues of our time.

## **Pacific Life Foundation**

Since 2003 Pacific Life Foundation has partnered with the Aquarium to develop and implement innovative and impactful programs that have ignited passion for science and engaged Aquarium visitors in conversations about the future of our planet. The foundation contributed \$250,000 to Pacific Visions in 2015, furthering this initiative and supporting the new wing that will inspire millions of students and families from the greater Los Angeles-Orange County area.

## **The Hearst Foundations**

The Hearst Foundations granted \$100,000 to Pacific Visions. Its support will allow for innovative educational and cultural initiatives throughout the new gallery spaces. As Pacific Visions brings together arts and science, students will have the opportunity to find inspiration, to make observations and ask relevant questions, and to formulate ideas in an immersive, technology filled environment that encourages conversations with peers and Aquarium educators.

## **Russ and Avalon Hill**

Aquarium Board Director Russ Hill furthered his commitment to the Aquarium with a \$100,000 gift to the Pacific Visions wing from him and his wife, Avalon Hill. Serving on the Aquarium's Board of Directors since 1997, Hill has provided support to many of the Aquarium's initiatives, including the annual Sea Fare and Gala events.

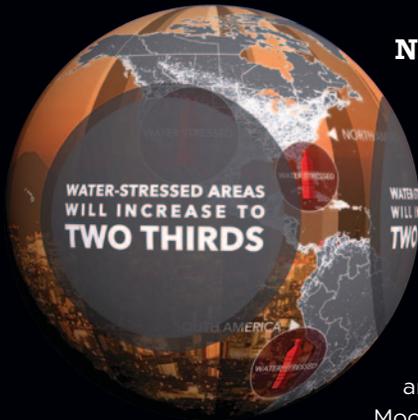
# Exhibits & Accolades

*The Aquarium's exhibits engage visitors and inspire them to become stewards of our ocean and environment. Up-to-date information is presented to connect the animals on display with current conservation issues.*

## **Jellies Exhibits Mesmerized Aquarium Visitors**

In May 2015 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.





*New Science on a Sphere show, The World's Water.*

### New Science on a Sphere Presentations Address Ocean Radioactivity and Water Scarcity

The Aquarium created its twelfth and thirteenth shows for NOAA's Science on a Sphere in 2015. *Fukushima and Our Radioactive Ocean*, developed in partnership with the Woods Hole Oceanographic Institution and funded by the Gordon and Betty Moore Foundation, examines the amount of naturally occurring radioactivity in the ocean and the impacts of the Fukushima disaster. *The World's Water* focuses on water as a precious natural resource and how people around the world, in both developing and developed countries, face water shortages. In some places, shortage of freshwater is a looming crisis exacerbated by climate change and a growing population. This show was developed in partnership with NOAA's National Water Center.

### Webcasts Brought Critical Issues to Public and Press

The Aquarium hosted four live webcasts in 2015, sharing up-to-date information on ocean and environmental issues with the public and members of the media. Expert speakers discussed their research and answered questions.

- **January 21:** Officials from the Port of Long Beach and the Port of Los Angeles discussed regulations aimed at improving air quality and reducing emissions that contribute to climate change.
- **March 11:** Dr. Ken Buesseler, a senior scientist at Woods Hole Oceanographic Institution, discussed ocean radiation levels and safety after the Fukushima disaster, detailing ongoing monitoring efforts in Japan and the United States to measure radioactive isotopes present in ocean water and fish.
- **June 1:** Experts discussed sea level rise in conjunction with the opening of a new photography exhibition at the Aquarium, *Sink or Swim: Designing for a Sea Change*, organized by the Annenberg Space for Photography in Los Angeles. Speakers included Frances Anderton, guest curator for the exhibition; Dan Cayan, research

meteorologist with the Scripps Institution of Oceanography; and Patrick H. West, Long Beach city manager. They discussed sea level rise and its potential threats to Southern California, and West announced a collaborative project led by the Aquarium to assess Long Beach's climate resiliency.

- **October 7:** In conjunction with the opening of *Water: Our Thirsty World*, an exhibition of photographs examining water scarcity and humans' relationship with water, experts discussed water scarcity locally and globally and what people can do to help respond to global water issues. This exhibition was organized by the Annenberg Foundation. Speakers during the webcast included Camille Lowry, media relations and special event lead for the Annenberg Foundation, and Kevin Wattier, former general manager of the Long Beach Water Department.

### Aquarium Renewed AZA Accreditation

In March the Association of Zoos & Aquariums (AZA) announced that the Aquarium was granted accreditation by AZA's independent Accreditation Commission. The Aquarium first received AZA accreditation in 2000 and renewed in 2005, 2010, and 2015. 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.

### Aquarium Earned TripAdvisor 2015 Travelers' Choice Award



The Aquarium of the Pacific won a 2015 Travelers' Choice Award for Aquariums, as awarded by TripAdvisor® travelers. The award appears on the Aquarium's TripAdvisor page.

TripAdvisor recognizes the best in travel as awarded by its community of users through the Travelers' Choice Award and the Certificate of Excellence. Each award uses a proprietary algorithm that takes into account several factors, including the reviews and opinions of travelers.



*Jerry Schubel speaks during a live webcast.*

# 2015 Major Donors

*The mission-driven programs mentioned throughout this annual report are made possible largely through contributions from individuals, foundations, corporations, and government partners. The Aquarium deeply appreciates and thanks the donors recognized here for their gifts and pledges.*

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Allen and Charlotte Ginsburg \*

## \$250,000+

American Honda Motor Co., Inc.  
Anonymous  
Supervisor Don Knabe, Los Angeles County Fourth Supervisorial District \*  
Pacific Life Foundation \*

## \$150,000+

Anonymous  
Tesoro Foundation \*

## \$100,000+

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The Hearst Foundations \*  
Russ and Avalon Hill Δ \*  
The Roddenberry Foundation \*  
Tom Turney and Jill Boivin Δ \*

## \$50,000+

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*The following contributors donated goods or services valued at \$1,000 or more to the Aquarium in 2015:*

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**IN MEMORY OF**

*Friends and family donated thoughtful gifts in memory of their loved ones, recognizing their love for the ocean and support of the Aquarium. All of us at the Aquarium extend our deepest sympathies to the family and friends of:*

Aquarium Penguins  
 Noodles and Elvis  
 Dorothy J. Reiner \*  
 Josie Cabiglio  
 Red-Eared Slider Clarence Cahill  
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**IN HONOR OF**

*To commemorate a special occasion, milestone, or birthday, donations can be made to the Aquarium of the Pacific. The following individuals were honored in 2015:*

Aquarium penguins Elvis  
 and Noodles  
 The Aquarium Team  
 Emma Blanchard's 14th birthday  
 Jeanne M. Brodeur  
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 Alex Vanderhoof's 6th birthday  
 Maura Whitfield  
 Michael Williams  
 Kent Wong's 5th birthday

*Please note that pledges are recognized in the year in which they are received.  
 \* These donors have increased their giving in 2015. Δ Pacific Circle member*

# Arts Programs

*The Aquarium offers visual and performing arts programming throughout the year to attract new audiences, help visitors make an emotional connection with environmental issues, and approach scientific topics in novel ways.*



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THEO ALLOFS, CORBIS

Photography exhibitions from the Annenberg Space for Photography address sea level rise and water scarcity.

## Aquarium Hosted Two Exhibitions from Annenberg Space for Photography

From June 1 to September 15 the Aquarium hosted *Sink or Swim: Designing for a Sea Change*, an exhibition organized by the Annenberg Space for Photography in Los Angeles. The exhibition, guest curated for the Photography Space by Frances Anderton, architecture writer and host of KCRW's *DnA: Design and Architecture* program, examined housing and infrastructure responses to rising seas, coastal flooding, and increasingly powerful storm surges tied to global climate change. The exhibition included images from renowned photographers around the world examining the ways people are responding to sea level rise, from building complex systems of sea walls and dikes in the Netherlands to constructing floating schoolhouses in Nigeria. The primary focus was the architectural and urban planning innovations being used to adapt to higher seas and the human stories behind these solutions. The Aquarium's presentation of *Sink or Swim* was complemented by sea level rise and extreme weather programming, including daily showings of the Aquarium's *Rising Sea* and *Extreme Weather* shows for NOAA's Science on a Sphere® and a lecture miniseries by sea level rise experts Dan Cayan, John Gillis, and Reinhart Flick.

The Aquarium also hosted an exhibition of photographs exploring water scarcity and humans' relationship with water in regions around the world from Annenberg. Opened on October 7, *Water: Our Thirsty World* featured images captured by photographers for *National Geographic* magazine. The photos examined water as a precious natural resource and documented how water scarcity affects threatened and endangered species, agriculture, and people, particularly those living in developing nations. The exhibition also focused on the spiritual relationship with water in cultures around the world. The exhibition, organized by the Annenberg Foundation in Los Angeles in partnership with National Geographic, was on view at the Aquarium through February 15, 2016.

## Aquarium Commissioned *Symphony of Jellies*

The Aquarium commissioned a project that brings art and science together to translate the movement of sea jellies, or jellyfish, into a symphony. The *Symphony of Jellies* was developed based on an algorithm that tracks the movements of sea jellies and translates them into sounds. Marty Quinn, founder of the Design Rythmics Sonification Research Lab, developed software and hardware to capture sea jellies movements with digital video footage and translate them into sounds through a process he calls MoveMusic sonification. Composer Eddie Freeman of Icarus Music used those sounds to create musical motifs and orchestration. Jerry Schubel and Aquarium Trustee Dennis Poulsen served as advisors and partners on the project. New exhibit components that demonstrate the MoveMusic sonification software were installed at two of the Aquarium's *Jellies* exhibits. Webcams installed in the moon jellies exhibit in the Southern California/Baja Gallery and in the lagoon jellies exhibit in the Tropical Gallery broadcast images onto a screen next to the exhibit and play the translated sounds of the jelly movements in real time.

## Sketch Comedy Meets Climate Change in *The Lollygaggers*



The Aquarium hosted a performance of *The Lollygaggers*, a comedy theater show about climate change. Written by Rani O'Brien, theater director, and Josh Willis, Ph.D., an oceanographer at NASA's Jet Propulsion Laboratory specializing in sea level rise and ocean warming, *The Lollygaggers* featured music, sketch comedy, and puppets.

# Conservation

*Through projects that sustain endangered species, citizen science programs, and a sustainable seafood program, among other efforts, the Aquarium supports ocean and environmental conservation at many levels.*

## First Loggerhead Turtles Fitted with Satellite Tags Provided New Data

The Aquarium rehabilitated and released two loggerhead sea turtles in 2015. The turtle released off the coast of San Diego in April was the first loggerhead to be fitted and tracked with a satellite tag, allowing NOAA researchers to learn more about these turtles' habitat and behavior. The second had an injured front flipper that was amputated by the Aquarium's veterinary staff before its release in November. The location data provided by the satellite transmitters will help answer questions about loggerhead habitat. Previously, this has been a mystery because the juvenile turtles are small and difficult to spot in the wild, scientists say. This new information will also help NOAA Fisheries to better protect these turtles.

## Citizen Science Programs Grew in 2015

Originally launched in 2014 in partnership with the Los Cerritos Wetlands Authority, Tidal Influence, and NOAA Fisheries conservation and wildlife management groups, the Aquarium's San Gabriel River Sea Turtle Monitoring Program grew in 2015 to include 141 volunteers who donated 1,906 hours to the program. Newer volunteers were trained for lead positions, so the current leads can evolve the project and work with NOAA Fisheries scientists on quality assurance and data analysis efforts. The data collected will be recorded and used to understand how many individual sea turtles might be living in the San Gabriel River and to help with additional tracking and monitoring efforts.

Also in 2015 the Aquarium joined the Focal Trees program in partnership with Earthwatch and the City of Long Beach to gather data on types of trees, their cooling potential, their ability to absorb certain contaminants, and water resource needs. The Aquarium trained ten citizen scientists and provided materials.

The Southern California Whale Research Project established in 2010 to collect data on blue whale movements brought in two new students for a total of thirteen volunteers.

The Aquarium also joined HABWatch to help monitor harmful algal blooms (HABs). This effort increases the number of eyes on the ocean for early detection and sets into place a method for rapid response. The Aquarium was the top contributor for information on the program's website.

## New Systems Built for Program to Breed Endangered Abalone

The Aquarium has been an active partner in the white abalone breeding program, part of NOAA's National Marine Fisheries Service (NMFS) abalone restoration efforts. The aim of the program is to re-establish healthy populations of white abalone along California's coast. Focused on successful propagation of white abalone, the Aquarium continued to condition the animals in 2015 so they are ready for future annual spawning attempts.

In 2014 NMFS awarded the Aquarium a \$48,000 grant over two years to further propagation efforts and education programs on abalone ecology for high school students. In 2015, the second year, the Aquarium's abalone team used the funds to construct a larger holding space where newly hatched white abalone larvae settle to the bottom and begin to grow after metamorphosing into their adult form. The additional settlement space was also utilized by other white abalone recovery program partners. The NOAA funding was also used to improve an algae culture system to experiment with the abalone's food preferences and the nutritional content of different algae.

## Aquarium Earned Cool Planet Award for Energy Conservation

In October the Aquarium was awarded a 2015 Cool Planet Award in the education sector from The Climate Registry and Southern California Edison for its efforts in energy and carbon management.



*Juvenile abalone are labeled with identification numbers.*



## Aquarium President Receives Conservation Award

Jerry Schubel was named Conservator of the Year by the Bolsa Chica Conservancy in 2015. He was selected in recognition of his visionary leadership in ocean conservation through exploration, research, and education. Wyland, the 2014 honoree, presented the award to Schubel.

# Animals

*The Aquarium's animals serve as ambassadors for their counterparts in the wild, helping visitors to learn about the conservation issues they face.*



## **Third-Generation Penguin Chick Hatched in June**

The Aquarium announced the birth of a female Magellanic Penguin chick named Lily in June 2015. She hatched on June 5 and represents the third generation of Aquarium-born penguins. Penguins Roxy and Floyd are Lily's parents, and Heidi, Anderson, and Skipper are her siblings. Lily made her public debut and joined the other penguins in the June Keyes Penguin Habitat on August 18.



## **Penguin Physical Exams**

Each of the Aquarium's eighteen penguins received an annual physical examination by Dr. Lance Adams, staff veterinarian.

### **Shark Pups Born Via Artificial Insemination Added to Shark Lagoon**

On January 27 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. In spring one of the zebra shark pups was delivered to another Association of Zoos and Aquariums (AZA) institution as part of the Aquarium's involvement in AZA's Species Survival Plan for zebra sharks. Successful births from artificial insemination can further research in helping dwindling shark populations in the wild. This species is listed as vulnerable to extinction under the International Union for Conservation of Nature (IUCN) Red List, mainly because of human activities, including overfishing.



*One of two zebra shark pups born via artificial insemination being added to the shallow pool in Shark Lagoon. Pictured: Lauren Harper, Aquarium of the Pacific aquarist.*

### **Largetooth Sawfish Moved to Join Breeding Program**

The Aquarium's female largetooth sawfish (*Pristis pristis*) moved to another aquarium in December to become part of a breeding program. She was a resident since 2005 of Shark Lagoon, where she lived with the Aquarium's larger sharks, including sand tiger, zebra, and blacktip reef sharks. The move is considered a breeding loan, allowing the Aquarium to retain access to any resulting offspring. In preparation for the move, the Aquarium's shark keepers worked with the sawfish to train her to swim into a stretcher. Unlike sharks that are trained in this behavior, including Fern the zebra shark, sawfish cannot be rewarded with food during the training because sawfishes thrash at their prey with their saws during feeding. Instead, the keepers offered a tactile reward when the sawfish performed behaviors successfully, giving her a quick scratch or massage for swimming into the stretcher. Sawfishes are listed as critically endangered by U.S. and international organizations, and it is no longer possible for zoos or aquariums to acquire any from the wild. These animals are part of a Species Survival Plan (SSP) managed by AZA. The SSP provides guidelines to ensure genetic diversity within the population living at zoos and aquariums.



*The Aquarium's largetooth sawfish.*

# Volunteers

*Hugh Ryono, a charter volunteer in the husbandry department, creates some of the most popular content for the Aquarium through his blog. His photos and videos give an insider's perspective and frequently go viral online.*

## Longtime Volunteer Created Viral Content

Aquarium volunteer Hugh Ryono has worked in the animal husbandry department since before the Aquarium officially opened its doors in 1998. He has played a primary role in caring for penguins, sea otters, seals, and sea lions. He has even stayed overnight with newly arrived sea otter pups needing twenty-four-hour care, rightly earning him the unofficial title of "Otter Pop."

Ryono also has a talent for photography and videography. He has captured behind-the-scenes underwater footage, timelapses, and high-speed video giving viewers a never-before-seen look at life at the Aquarium and the animals that call it home. His photos and videos of the Aquarium's animals are featured in his biweekly blog on the Aquarium's website. Ryono started his Aquarium blog in 2007. Some of his most popular posts include his story about giving the penguins an iPad to play with and his stint as Ollie the sea otter's official biographer, from her first days at the Aquarium as a pup to her daily life with the other otters in the public exhibit.

In 2015 several of his videos went viral on social media platforms and helped to promote the institution's mission and vision. His video of flamboyant cuttlefish was viewed over 655,000 times on YouTube and Facebook combined and was shared by over 16,000 people on Facebook, ultimately reaching 1.9 million Facebook users.

Through his blog, photos, and videos, Ryono gives the public insight into animal care at the Aquarium, our animals' personalities, and the inner workings of the Aquarium's behavior training and enrichment programs. These help people create a special connection with the Aquarium and promote a love of animals, providing an invaluable service to the Aquarium.



*Volunteer Hugh Ryono regularly shares photos and videos of his experiences with the Aquarium's animals on his blog.*



## 2015 Volunteer Statistics

**734 education volunteers**

**413 husbandry volunteers**

**193 volunteer divers**

**180 VolunTEENS**

**1,601 total volunteers and interns**

**163,651 total hours contributed**

*Ryono works with Aquarist Nicole Leier and Fern the zebra shark in a training session.*

# Education

*The Aquarium's education programs serve students of all ages, from toddlers and schoolchildren to high school and college students, as well as adults.*

## **Educators Helped Visitors Explore the Ocean**

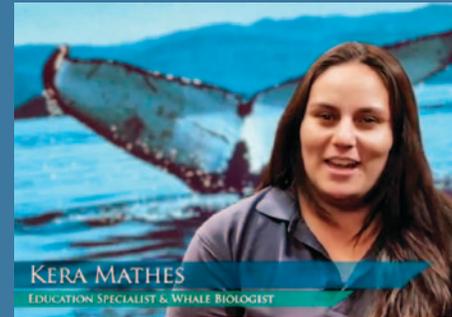
Visitors learned about our planet during Exploration Shows led by educators on weekends in the Aquarium's Ocean Science Center in 2015. Visitors observed Earth using NOAA's Science on a Sphere. Data collected daily by NOAA and NASA satellites are transformed into visualizations for the 6-foot-diameter globe. During these Exploration Shows, an Aquarium educator manipulated the sphere to show audiences the latest visualizations and answer questions about Earth and our ocean. During the summer months, audiences were able to connect via live video to explorers on expeditions at sea to ask questions and learn more about their missions.

## **Aquarium Earned Fourth CILC Pinnacle Award**

The Aquarium's education department received the 2014-2015 Pinnacle Award from the Center for Interactive Learning and Collaboration (CILC) for its educational videoconference programs. The Pinnacle Award is given to institutions that receive "outstanding" scores on program evaluations from teachers. Teacher evaluations score educational content and audience engagement. Since the program started in 2011, more than 10,200 students throughout the country have participated in the Aquarium's video-conference programs. This is the Aquarium's fourth consecutive CILC Pinnacle Award.

## **Career Connections Program Linked Students and Scientists**

Career Connections was supported in 2015 by funds from The Robert and Lisa Margolis Family Foundation. This program provides opportunities for scientists to connect with middle school and high school students anywhere in the nation through videoconferencing technology. During a live video chat session, students are able to ask the scientist questions about his or her experiences, education, and areas of expertise. Connecting scientists with students can help give real-life examples of science in action, introduce career opportunities, and help students learn how science is related to their everyday lives.



*The Career Connections videoconferencing program allows students to connect with scientists.*

## **Education Staff Developed New Shows for Kids and Families**

In 2015 the Aquarium's education staff developed new shows for the outdoor Marine Life Theater for kids and families. Ranging from musical comedy variety shows to presentations of live animals, these programs provide entertainment that engages visitors and delivers educational information in novel ways. The *Singing Spectacular!* show features characters performing in an "Aquarium Idol" competition, and in *Fishywood Squares* characters answer questions from the host and the audience determines whether their answers are true or not.



## 2015 Education Statistics

**165,583** students, teachers, and community members served

**30,100** students and chaperones visited through the scholarship program

**61,455** hours of service donated by education volunteers

**8,832** miles driven and **29,328** visitors served by Aquarium on Wheels

*Kids participate in hands-on learning with parents in Aquarium classes.*

# Fundraising Highlights

*The Aquarium relies on individuals, corporations, foundations, and government partners to support its mission and vision with contributions to the operating budget and a diverse range of projects.*

## **Pacific Circle Leadership Gift Society**

The Pacific Circle program raised nearly \$730,000 in 2015 to support the Aquarium's mission-driven education, conservation, and animal care programs. This figure represents a 17 percent increase over the program's 2014 revenue and nearly \$85,000 in surplus over the program's intended 2015 revenue goal. Members of the Pacific Circle, the Aquarium's leadership gift society, receive exclusive Aquarium access in gratitude for their support. See pages 10 and 11 for a full list of Pacific Circle donors.

## **Blue Whale Gala**

The Aquarium hosted its annual Blue Whale Gala and entertained over 380 guests on June 13, 2015. Attendees of the black-tie affair participated in an elegant cocktail and hors d'oeuvre reception on the front plaza, gourmet dinner in the Great Hall of the Pacific, and after-dinner drinks and dancing under the stars. This elegant fundraiser raised significant support for the Aquarium thanks to the Aquarium Board of Directors and the Gala committee, chaired by Trustee Michelle Molina. The event celebrated the Aquarium's mission and vision, featured a special presentation of the Ocean Conservation Awards to Vice Admiral Paul G. Gaffney II, U.S. Navy (Ret.), and Margaret S. Leinen, Ph.D., and raised more than \$378,000 in support of the Aquarium's education, conservation, and animal care programs.

## **Sea Fare**

The twelfth annual Sea Fare fundraiser hosted 650 attendees and raised over \$146,000 on October 17, 2015. This annual "foodie" fundraiser featured tastes from twenty-eight local restaurants and food and beverage providers, the Go Fish opportunity game, and silent and live auctions. The VIP on the Veranda sponsorship opportunity, offering reserved seats, early access to the event, hors d'oeuvres, and a premium bar on the outdoor Veranda, sold out for a second consecutive year. Proceeds from Sea Fare benefit the Aquarium's education, conservation, and animal care programs.

## **Membership**

Last year the Aquarium was supported by 38,683 member households. Members visited a record-breaking 286,799 times and shared these experiences by tagging their online photos with the #AquariumMember hashtag. They also enjoyed special events, including

stuffed animal check-ups at the Family Member Pajama Party and our first-ever Member Prom. The \$4.3 million in membership support helped the Aquarium continue to protect and preserve the Pacific Ocean, its inhabitants, and ecosystems.

## **Annual Programs**

In 2015 thousands of individuals gave a total of \$136,817 through the Aquarium's Adopt an Animal program, year-end campaign, matching gift program, and by dropping money into donation kiosks at the Aquarium. While otters and penguins continue to be favorites among animal adopters, the limited-edition sea jelly adoption was also popular and allowed one adopter to visit behind the scenes of the sea jelly exhibits with an aquarist. Additional highlights included the first-ever \$1,000 donation raised by a marathon runner and a five-year-old who collected \$70 for his favorite sharks by breaking into his piggy bank and asking for donations.

## **Grants**

In 2015 more than \$1 million in grant funding was raised for the Ocean Science Education Program, the Aquarium Scholarship Fund, and other conservation programs and initiatives. These initiatives, rooted in science and the environment, are core to the Aquarium's mission and provide inspiration and engagement to visitors of all ages. More than fifty corporate and foundation partners provided grant funding to the Aquarium, including twelve new supporters. Key supporters include the Tesoro Foundation, The Roddenberry Foundation, BCM Foundation, Edison International, The Robert and Lisa Margolis Family Foundation, and The Miller Foundation. For a complete list of our corporate and foundation donors, please see pages 10 and 11.

## **Sponsorship**

In 2015 the Aquarium raised more than \$80,000 through corporate sponsorships. Corporate sponsors play a key role in supporting the Aquarium's mission and goals and receive unique opportunities for recognition, engagement, and benefits for employees and executives. A key corporate sponsor, ScholarShare California's 529 College Savings Plan partnered with the Aquarium to inspire a lifetime of learning through their sponsorship of the Aquarium's Toddler and Preschool Programs, Pacific Islander and Scarium of the Pacific Festivals, and Library Pass program.

# Aquarium Administration & Financial Results

## TRUSTEES OF THE PACIFIC (AS OF 12/31/15)

A special thanks to the following individuals who serve as Trustees of the Pacific. Trustees are donors who also volunteer their time and expertise in support of the Aquarium's mission and vision.

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Dr. Dominic and Margaret DeCristofaro	Beverly O'Neill
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John Fielder and Donita Van Horik	Janet and Fred Riedman
Walt and Linda Florie	Heidi and Rod Roddenberry
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Richard Katz	John and Patricia Wang
Suzanne Kelley	William Waterhouse and Barbara Long
Los Angeles County Supervisor Don Knabe	Charles and Maureen Wilmot
John and Joan Knight	Denise Wynn
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## FINANCIAL OVERVIEW

For the year ended 2015 total attendance was 1.6 million, a 5 percent increase compared to 2014. Total earned revenues were 7 percent greater than 2014 results. Earned revenues, which include admission, education programs, and gift store and food sales, equated to 72 percent of the total 2015 revenue. Total revenue was down slightly compared to 2014. This reflected the timing of when contributions were received. Programs continued to be the focus of activities for the Aquarium, with 82 percent of total expenditures directed toward exhibits, service, and communication. Net assets at the end of the year increased, with a favorable change of 2 percent, or \$700,000.

### REVENUES AND EXPENSES (In 000s)

	2015	2014
Earned revenue	\$26,336	\$24,516
Membership	4,288	4,042
Government	300	1,919
Contributions	5,461	6,527

**Total Revenue 36,385 37,003**

Programs and marketing	29,193	27,295
Development and membership	2,492	2,497
Administration	4,000	3,828

**Total Expenses 35,685 33,619**

Change in net assets 700 3,383

Net assets at beginning of year 32,182 28,799

**Net assets at end of the year 32,882 32,182**

### BALANCE SHEET (in 000s)

	2015	2014
Cash and cash equivalents	\$10,156	\$11,093
Accounts receivable	816	832
Contributions receivable	2,399	2,939
Prepaid expenses	379	369
Gift store inventory	596	515
Property and equipment net	24,322	23,925

**Total Assets 38,668 39,674**

Accounts payable 1,696 2,908

Accrued liabilities 1,261 1,940

\*Deferred revenue 2,874 2,643

**Total Liabilities 5,785 7,492**

Unrestricted 17,263 18,319

Temporarily restricted 15,121 13,465

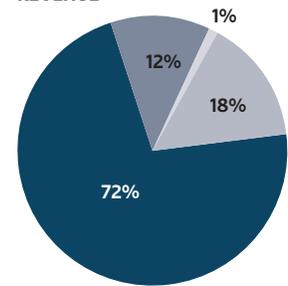
Permanently restricted 498 398

**Total Net Assets 32,883 32,182**

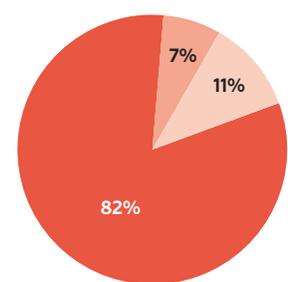
**Total Liabilities and Net Assets 38,668 39,674**

\*The Aquarium of Pacific restated 2014 deferred revenue to include membership sales paid but not earned in the period.

## REVENUE



## EXPENSES



For a list of the Aquarium's donors, please see pages 10 and 11 of this annual report.



  
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