

Ocean Alliance, Inc.

Strategic Plan

December 2<sup>nd</sup>, 2015

## **Organization**

Ocean Alliance, Inc., a 501(c)(3) not-for-profit Organization, was founded in 1971 by renowned biologist Dr. Roger Payne. Ocean Alliance strives to increase public awareness of the importance of whale and ocean health through research and public education. Led by Dr. Payne and CEO Dr. Iain Kerr, we work with our scientific partners to collect a broad spectrum of data on whales and ocean life. Ocean Alliance uses this data to advise educators, policy makers, and the general public on wise stewardship of the oceans to mitigate pollution, prevent the collapse of marine mammal populations, and promote ocean and human health. Ocean Alliance: Strategic Overview

To effectively carry out its mission, Ocean Alliance focuses efforts on three strategic priorities. These are:

### 1) Whale and Ocean Research

- a. Conducting ongoing, targeted research expeditions focused on whales and ocean pollution from our research station in Argentina and aboard Ocean Alliance's floating laboratory, R.V. Odyssey
- b. Serving as a seasoned and reputable "pathfinder," a familiar role in which Ocean Alliance anticipates problems and launches research initiatives to address these problems. Our capacity to respond quickly to crises related to marine mammal and ocean health has been key to our success in this arena (such as our response to the 2010 Gulf oil spill).
- c. Establishing and maintaining key research partnerships, such as Ocean Alliance's current partnership with the University of Southern Maine's Wise Laboratory of Environmental and Genetic Toxicology & The Seger Laboratory at the University of Utah & Olin College of Engineering.

### 2) Science Communications for Social Impact

- a. Developing informational tools based on Ocean Alliance's historical and current research findings for use by our scientific and non-profit partners, educators, policy makers, risk managers, and others concerned about the health of the world's oceans and their connection to human health.
- b. Serving as an objective, experienced "voice of reason" regarding issues related to whale and ocean health by forming hypotheses based on data collected through rigorous scientific research methods.
- c. Distributing the results of Ocean Alliance/research partner findings to the general public through communications platforms including the press, social media outlets (e.g. Facebook, Twitter, Instagram), and Ocean Alliance and its research partners' web sites.
- d. Distributing the results of Ocean Alliance/research partner findings to the general public through speaking engagements at venues such as the United Nations, Parley for the Oceans and TED talks.

### 3) Public Education (both formal and informal)

- a. Developing curricular materials for grades 5-8 based on the multimedia content from both past and current science research expeditions (including the development of web-accessible 'science learning modules' correlated to the National Science Standards for educators and youth).

b. Developing and distributing multimedia educational content for general audiences via key partnerships with educational institutions worldwide including aquaria, zoos, museums and nature centers, and via Ocean Alliance's web sites as well as its future science and education headquarters based in Gloucester, Massachusetts.

c. Developing STEM education initiatives through our new Robotics Laboratory and partnership with Olin College of Engineering.

d. Ongoing design and development of Ocean Alliance's new 20,000 sq. ft. Oceanographic Research and Education Center on the Gloucester, MA, waterfront. This complex will house research laboratory spaces, public educational interactive exhibits, dedicated classroom and community space for local/regional groups and partners, and provide public access to the waterfront for students and the public.

### **Oceanographic Research and Education Centre - A New Home For Ocean Alliance**

On June 10, 2008, Ocean Alliance purchased—for preservation and restoration—the iconic Tarr and Wonson Paint Manufactory located at the entrance to the inner harbor of Gloucester, Massachusetts. The historic 1863 site will be restored as a public accessible oceanographic research and education center to be operated by Ocean Alliance.

The \$2 million purchase of the property was made possible by the Annenberg Foundation with a total grant of \$3 million towards the project, \$1 million of which was received in fiscal 2009 for capital campaign planning, site remediation and ongoing program support. An additional \$1.5 million has been raised to date towards site cleanup and restoration. The complete restoration of the landmark is estimated at another \$4 to \$6 million. Restoration work continues as funds are raised. The buildings stand at the tip of Rocky Neck, one of

America's oldest art colonies. The charm of the factory's architecture has inspired generations of artists, who have come from around the world to paint it. For over a century local fishermen have used the factory's smokestack as a navigational guide. More recently, the factory appeared as a backdrop in the 2000 movie *The Perfect Storm*, but the buildings have been vacant for 32 years, since the close of the factory in 1980. Ocean Alliance moved its offices into one of the brick buildings on site on April 2013.

“Wallis Annenberg and her foundation saw the importance, beauty, and iconic nature of the paint factory from across the continent in Los Angeles. We want to return the factory to as close to its original appearance as possible, and while doing so, use techniques that are as green as possible. We hope to demonstrate, through its restoration to a healthful and non-polluted state, what is possible for Gloucester's unique harbor and structures. Like generations before us who have lived in Gloucester, we make our living from the sea, and our intention is to move forward hand-in-hand with the community. We believe that our planned use of the buildings will not only respect the community's past, but will be a natural fit with the current environment and with our mission. We fully realize that acquiring and restoring the paint factory is the biggest challenge Ocean Alliance has yet faced, but we believe that the iconic value of the location and its role in maritime history offers a priceless reinforcement of our message.” Ocean Alliance President, Roger Payne.

The strategic direction of Ocean Alliance is fulfilled through its successful programs in whale and ocean research, science communications and public education as described below.

## **Whale and Ocean Research**

### Odyssey Expeditions

Odyssey Expeditions are an ongoing, formalized series of expeditions in which Ocean Alliance scientists, crew, and partners locate, track, identify, biopsy and acoustically record whales in targeted locations around the world. These efforts result in the collection of valuable baseline data sets and inform ongoing research (both collaborative and in-house) and policy decisions related to the effects of ocean contaminants on whales and other marine mammals. They also provide an excellent platform for our continuing series, a “Voice from the Sea” in which educators and other crew members connected with the expedition document, contextualize and report on the work being conducted in the field in a manner that is easily digestible to students, teachers and the general public.

Current Odyssey Expedition: On April 20, 2010, the Deepwater Horizon oil rig exploded resulting in an uncontrolled release of oil into the Gulf. Estimates now indicate that approximately 200 million gallons of oil were released. Superimposed on the threat of the oil, is the fact that more than two million gallons of toxic chemical dispersants were intentionally pumped into the Gulf by BP to break up the oil. These chemicals were used in unprecedented amounts and in untested ways.

In response to this unparalleled spill, Ocean Alliance immediately launched a Gulf Expedition to collect baseline data to determine the potential, short- and long-term effects on marine mammals of the oil spill and the massive deployment of Corexit, a toxic dispersant. The Gulf data we are collecting will be integrated into Ocean Alliance’s most recent, five-and-a-half-year, scientific circumnavigation of the globe to put the Gulf data into a global context and document the health of the world’s oceans.

At this time (spring 2015), Ocean Alliance is the only NGO conducting extensive research on the toxicological effects of the BP spill (including oil and dispersants) on deepwater marine mammals in the Gulf. Throughout the Expedition, Ocean Alliance has been documenting its findings and reporting from the Gulf as an independent (non-corporate, non-governmental) science research organization.

The Gulf Expedition has now completed the first five field seasons and the research work has moved to the laboratory and data analysis Phase.

Ocean Alliance’s scientific partner the Wise Laboratory of Environmental and Genetic Toxicology at the University of Southern Maine (USM) is one of the nation’s leaders in marine mammal toxicology. USM scientists have been working closely with Ocean Alliance since the launch of the Gulf Expedition. Together, with the Wise Lab and the help of other science partners including: the University of Utah, Cornell University, and Scripps Institution of Oceanography; we are uniquely positioned to address the emerging toxicological threat in the Gulf.

### Patagonia Right Whale Program

In the fall of 2014, Ocean Alliance celebrated the 44th consecutive field season of our study of the Southern Right Whale from the shores of Peninsula Valdez, Argentina. It was in 1970 that Ocean Alliance founder and President, Dr. Roger Payne, began studying a population of right whales that calves off the coast of Argentina. Since then, we have developed a uniquely detailed, 44-year record of the life histories, distributions and associations of over 2,000 individually known right whales. This database, which is extended by aerial surveys of the population each year, has become an invaluable tool for protecting the whales and their habitat. Ocean Alliance’s Patagonia Right Whale Program also informs the study of the Northern Right Whale, a critically endangered parallel species

The Patagonia Right Whale Program is the longest continuous study of any whale species based on known individuals and it has created a context for discovery rarely encountered in field research that is unmatched by any other cetacean research initiative. At Peninsula Valdes (and aboard the RV Odyssey), Dr. Payne and Ocean Alliance scientists have pioneered many of the benign research techniques now used by cetacean researchers throughout the world.

## **Science Communications for Social Impact**

### Communication Platforms

Independent, unbiased voices are rare when faced with the task of communicating the threats of human-made contaminants in the context of ocean pollution and whale research. Ocean Alliance, due to its long history and reputation in the field, has the ability, capacity and independence to inform policy on a scientific level to ensure that these issues of concern reach the level of policy and decision makers both in the United States and abroad. Our success in communicating our findings to benefit humanity depends on our ability to maintain a strong media presence through diverse communications channels including the press, social media outlets, the Ocean Alliance web site, and partner online networks.

Because there is a moratorium on commercial whaling, people seem to believe that whales have been saved. This is far from the truth. Many of the whaling nations have sidestepped the moratorium, commercial whaling is about to resume in Japan, and effective international control is now all but lost. Meanwhile, more whales die each year from accidental entanglement in fishing gear than from harpoons.

The world's whales now face greater and more diverse threats than ever before. As far as we are concerned there is a dire threat on the horizon facing whales and humanity alike: both whales and humans are at risk from the long-term (chronic) effects of synthetic, toxic contaminants contained in their food, compounds such as PCBs, dioxins, furans, PAHs, DDT, DDE.

These compounds bioaccumulate as they move up food chains and cross generations, inexorably increasing in concentration with each passing year. They can interfere with fetal development and the normal formation of sex organs. They also diminish the ability of immune systems to fight infections; and, in humans, can make it difficult or impossible for children to concentrate long enough to learn effectively. These bio-persistent toxins are likely to have a devastating impact on marine mammals (including whales), and on human access to fish from the seas.

### Distribution of Results: Getting the Word Out

Ocean Alliance believes that mitigating the effects of global ocean pollution on marine mammals—and ultimately humans—can be publicly embraced and adequately addressed only when presented in media formats that are both easily understandable to the general public and based on rigorous scientific research.

In 2009, Ocean Alliance released the results of 2000-2005 Odyssey Expedition, a five-year study of worldwide ocean pollution based on data collected from samples of sperm whale skin and blubber. The results were somewhat shocking (especially those related to chromium, a known human carcinogen) and have direct implications on the health of marine mammals and the health of human populations around the world—especially those that rely, in great part, on protein sources from the oceans. While the Executive Summary report of the Odyssey Expedition was made public at the 2010 meetings of the International Whaling

Commission in Agadir, Morocco, the results are still being distributed through scientific presentations and the media. The Expedition data is truly remarkable in terms of its scope and what it reveals about various toxic pollutants in the world's oceans. Ocean Alliance is working to "translate" this dataset quantifying baseline contaminant levels in the world's oceans into useful tools for risk managers,

policy and decision makers, and the general public. Last but not least this data set allows us to put data that we continue to collect in locations such as the Gulf of Mexico into a global context.

## **Public Education**

### Odyssey Expeditions: From the Gulf

The disastrous oil spill in the Gulf of Mexico has provided a regrettable, but unique “teaching moment” for increasing science-based, public education about the harmful effects of current human activities on ocean and wetland ecosystems.

The educational programming model for the Gulf of Mexico Odyssey Expedition, which is planned to continue through 2015, is based on the successful, long-term programming Ocean Alliance developed and disseminated to the 118 ports in 22 countries visited by the Odyssey during its most recent global Odyssey Expedition. The educational program of the Odyssey Expedition in the Gulf of Mexico includes science-based video podcasts from the Gulf, daily blogs from the science crew aboard Odyssey, audio recordings of marine mammals obtained from Odyssey’s acoustic array, and photographic images captured from both above and below the surface of the water, see [www.whale.org](http://www.whale.org).

To date, Ocean Alliance’s educational content is diverse in its context and nature. For example, our web site blogs are supported by solid science research, and a variety of charismatic images from our ocean expeditions. They are also presented in a format and tone that is easily accessible to wide public audiences.

For specific examples of Ocean Alliance’s expertise in creating and broadcasting engaging science-based content, please visit our currently static, PBS-hosted, web site at [www.pbs.org/odyssey](http://www.pbs.org/odyssey).

### Learning Platform: Modules in Development

Ocean Alliance seeks to build on its history of developing engaging multimedia content resources by further developing and thematically organizing its ‘treasure trove’ of existing educational content into a series of 25-

30 online, publicly accessible, grade-specific, standards-correlated ‘science learning modules.’ These modules will be easily integrated into existing middle school science curricula (as supplemental curricular resources), or may be used on their own to enhance existing ocean and whale educational exhibits and resources at zoos, aquaria, museums, nature centers, and after-school programs nationwide.

### Educational Network: Building Partnerships

Ocean Alliance will utilize various means to inform educators, youth, and the general public about how to access the organization’s valuable educational resources. Our strategy includes: contacting umbrella organizations/associations serving science educators who work with middle school youth nationwide to inform them about our ocean-related educational resources; reaching out to aquaria, zoos, museums, and marine education centers nationwide; reaching out to other non-profit and government organizations working on issues related to ocean conservation and education—especially those with a focus on programs for middle school youth and educators; and utilizing social media, including Facebook and Twitter networks targeted toward middle school audiences and educators.

### Educational Programming: In-House Program Development

In 2010 Ocean Alliance undertook a capital campaign to restore an iconic landmark, a complex of buildings that were formerly home to the Tarr and Wonson Paint Manufactory on the shore of Gloucester, Massachusetts. The complex will serve as both an oceanographic research and education center and as Ocean Alliance’s new headquarters.

Ocean Alliance's ongoing educational programming is being developed with an eye toward providing on-site, programming for this future, 20,000 square foot center on the Gloucester waterfront. This complex will house research laboratory spaces, public educational interactive exhibits, dedicated classroom spaces, and community space for local/regional groups and partners, and provide public access to the waterfront for students and the public.

The scientific, educational and practical reason for this project is to provide Ocean Alliance with a physical location in which to bring together key partners and 40+ years of influential research, intellectual capital and unique educational content. The restored headquarters will bring about stronger visibility for Ocean Alliance provide an extraordinary educational resource for students, teachers and the general public and leverage existing and new partnerships for the benefit of whales and ocean research.

### **Summary**

Over the past decade, Ocean Alliance and its supporters have invested millions of dollars and an abundance of intellectual and physical energy to make our programs successful. We continue to build and capitalize on these investments in order to extract the maximum understanding from the research and education content we have amassed and to broadly communicate our findings to educate, motivate, inspire and effect change. This has given us the opportunity to strategically build and expand our organizational capacity in order to continue our work in making the case for wise stewardship of the oceans to mitigate pollution, prevent the collapse of marine mammal populations, and promote ocean and human health.

"Ocean Alliance, under the leadership of world-renowned marine scientist Dr. Roger Payne & Dr. Iain Kerr, embodies an extraordinary combination of innovative scientific research and focused, informed environmental advocacy."

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