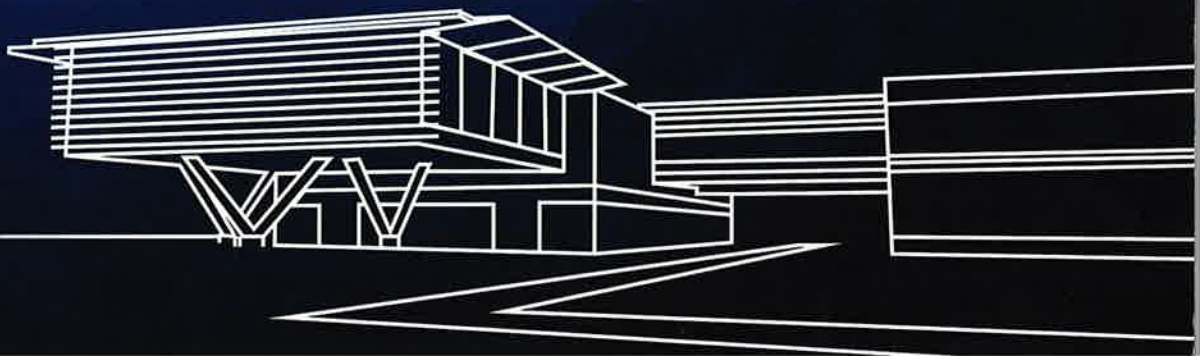




GEORGIA AQUARIUM

**ONE OCEAN,
ONE HEALTH
RESEARCH INSTITUTE**

at Marineland, FL





BELIEVE IN THE IMPOSSIBLE. ACHIEVE THE UNIMAGINABLE.

Since opening in 2005, Georgia Aquarium has welcomed over 22 million guests. The Aquarium's collections and facilities are world-class; no other aquarium in the world boasts such an abundance and diversity of aquatic life. The Aquarium provides a remarkable platform for educating people of all ages about the ocean and the ways it is impacted by human activities.

Georgia Aquarium is uniquely positioned to be a global resource for scientific research, conservation and education that explores and preserves the vital connection between ocean health and human health. The time has come to leverage the capabilities of this unparalleled scientific and educational resource.

*EXPANDING UPON ITS RESEARCH AND CONSERVATION PROGRAMS, THE GEORGIA AQUARIUM IS BUILDING THE **ONE OCEAN, ONE HEALTH RESEARCH INSTITUTE** AT MARINELAND, FLORIDA.*

The **One Ocean, One Health Research Institute** will bring together scientific thought leaders in the field of ocean and environmental health, accelerating conservation, research and educational activities and fueling discoveries that can have a global impact for the species and habitats represented in the Aquarium's collection.

ONE OCEAN, ONE HEALTH RESEARCH INSTITUTE

The One Ocean, One Health Research Institute, together with related disciplines and institutions, will focus research on the growing One Health movement—a collaborative effort among health science professions—to attain optimal health for people, animals, and plants in our environment. Georgia Aquarium is pioneering and integrating the One Health concept into its research and conservation programs centered at the proposed Research Institute.

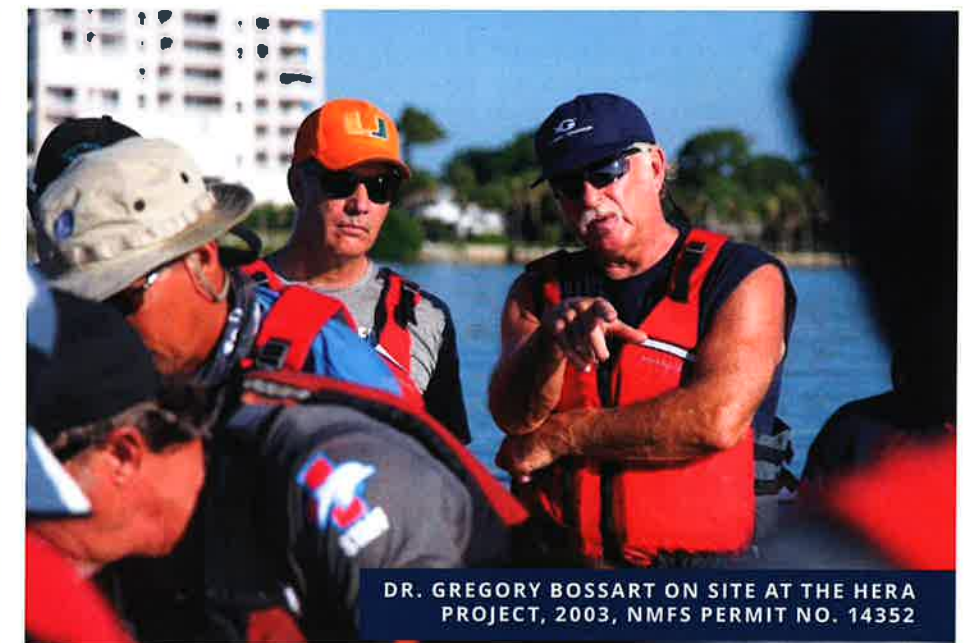
The Institute will build on the success of Georgia Aquarium's present research and conservation projects, including:

- The creation of the first ever **complete genome map** of shark DNA using samples from the Aquarium's whale sharks.
- The **Bottlenose Dolphin Health and Environmental Risk Assessment (HERA) project**—a multidisciplinary, integrated, collaborative effort to assess individual and population dolphin health in Charleston, SC, and the Indian River Lagoon, FL, to develop standardized tools for health and risk assessment and to develop the dolphin as the sentinel species for ocean and human health.
- Since 2010, Georgia Aquarium has been working in partnership with the Coral Restoration Foundation (CRF) in the Upper Florida Keys to help to **restore Staghorn and Elkhorn corals** using ocean-based aquaculture nurseries and transplantation methodologies.

The formation of the Institute will be overseen by Dr. Gregory Bossart, Senior Vice President and Chief Veterinary Officer at the Georgia Aquarium, who has spent the last 30 years working in clinical domestic marine mammal and avian medicine, and in wildlife pathology on a national and international basis. He has over 150 peer-reviewed scientific publications focused primarily on the pathologic basis of disease in wild animals.



HERA PROJECT, 2003, NMFS PERMIT NO. 14352



DR. GREGORY BOSSART ON SITE AT THE HERA PROJECT, 2003, NMFS PERMIT NO. 14352



ONE OCEAN, ONE HEALTH RESEARCH INSTITUTE OVERVIEW

ESTABLISHMENT OF THE ONE OCEAN, ONE HEALTH RESEARCH INSTITUTE IS AN INVESTMENT IN THE HEALTH OF OUR PLANET, OUR OCEAN AND OUR SPECIES.

THE REASON

The One Ocean, One Health Research Institute will be:



• A **global hub for scientific activity** to expand the body of knowledge on the largely unexplored connection between the health of the ocean and human health



• A **point of intersection for scientists, educators and the millions of visitors** who come to Georgia Aquarium, raising awareness of the changes in human behavior that will improve the one health that unites animals, humans and the environment



• A **regional and global leader in conservation initiatives** that increase and enhance the management of ecologically-significant networks of protected areas, leading to cleaner water and healthier aquatic environments



• An **academic partner for research universities** in Georgia, Florida and beyond that are engaged in cutting-edge research that aligns with and expands upon Georgia Aquarium's work

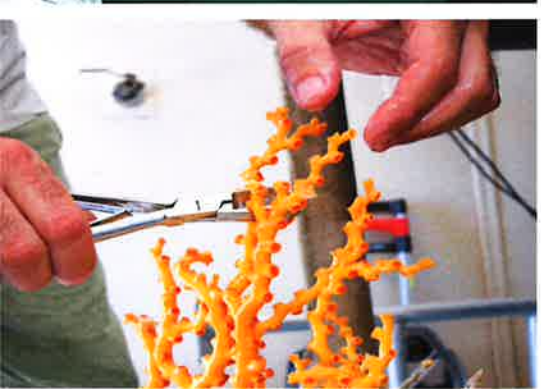


• An **educational resource for local schools** and teachers wanting to integrate STEM content into their daily classroom activities, as well as for high school and college students seeking hands-on opportunities to become engaged in scientific research

THE PARTNERS



The Aquarium can expand upon and leverage its **extensive network of local partners** to fuel the growing body of research. The Research Institute will collaborate with other local research institutes to improve the health and well-being of humans, animals and the environment.



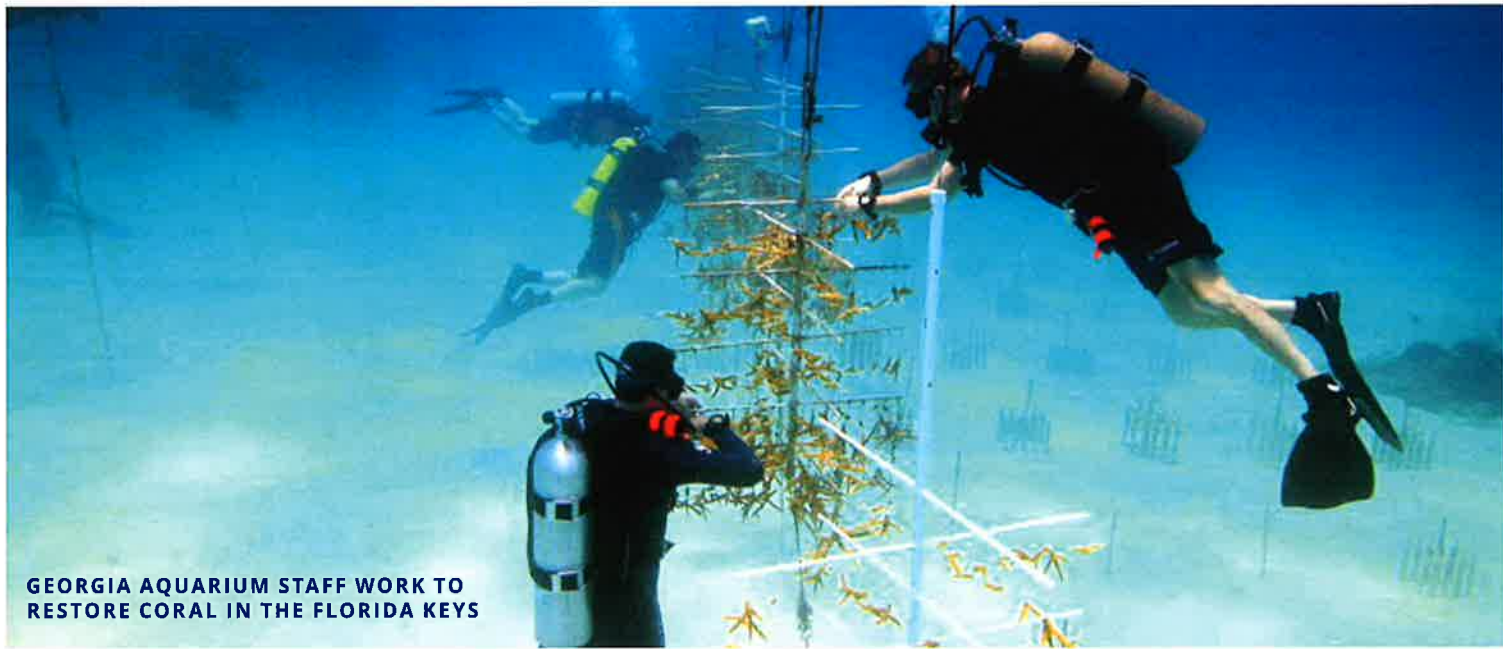
THE LOCATION

Given the maturation and growth of the Aquarium's research and conservation efforts, there is a need to centralize, expand and broaden this program to realize the full potential of Georgia Aquarium to make a global impact on our understanding of the ocean and ourselves. The ***One Ocean, One Health Research Institute*** will advance research priorities while achieving real conservation outcomes, solving pressing problems and enhancing the Aquarium's education programs and public health initiatives.

The logical location for the Institute is at ***Marineland Florida***, with its prominent Atlantic coastal footprint, closer proximity to existing and planned research projects and colocation with the existing infrastructure of Georgia Aquarium's Marineland Dolphin Adventure and Georgia Aquarium's Conservation Field Station facilities.

The Institute will include a new building that services the scientific, educational and conservation needs of the Institute and provides a coastal base of operations for a research and conservation program that is vital in nature and global in scope. To keep our guests directly and intimately engaged in these important aspects of our mission, the building will provide an unprecedented amount of guest viewing, allowing guests to see science as it happens and experience firsthand Georgia Aquarium's efforts to understand and sustain the ocean.





GEORGIA AQUARIUM STAFF WORK TO RESTORE CORAL IN THE FLORIDA KEYS



ORGANIZATION STRUCTURE

Academically, the One Ocean, One Health Research Institute will be structured around a core faculty of six research chairs who will each have their own laboratories. The Institute and its chairs will coalesce research teams of staff, postdoctoral fellows and graduate students. Together, they will manage an exciting and diverse portfolio of regional, national and international projects that resonate with the collection at Georgia Aquarium and catalyze significant improvements for our understanding and stewardship of the ocean.

These chairs will provide the intellectual drive for the institute and will also be responsible for pursuing external research funding that leverages the Georgia Aquarium's commitment for even greater research benefits.



MARINE MAMMAL HEALTH CHAIR

This Chair focuses on understanding the health of marine mammals, as well as the emergence of infectious diseases and toxins that impact the habitats of these species. In this way, researchers can identify potential health issues in the ecosystem, which has a direct application to human health.



PELAGIC (OPEN OCEAN) BIOLOGY CHAIR

This Chair will heighten the Aquarium's status as a leader in the study of the growth, behavior, health and genetics of whale sharks and other marquee pelagic species. This research will lead to important discoveries about the impact of changing CO₂ levels, plastic pollution, warming and acidification on pelagic species and the flow-on effects that this will have on the health of humanity.



CORAL REEF CHAIR

This Chair will be both pure and applied, building off of Georgia Aquarium's existing pure research and applied conservation work with these ecosystems, including two current conservation projects on coral propagation and reproduction that are aimed at restoring endangered corals in the Florida Keys and wider Caribbean.



AQUACULTURE CHAIR

This Chair will seek to solve the specific problem of reducing the extractive footprint of humanity on the oceans, primarily by developing novel methods to breed and rear fishes and invertebrates not previously amenable to captive culture. A focus on the public aquarium sector will yield tremendous scope for success including the development of revenue streams.



CONSERVATION CHAIR

This Chair would become the public spokesperson for the Institute's conservation efforts, would be responsible for developing partnerships with government and NGO partners, working alongside these and community stakeholders using the One Health approach to help conserve the oceans for future generations.

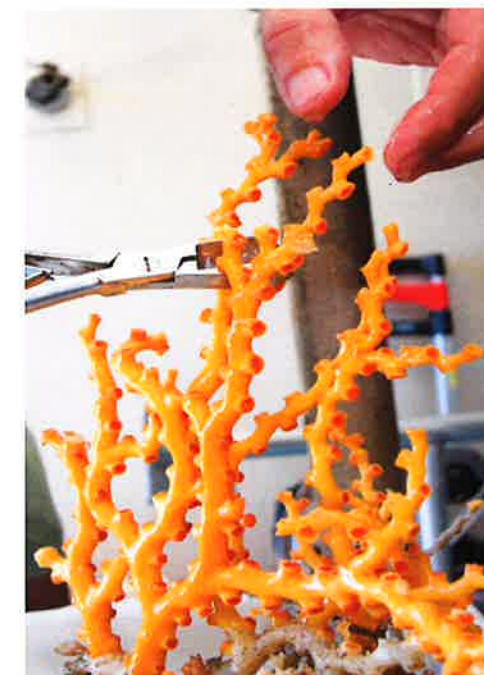
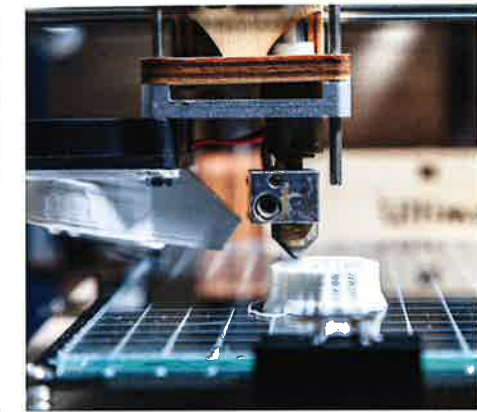


EDUCATION CHAIR

This dedicated applied science Chair would elevate education programs and provide a direct link between new science initiatives and Georgia Aquarium's ongoing work with schools and teachers, reviewing educational content and delivery methods, focusing on new ways to package informal science education, engaging young people in the study of science, and linking education to the Institute's work.

ONE OCEAN, ONE HEALTH RESEARCH INSTITUTE





FACILITIES

The ambitions of the One Ocean, One Health Research Institute require cutting-edge facilities that will allow the chairs and their associated teams to maximize creativity and productivity. Office, laboratory and meeting spaces will all be necessary and will feature “baked in” technology solutions to minimize the tyranny of distance from Atlanta. The existing Conservation Field Station will become part of the new facility. Laboratory facilities will be opened to scheduled public tours which will highlight the research programs. Additionally, the Institute will offer a unique citizen science model to raise funds and recruit individuals, students, teachers and corporate fellows to participate in Research Institute research programs.

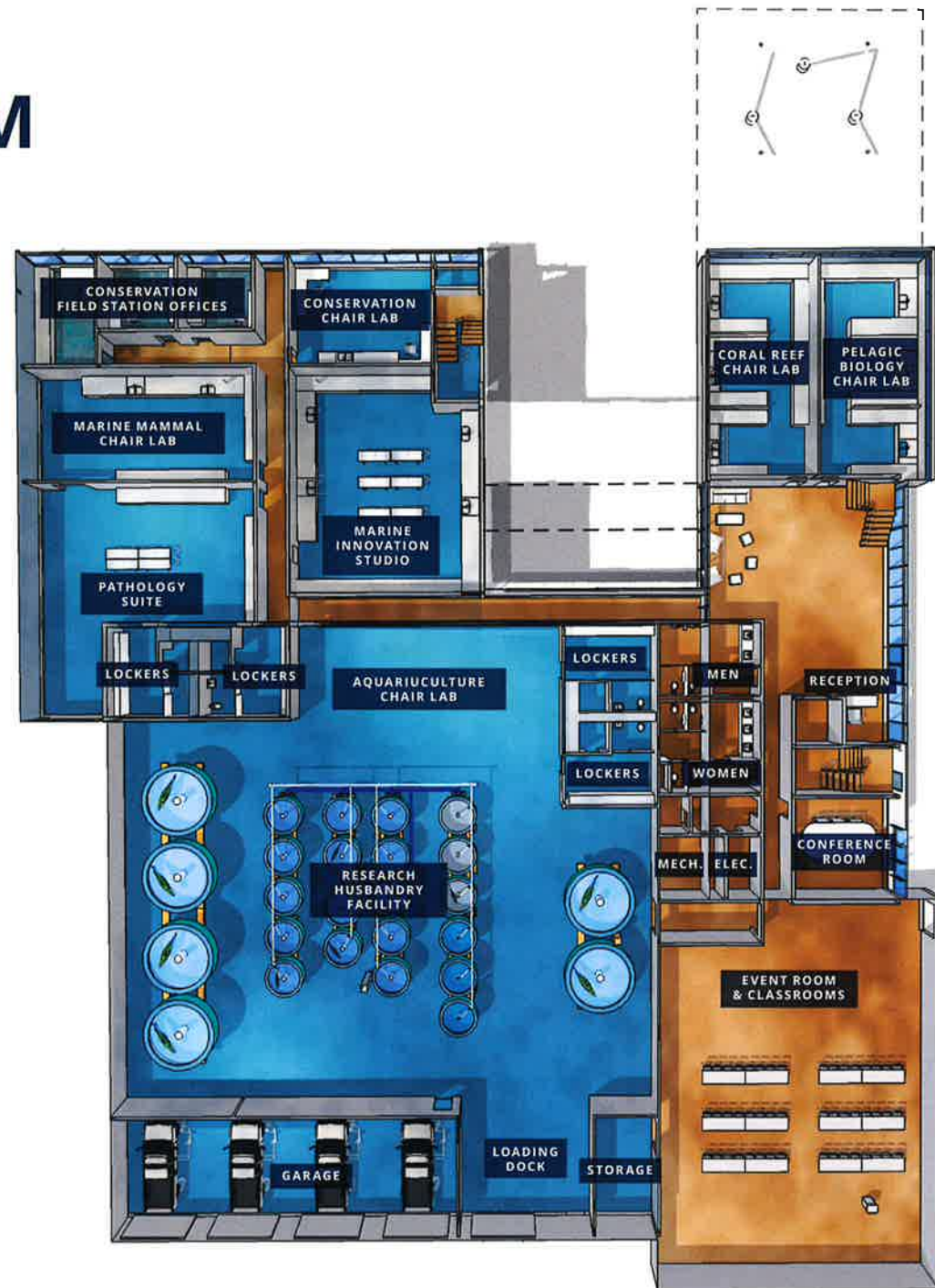
Key facilities would include:

- **Pathology Suite** Dedicating space to the preparation, imaging and interpretation of pathological samples collected during health assessments and other research projects, the pathology suite will be equipped with advanced research equipment and facilities, including a necropsy room for stranded marine mammals including dolphins and small whales.
- **Marine Innovation Studio** An innovation studio equipped with the latest equipment used in designing and building instruments such as satellite telemetry tags, bioacoustics, photography/ photogrammetry, drone equipment, and oceanographic instruments, it will contain equipment such as AutoCAD design, 3D printers, CNC routers, epoxy and fiberglass fabrication and drone/ROV operations.
- **Research Husbandry Facility** research husbandry systems appropriate for both maintenance of ark populations of rare species, and manipulative experiments with ex situ breeding and rearing

of species of interest, including both fish and invertebrates like corals. The RHF will require a state-of-the-art seawater intake and conditioning system and an appropriate effluent management system.

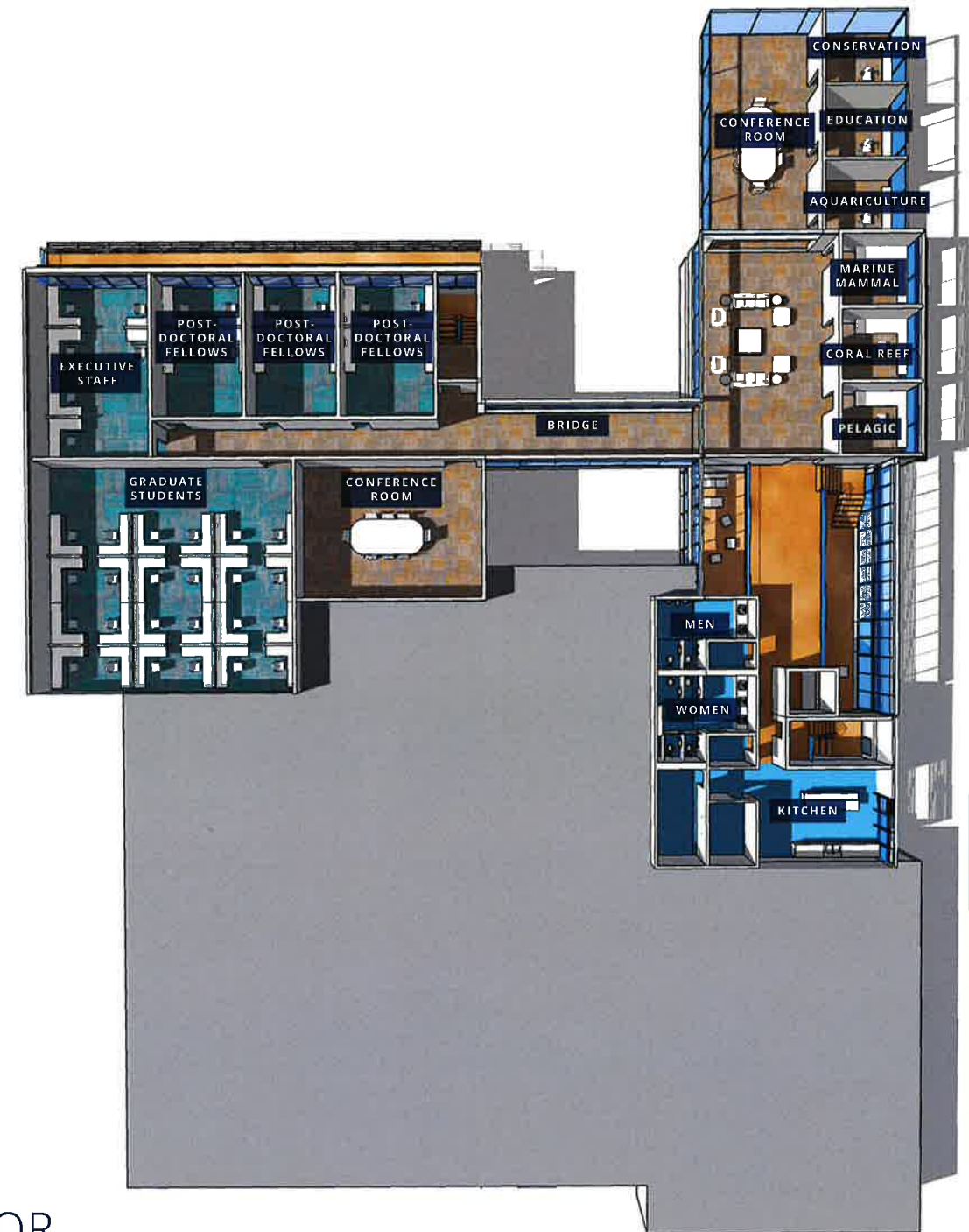
- **Vessel Operations** A Challenger-class vessel would provide day and overnight capability anywhere on the continental shelf. A mobile platform for research activities with whales, dolphins and manta rays, it could also be used as a stable platform for collections activities for the Georgia Aquarium. The vessel would be equipped with custom instrumentation from the marine innovations studio and would provide an excellent training tool for GAI’s extensive scientific diving program. The new vessel would dock in the safe harbor provided by the marina in the Intercoastal Waterway adjacent to the proposed institute site. Operational costs will be subsidized by providing the vessel on a rental basis to universities and other institutes.

PLAN & PROGRAM



FIRST FLOOR

- Chair Laboratories
 - Pelagic (Open Ocean) Biology Lab
 - Coral Reef Lab
 - Conservation Lab
 - Marine Mammal Chair Lab
- Research Husbandry Facility (Aquariculture Lab)
- Pathology Suite
- Marine Innovation Studio
- Conservation Field Station Offices
- Education and Events Room



SECOND FLOOR

- Chair Offices
 - Pelagic (Open Ocean) Biology Chair
 - Coral Reef Chair
 - Conservation Chair
 - Marine Mammal Chair
 - Aquariculture Chair
 - Education Chair
- Post Doctoral Fellows Offices
- Graduate Students Work Area
- Executive Staff Offices

ONE OCEAN, ONE HEALTH RESEARCH INSTITUTE CONCEPT BUDGET ALLOCATIONS

BUILDING

Chair Laboratories	\$5,500,000
Research Husbandry	\$6,500,000
Offices & Meeting Areas	\$3,000,000
Educational Facilities	\$2,000,000
Building Services	\$2,000,000
Building Total	\$19,000,000

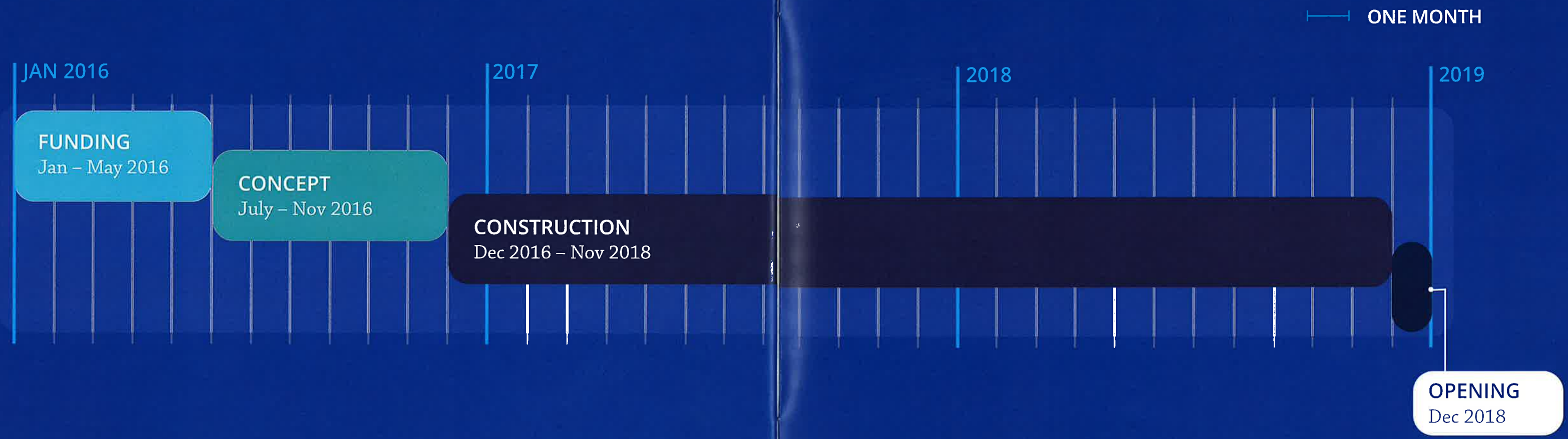
SITE DEVELOPMENT

Site Work & Utilities	\$2,000,000
Lagoon Habitat	\$500,000
CFS Upgrades	\$500,000
Site Total	\$3,000,000

PROJECT TOTAL **\$22,000,000**



PROJECT SCHEDULE





GEORGIA AQUARIUM'S COMMITMENT

Since opening in 2005, Georgia Aquarium has become an internationally-recognized landmark that has drawn millions of people to Atlanta. The extraordinary generosity of Bernie Marcus has provided Atlanta with an aquarium that is unlike any other, one that will stand for decades. There is much more for Georgia Aquarium to discover and contribute as part of its stated mission to better understand how the health and well-being of people, animals and the ocean are intertwined and dependent upon one another.

*BY CONDUCTING RESEARCH THAT
LEADS TO A GREATER UNDERSTANDING
OF OCEAN ENVIRONMENTS,
GEORGIA AQUARIUM HAS THE
POTENTIAL TO IMPROVE THE HEALTH
OF ALL SPECIES.*



The One Ocean, One Health Research Institute will leverage Georgia Aquarium's first-class facilities and international reputation. The Aquarium has an obligation to protect and study aquatic species and to be an advocate for the health of their ocean home. By conducting research that leads to a greater understanding of ocean environments, Georgia Aquarium has the potential to improve the health of all species. Further, the scientific discoveries led by the Institute will be utilized to improve public health, education and conservation efforts on a local and regional level.

With the Institute, Georgia Aquarium expands its role as a global leader in the research and understanding of the vital link between human health and ocean health. This knowledge will benefit local schools, teachers and conservation organizations by providing access to an international scientific resource in their own backyard.

**WE EXIST TO PROTECT
AND CONSERVE THE
BEAUTY OF AQUATIC
WILDLIFE AND TO
SHARE THE POWER
OF NATURE'S STORIES
IN A WAY THAT WILL
INSPIRE COMMITMENT
TO OCEAN HEALTH FOR
GENERATIONS TO COME.**



GEORGIA AQUARIUM