

# THE **TRUTH** IS IN OUR PARKS AND PEOPLE



**SeaWorld**<sup>®</sup>  
[seaworld.com/truth](http://seaworld.com/truth)

# SEAWORLD'S MISSION

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More than 50 years of world-class care, state-of-the-art animal habitats, and commitment to animal welfare have earned our parks recognition as global leaders in the zoological community.

Our mission at SeaWorld® is to inspire guests to celebrate, connect with, and care for the natural world. Through education and up-close experiences, our guests become engaged and greater stewards of marine animals and their habitats.

**"Our mission at SeaWorld is to inspire guests to celebrate, connect with and care for the natural world."**

SeaWorld cares for one of the largest animal collections in North America. Our commitment to animals extends around the world through significant financial contributions and resource support for conservation, wildlife rescue and education programs.

Our killer whales are an important part of this work. Through scientific research and public engagement, these majestic animals help benefit their counterparts in the wild. Our ability to closely observe killer whales provides insight and understanding that is invaluable to those studying and protecting killer whales in the wild.



# KILLER WHALE HEALTH AND DAILY CARE

SeaWorld has been safely caring for killer whales for nearly 50 years. We are a global leader in the care, behavior and enrichment of this species and are accredited by the world's foremost professional zoological organizations. Including our whales overseas, SeaWorld provides for the health and well-being of the largest killer whale population in a zoological organization worldwide: 30 animals. These killer whales are healthy and well adapted to their surroundings, a fact that is evident to us through our constant care, interaction and observation 24 hours per day.

SeaWorld has learned a great deal about whales over the past five decades, including what measures of daily care ensure their optimal health.

SeaWorld provides our animals with restaurant-quality fish, exercise, veterinary care and the company of other members of their species. Their environment is also continually changed to include a wide variety of positive reinforcements and enrichment activities that keep them healthy and engaged physically, mentally and socially.

SeaWorld trainers interact with each killer whale every day. Their contact, and the personal relationship it nourishes, enable the training staff to become intimately familiar with each animal's unique behavioral profile and to notice even the slightest differences in behavior that might indicate anything unusual.

Another key component of keeping our killer whales healthy is proactive monitoring of their health as an aspect of preventative care, including blood tests and physical exams. Animals at SeaWorld have a more comprehensive preventive medicine program than most humans. Rather than just a yearly physical, the whales at SeaWorld receive complete health assessments every month.

**"Animals at SeaWorld have a more comprehensive preventive medicine program than most humans."**





## SAFE AND SOPHISTICATED HABITATS

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Killer whale health starts with a safe, state-of-the-art habitat and a day filled with enriching activity. Our zoological habitats are among the largest in the world. They are multi-million-gallon environments of continually chilled and filtered saltwater. The killer whale habitat at SeaWorld Orlando, for example, encompasses more than 6 million gallons. We also have a dedicated team of water quality experts on call 24/7 to monitor this advanced system and ensure all water quality conditions meet or exceed industry and government standards.

SeaWorld invests millions of dollars in habitat maintenance and improvement and, in the last three years alone, have invested \$70 million in our killer whale habitats.

Due in large part to size and sophistication of the habitats at SeaWorld, our whales show every sign of physical fitness including healthy weight, muscle tone, respiratory efficiency, strength and heart rate. Our trainers work with our whales and closely monitor and provide their food, exercise and other environmental enrichment activities.

**"Our trainers work with our whales and closely monitor and provide their food, exercise and other environmental enrichment activities."**

Animals at SeaWorld do not face many of the challenges of their wild counterparts. They are not subject to hunger or pollution. If whales are ill or injured, they receive veterinary care.



## BEHAVIORAL ENRICHMENT AND TRAINING

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Our entire program is grounded in the philosophy of positive reinforcement and compassionate care. When training the whales, SeaWorld uses a variety of positive reinforcements. What is positive for a whale can vary from day to day, and whale to whale. For instance, some whales prefer a massage or toy; some prefer a big salmon. The essence of animal training is to continually vary the reinforcement to keep the animal engaged.

Animals at SeaWorld are never punished, and their food is never withheld.

We recognize that these animals have evolved complex behavioral capacities and problem-solving strategies to

succeed in the ocean, and we are committed to caring for their behavioral health as well as physical health. Our trainers work closely with our veterinarians and other team members to provide a holistic behavioral program that focuses on health, exercise and mental challenges.

For example, the behavioral health program of a killer whale at SeaWorld would include training to participate in husbandry and veterinary care; exercise in the form of high jumps, fast swims, and other high-energy behaviors both in and out of shows; social interactions with other killer whales and interaction with multiple enrichment objects that challenge the animals to manipulate their environment and solve problems individually and in groups.

# KILLER WHALE SOCIAL STRUCTURES

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Thanks to our groundbreaking research and decades of work with killer whales, SeaWorld's population of killer whales has been successfully producing healthy offspring since our first whale was born in 1985.

The success of this program has made it possible for SeaWorld to care for and display killer whales to the public without collecting a killer whale from the wild in 35 years.

In fact, only two of the whales in our care were collected from the wild by SeaWorld. Those two whales are doing well today, and both have given birth at SeaWorld. One of them, Katina, was the first killer whale to successfully reproduce in a zoological setting, and she is now the head of a lineage that includes four generations of killer whales born at SeaWorld.

## RESPECT FOR SOCIAL STRUCTURE

In our breeding program, as well as all aspects of our husbandry programs, SeaWorld recognizes the important bond between mother and calf, and everything we do in the care of our young whales is centered on that bond.

We administer the breeding program in a way that promotes genetic diversity. Where it was once necessary to move whales to ensure that diversity, advances in artificial insemination—pioneered with killer whales at SeaWorld—have made inter-facility whale transfers less common.

On the rare occasion that a mother killer whale cannot care for the calf herself, we have pioneered the techniques to successfully hand raise those calves. Our ability to assist in this manner is due in part to our years of experience working closely with these animals, our comprehensive health and wellness management programs, and our understanding of whale behavior.

**"SeaWorld recognizes the important bond between mother and calf."**

## INTERNATIONALLY RECOGNIZED STANDARDS

SeaWorld's killer whale program is carried out according to internationally recognized zoological standards. SeaWorld is a member of the World Association of Zoos and Aquariums, the Association of Zoos and Aquariums, and the Alliance of Marine Mammal Parks and Aquariums.

# HOW LONG DO KILLER WHALES LIVE?

## KILLER WHALE LIFESPAN IS OFTEN MISREPRESENTED. THE OBSTACLES ARE:

- **Only a small percentage** of the world's wild killer whales have been studied long enough to produce statistically valid research.
- **Killer whales** live all over the world in distinct populations—some very different from each other—and we do not have enough adequate science to know if different ecotypes have different lifespans.
- **Additionally**, when attempting to compare the lifespan of wild populations vs. those that live in zoos, data is limited. Because of the relatively small number of killer whales in our care, direct comparisons can be difficult.

## WHAT WE DO KNOW:

**The data we do have show that killer whales at SeaWorld are living as long as their counterparts in the wild.**

In peer-reviewed studies, scientists estimate that the average, or mean, life expectancy for a female is 30 years and a male is 19 years in the Pacific Northwest<sup>1</sup>. For whales in southeastern Alaska, the maximum longevity appears to be in the 50s for females and late 30s for males<sup>2</sup>. So, in those two areas of the world, female killer whales live around 30 to 50 years and males live around 19 to 30 years.

SeaWorld has several killer whales in their 30s and one that is close to 50.



## A LOOK AT THE MOST RECENT RESEARCH

**B**ecause it can be misleading to compare life expectancies between whales in the wild and those in captivity, scientists believe that the most accurate comparison to use is the "Annual Survival Rate" (ASR). ASR is an estimate of the percentage of whales in a population expected to survive each year<sup>2,3</sup>.

For instance: if we were studying a specific community of humans, this method takes into account that - in that specific population - the number of children that are expected to survive another year is high, and the number of senior citizens expected to survive is low.

According to recent studies, the current ASR of SeaWorld's killer whales is similar to that of the Alaskan Resident whales<sup>2</sup>. The study determined that the overall average ASR for that population is 0.976. (This means that there is a 97.6 percent chance that a whale in that population will live another year.)

SeaWorld compared the study's results to the ASR's of its killer whale population. To take into account advancements in medical care and knowledge, we looked at four different time spans (1968-1983, 1984-1993, 1994-2003, and 2004-2013). Not surprisingly, the trend improves over time. The fairest comparisons are the two most recent 10-year periods from 1994 to present, during which SeaWorld whales have benefitted from advancements in husbandry and veterinary practices.

**For both of those most recent periods of time, there is no significant difference between the ASR of our whales and the ASR of wild populations.**

<sup>1</sup> Olesiuk, P. 2012. Population biology of the resident ecotype of killer whale in British Columbia. Materials of the killer whale workshop, Suzdal, Russia.

<sup>2</sup> Matkin, C.O., J. Ward Testa, Graeme M. Ellis and Eva L. Saulitis. 2013. Life history and population dynamics of southern Alaska resident killer whales (*Orcinus orca*). Marine Mammal Science: 10.1111/mms.12049

<sup>3</sup> Small, RJ and DP Demaster. 1995. Survival of five species of captive marine mammals. Marine Mammal Science 11:209-226.

# RESEARCH AT SEAWORLD BENEFITS KILLER WHALES IN THE WILD

Killer whale research conducted at SeaWorld advances the scientific understanding of their species. The animals in our care allow researchers, biologists and conservationists to better understand and conserve these remarkable animals.

SeaWorld conducts and publishes the results of research on and about killer whales, provides access to our parks and animals in controlled environments, and supports field research projects around the world.

## THIS RESEARCH CONTRIBUTES TO CONSERVATION OF WILD WHALES.

The Southern Resident killer whales off the U.S. and Canadian Pacific Coast are listed as endangered by the National Marine Fisheries Service. The research we conduct and support at SeaWorld is made available to the scientific community and may someday help researchers understand why this population of whales is in decline and perhaps help to reverse the trend.

## OUR PARKS = UNIQUE ENVIRONMENTS FOR RESEARCHERS TO UNDERSTAND KILLER WHALES.

We care for the largest collection of killer whales in a zoological setting; house them in state-of-the-art habitats; and provide researchers the unique advantage of animals that are trained and able to cooperate. Researchers can monitor these individuals daily over long periods. We create a controlled setting for science that is impossible to replicate in the wild.

## RESEARCH

Scientific research performed at SeaWorld is carried out by our own research staff, and by scientists from national and internationally renowned universities and research organizations.

SeaWorld publishes the research in peer-reviewed journals, making it available to scientists and those who manage animal populations. SeaWorld scientists have authored or co-authored hundreds of published papers. Of these, 50 are specific to killer whales.

We also provide resources and financial support to field researchers. This support is offered directly by SeaWorld, through grants from the SeaWorld & Busch Gardens® Conservation Fund, and by research foundations associated with and supported by SeaWorld, including the Hubbs-SeaWorld Research Institute.



KILLER WHALES IN A ZOOLOGICAL SETTING PROVIDE  
**insight that is impossible  
 to get in the wild.**

UNIQUE ACCESS LEADS TO DEEPER SCIENTIFIC UNDERSTANDING OF:

**METABOLISM**

**REPRODUCTION & GESTATION**

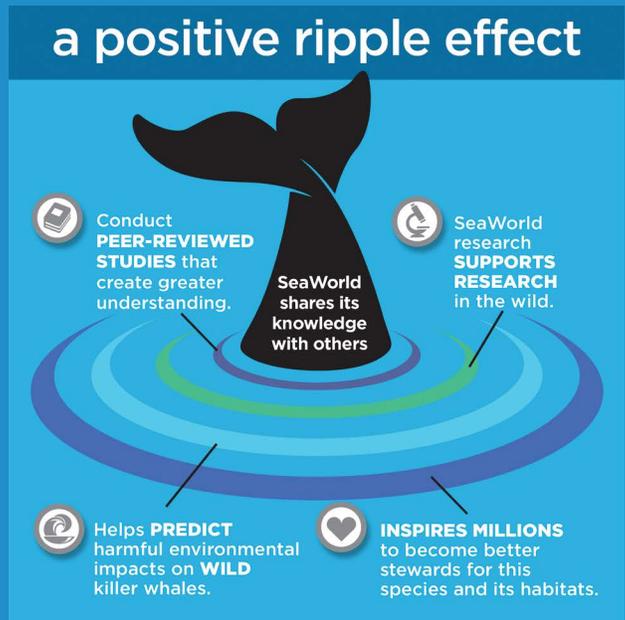
**NEONATAL CARE**

**EARLY GROWTH & PHYSIOLOGY**

**HEALTH & DISEASE**

**COMMUNICATION**

**SLEEP**



**400 MILLION+**

**GUESTS EDUCATED AND ENGAGED AT SEAWORLD**



**400 MILLION =** **COMBINED POPULATIONS OF USA + UNITED KINGDOM**



## BLUE WORLD PROJECT

For 50 years SeaWorld has transformed how the world views marine life. The unprecedented access to marine mammals that our parks provide has increased knowledge of the ocean and inspired millions of people.

To further advance scientific understanding of these animals, and to educate and to inspire conservation efforts to protect killer whales in the wild, SeaWorld has announced a plan to build first-of-its-kind killer whale environments and fund new programs to protect ocean health and killer whales in the wild.

### The numbers:

- **10 million gallons of water - nearly double that of the existing facility**
- **50 ft deep and 350 ft long**
- **1.5-acre surface area**
- **40-ft-high views for guests, resulting in the world's largest underwater viewing experience of killer whales.**

### REVOLUTIONARY NEW KILLER WHALE ENVIRONMENTS

Named the Blue World Project because of its size and scope, the first of the new environments will be built at SeaWorld San Diego.

Expanding on SeaWorld's legacy of leading-edge animal environment design, the enlarged environment will provide killer whales with even more dynamic opportunities and will support the whales' broad range of behavior and provide choices that can challenge the whales both physically and mentally. Among other things, the habitats will include a "fast water current" that allows whales to swim against moving water.

Innovative features focused on husbandry and animal care will offer SeaWorld's animal health professionals and independent scientists unique access to the whales, leading to better care for SeaWorld animals and a better understanding of those in the wild.

The San Diego environment is expected to open to the public in 2018 with new killer whale homes to follow at SeaWorld Orlando and SeaWorld San Antonio.

## HELPING WHALES IN THE WILD

As part of the Blue World Project, SeaWorld has committed \$10 million in matching funds focused on threats to killer whales in the wild, especially those identified by the US government related to the endangered Southern Resident Killer Whale population. The matching funds will be in addition to killer whale research conducted by SeaWorld's scientists, which includes 50 studies to date.

## ADVISORY PANEL

SeaWorld is engaging with an Independent Advisory Panel to bring new perspectives and ideas to the project. The panel will focus on the creation of an environment that maximizes the health and wellbeing of the animals. Given the particular expertise of current panelists and those expected to join, the panel will further advise on integrated research projects that can be conducted within the new environment and foster partnerships within the science and academic communities working in the wild.



# THE **TRUTH** IS IN OUR PARKS AND PEOPLE

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The men and women of SeaWorld are true animal advocates. We are the 1,500 scientists, researchers, veterinarians, trainers, marine biologists, aquarists, aviculturists, educators and conservationists who have dedicated our lives to the animals in our care as well as those in the wild that are injured, ill, or orphaned. Whether it's a sea lion, manatee, sea turtle, or whale, we are on call 24/7.

## Here are some important facts about SeaWorld and our work:

- SeaWorld **does not** capture killer whales in the wild. Due to the groundbreaking success of our research in marine mammal reproduction, we haven't collected a killer whale from the wild in **35 years**.
- We **do not** separate killer whale moms and calves. SeaWorld's successful development of its population of killer whales allows us to manage a healthy population of animals, while **keeping young calves with their mothers** and respecting the whales' social structure.
- SeaWorld invests **millions of dollars** in the care of our killer whales. In the last three years alone, we have invested **\$70 million** in our killer whale habitats.
- SeaWorld's killer whales' life spans are **equivalent** with those in the wild. **Five** of our animals are older than 30, and **one of our whales is close to 50**.
- The killer whales in our care **benefit those in the wild**. SeaWorld scientists have published more than **50 studies** specific to killer whales.
- SeaWorld is a **world leader** in animal rescue. The millions of people who visit our parks each year make possible SeaWorld's world-renowned work in rescue, rehabilitation, and release. We have rescued more than **24,000 animals** with the goal of treating and returning them to the wild.



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