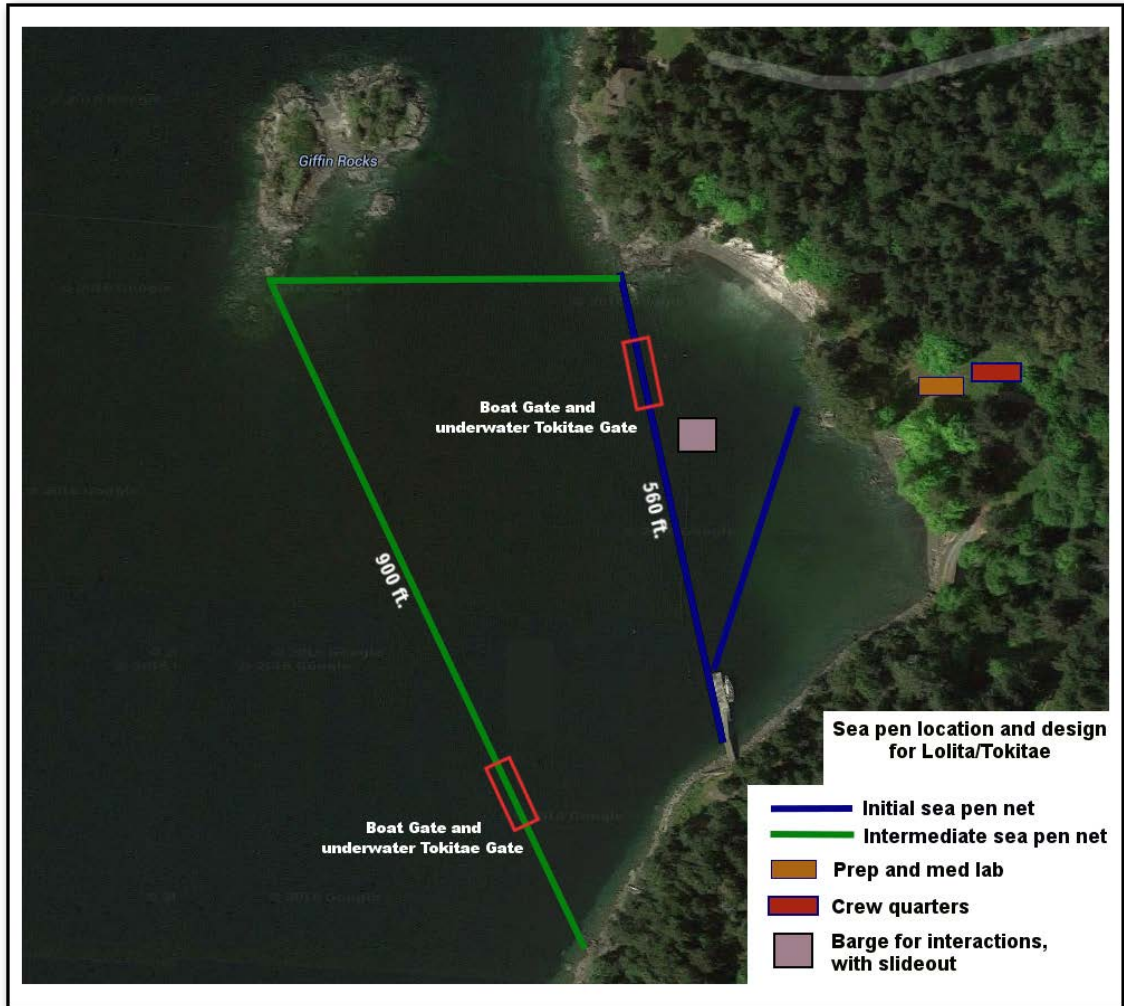


**PROPOSAL  
TO RETIRE THE ORCA  
LOLITA  
TO HER NATIVE HABITAT  
IN THE PACIFIC NORTHWEST**



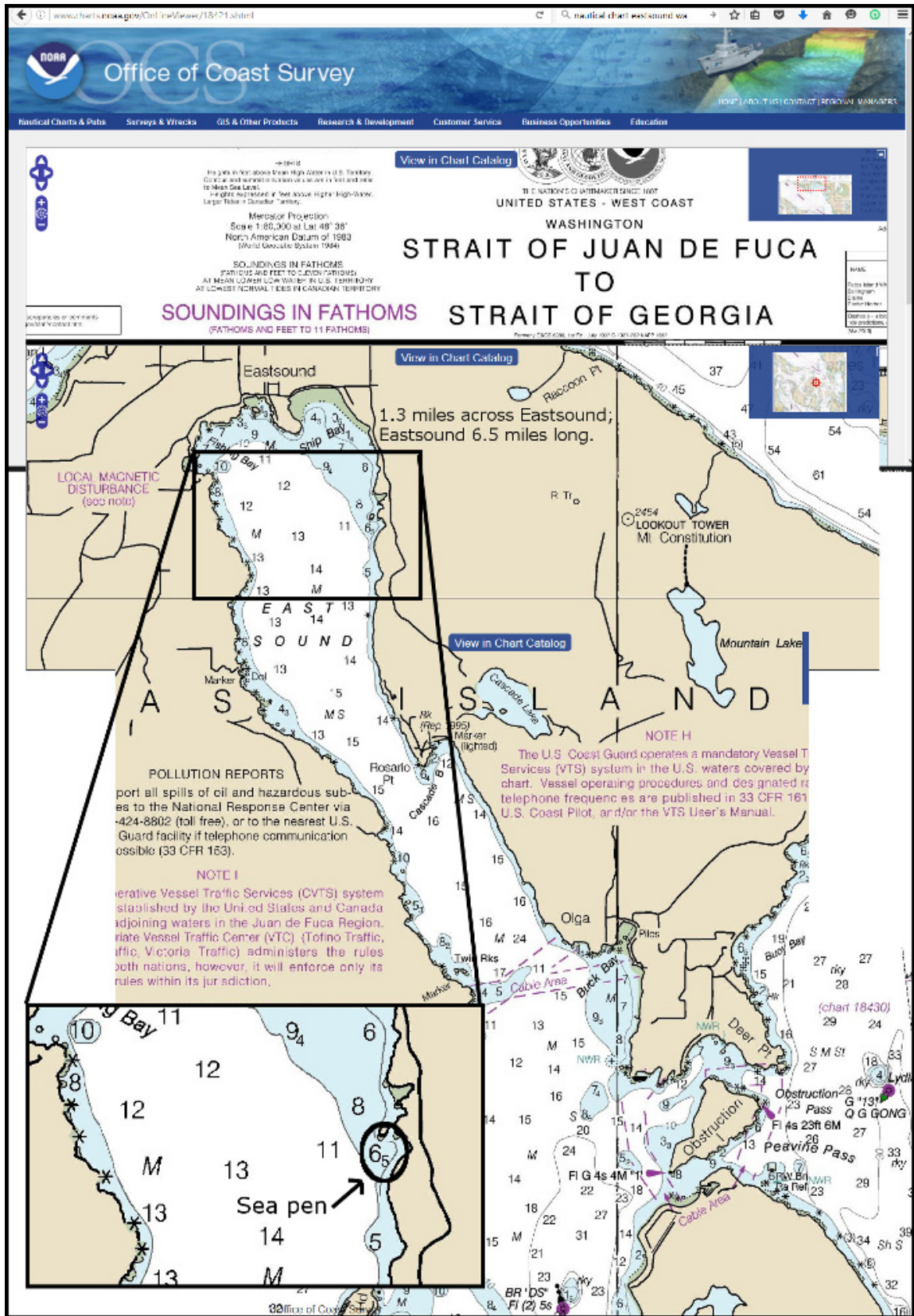
**Lolita in the 80' long x 35' wide x 20' deep tank in Miami.**



Lolita's seapen rehabilitation and retirement home in the San Juan Islands.



**Lolita's seapen site in the San Juan Islands.**



The location for Lolita's seapen in the San Juan Islands. Depths are at low mean tide, in fathoms.



**Seapen site in the San Juan Islands.**

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### **I. Introduction** (revised Feb. 17, 2018)

The original proposal for Lolita's rehabilitation and retirement was first prepared by Center for Whale Research, Friday Harbor, WA, in April, 1995, (see **Marine Biologist Ken Balcomb's Comprehensive Retirement Plan - A pre-proposal to return and rehabilitate a captive killer whale named Lolita to her home**)

**waters in Greater Puget Sound. Prepared by Center for Whale Research, April, 1995, For the 1995 Annual Meeting of the Association of Zoos and Aquariums in Seattle)** and has been developed in collaboration with Orca Network in Freeland, WA.

This draft proposal for Lolita's retirement assumes that all concerned want the best outcome for Lolita, and further assumes that moving Lolita from Miami to her native waters in the Pacific NW in a carefully phased and professionally conducted transport, rehabilitation, and retirement program, with prescribed contingencies to meet all foreseeable circumstances, would be physically and mentally therapeutic and beneficial for her overall health and well-being.

**According to:**

## **Sanctuary Engineering and Site Selection – a Brief Overview**

April 26, 2016 / [Michael Parks](#)  
(<http://www.whalesanctuaryproject.org/?p=1499>)

The function of a seaside sanctuary is to provide an environment as natural and safe as possible for the marine animal residents and their caregivers.

In any engineering project, you first have to know what it is that needs engineering and the functions that it's intended to provide. In the case of a seaside sanctuary, this means a marine mammal coastal containment system that uses large mesh nets as barrier boundaries.

The first, and most important, factor in engineering a seaside sanctuary is site location. This is done in two stages. The first involves compiling as much geographical data as possible to find potential sites that meet certain general criteria used to rule in and rule out various locations. Once we have a short list of potential sites, the next stage involves field surveys at each site in order to gather information about a number of critical environmental factors. The final decision is made after all available information is collected, with each factor weighted for significance and then analyzed altogether.

Here are some of the elements that a sanctuary facility would need to offer:

As much secured space for the residents as possible

- Safety and protection from natural and human-generated hazards;
- Specialized areas that provide caregivers and other professionals with access to the residents for health care and feeding;

- A food storage processing/wet area;
- Staff and scientist housing;
- Places for public viewing and education that don't intrude on the residents;
- 24/7 security by land and sea;

The most important aspect of a seaside sanctuary that directly affects how the engineering is done is protection from extreme surface winds, waves and currents. While this is of utmost importance, there is also a need to be near enough to consistent underwater currents so that the environment can be kept clean by natural flushing. Balancing these two factors is an important aspect of the site selection process.

The location and setting selected for Lolita's rehabilitation and retirement seapen fulfill every criterion described in this document, except that there will be no direct public viewing of Lolita. Instead there will be live webcams and hydrophones and other real time recording and reporting media providing public viewing online and on print and visual media.

Lolita will be transported in a specially designed and constructed transport unit from the whale stadium in Miami to a netted off cove in East Sound, Washington. (See <http://www.orcanetwork.org/Main/PDF/Lolita%20Transport%20Plan.pdf>).

Transport will be via charter aircraft, flatbed truck and barge, in accordance with professionally accepted techniques, and in compliance with all applicable regulations, standards and conditions set forth under the Marine Mammal Protection Act, the Animal Welfare Act, and the Endangered Species Act.

A team of professional staff under the direction of the Project Manager will assume responsibility for Lolita's care and maintenance when she is lifted from the display pool at the Seaquarium to be placed in the transport unit. Transport from the Miami pool to immersion in her natural habitat in Washington is anticipated to take approximately 20 hours.

Transport of flatbed truck carrying Lolita from Bellingham Harbor aboard a barge to East Sound, Orcas Island is expected to be provided by **Island Tug and Barge** of Seattle WA. (IslandTugandBarge.com).

Net infrastructure is expected to be designed, manufactured and installed by **Pacific Netting Products** of Kingston, WA. (PacificNettingProducts.com) and will include:

- \* Good quality copper alloy chain link netting with approx. 1' mesh.
- \* Cork line flotation for the net attached to the net, to be anchored to the bottom and shore.
- \* Heavy duty multi-function boom flotation for attenuation, and protection from debris, floating garbage, and oil slicks or spills.

\* A seine net may be deployed when live salmon are provided to Tokitae.

\* Boat gates as shown in illustration above.

\* Floating work platform with slide-out.

## **II. Executive Summary: How to safely return Lolita to her home waters**

Lolita became a member of an endangered orca population on May 11, 2015, bringing her protection under the jurisdiction of the NOAA Fisheries. However, the Miami Seaquarium bears historical and ethical responsibility for Lolita's welfare, and by contributing to her retirement program they would honor her service and demonstrate their obligation to her. Sustained and willing assistance from Seaquarium trainers, veterinary staff and park management will be essential to ensure that Lolita's transition back to her native waters is accomplished as professionally and stress-free as possible. This proposal is intended to be the basis for further discussions and will be subject to suggestions and revisions by representatives of the Seaquarium, scientific advisors, and officials involved in permitting processes.

This proposal will set forth:

- The step-by-step process of preparation, transportation, rehabilitation, and readaptation to Northwest marine conditions. The plan will also describe the contingencies by which any consideration may be made to provide Lolita with perpetual care and companionship at a designated location in her native waters, or to allow Lolita to rejoin her extended family, known officially as the Southern Resident killer whales (SRKW), also referred to as the Southern Resident orca community.
- A public relations outreach program describing Lolita's move to Washington waters and the Seaquarium's participation in a wide range of educational programs to ensure positive recognition and publicity for the Seaquarium;

Beyond general acceptance of the merits of Lolita's retirement, Seaquarium staff are needed for pre-transport preparation and research, all stages of transport, and for Lolita's initial care in her retirement facility, both to apply their long-term familiarity with her daily habits and the details of care protocols, and to reduce stress and enhance Lolita's confidence and trust in those around her as the transport proceeds. Seaquarium staff will be invited to examine the retirement facility in advance of transport to advise on any particulars or procedures. The best results will come when all principle parties effectively collaborate in the planning process.



The Lolita Retirement Project, in partnership with the Lummi Indian Business Council, Marine Mammal Commission, NOAA Fisheries, the Miami Seaquarium and other professional marine mammal care personnel, will make arrangements and preparations to transport Lolita to a netted seapen in East Sound, Orcas Island, in the San Juan Islands.

While in her seapen Lolita will be medically supervised, provided with the same cuts of the same species of fish she is accustomed to, and given structured and unconditional companionship. Live Chinook salmon will be gradually introduced, initially chilled to allow Lolita to regain her foraging skills.

If deemed advisable by scientific and veterinary personnel, Lolita will gradually be allowed to swim outside the netted enclosure while accompanied by her care staff on a boat equipped with a recall signal device. Over time she should be given the opportunity to swim greater distances while rebuilding her strength and stamina, pending approval by veterinary staff.

If she appears to be unwilling or unable to venture outside her pen, or returns repeatedly, she will be provided with sustenance, medical care, training regimens and human companionship indefinitely.

As a prime mover in this well-publicized retirement project, the Miami Seaquarium would gain immense, highly positive free publicity by facilitating the retirement of the whale that has been identified with the Seaquarium for over 47 years. The following proposal provides details of all phases of Lolita's retirement to her native waters. No one can predict how any animal will behave during transport, so experienced and trained monitors and veterinarians will attend all phases of the transport to anticipate and prevent any problems. However, no significant risk to Lolita or her family has been identified in any phase of this project. Remaining in the undersized tank in Miami, on the other hand, presents a known, significant risk to Lolita's health and well-being.

### **III. Background**

Cetaceans (whales, dolphins and porpoises) were first held in captivity in the 1860's. The first killer whale, or orca, that performed for the public was caught in British Columbia, Canada in 1965. This young male, named Namu, was displayed at the Seattle waterfront for eleven months until his death from massive infections. Namu showed that orcas were easily trained and established deep relationships with their trainers. Currently there are 60 orcas known to be held in captivity worldwide. (For a current list see **Orcas In Captivity** at [www.orcahome.de/orcastat.htm](http://www.orcahome.de/orcastat.htm)).

In 1976, after ten years of captures, the state of Washington reached a court settlement with Sea World that ended capture operations there. The history of

orca captures in Washington State can be found in: ***Puget Sound Whales for Sale***, at <https://www.arcadiapublishing.com/Products/9781626196025>.

Capture teams then moved to Iceland where they continued until 1989. A total of 128 mostly very young orcas had been delivered to marine parks between 1964 and 1989. Six more have been caught in Argentina and Japan since 1989, and Russia has captured at least 13 since 2012. Of the 60 orcas alive in parks today, 34 are captive-born. 147 orcas have been captured from the wild since 1965. A total of 162 orcas have died in captivity, all before reaching a normal average life span.

Efforts to release captive orcas were encouraged by a 1993 children's movie called **Free Willy** and a grassroots campaign to release Keiko, the movie's star orca. Many young viewers learned that "Willy" was a member of a family, that he missed his family and they missed him, and that he could safely be released to rejoin them. They also learned that captivity was hazardous for orcas. Studies have now confirmed that captivity is life-threatening for orcas, and we also now know that each wild orca is indeed a valued and recognized member of a highly cohesive family. The proposition that those who are able to find their close family members would happily rejoin them is gaining acceptance, but proposals to release them after long term captivity remain in doubt for many observers.

Because the marine park owners where Keiko was held realized he needed to be moved somewhere or he would soon die there (Cornell, 1993), and after a coalition including a wealthy benefactor financed and organized a lengthy rehabilitation and release program, Keiko received the benefit of the first realistic effort to release a long term captive orca. After two and a half years of rehabilitation in Oregon, Keiko regained his strength and returned to an approximately normal state of robust health. In September, 1998, after over 20 years in captivity Keiko was moved to a seapen in Iceland, several hundred miles from where he was captured, where he regained optimum health almost immediately. After 8 hours in flight, as soon as he was immersed, Keiko pumped his flukes to swim clear of the stretcher and immediately dove. He surfaced a full minute later, circling the pool, echolocating and vocalizing excitedly, as if calling out "Who's there?" Only after 10 minutes of energetically exploring his new home did he return to his human friends at the edge of the seapen.

Thus much of the younger generation and a growing portion of the general public are becoming aware that it is possible to release or retire captive orcas in their native habitats. The movie's image of the insensitive marine park owner risking the lives of their main attractions has also stuck in the minds of the younger generation, and that impression indeed seems to be borne out by recent revelations (See **Blackfish**, 2013). Captivity for orcas is increasingly seen as disrespectful and inherently cruel and abusive. Adding to the pressure on marine parks is a global network of organizations and individuals working to end the

practice of displaying whales and dolphins. The era of large-scale controversy for the marine park industry has begun.

Partly as a consequence of this increasingly negative publicity, SeaWorld, by far the largest player in the marine park industry with its three facilities, suffered an 84% drop in profits in the first half of 2015 as hasn't recovered as of 2018. The public demand to end whale and dolphin shows will almost certainly increase in the years to come, resulting in further declines in attendance at the parks. As the animals attract less revenue at the turnstile, the expenses required to maintain them remain high. Public pressure to resolve the building controversies by releasing or retiring captive dolphins and orcas is thus likely to grow over the coming years.

Since the early 1970s the Seaquarium has promised to build a new tank for Lolita, but since it is nearly impossible to find a replacement orca on the market due to public pressure prohibiting captures, and since expansion of the park is not possible due to zoning restrictions and public opposition, it is highly unlikely that any new tank will ever be built.

Lolita's transport to another marine park would involve great risk due to her probable inability to adjust easily to new trainers, protocols and philosophies, and the established social hierarchy of Icelandic, Japanese, Russian, or captive-born orcas in every other marine park. Social tensions among captive cetaceans is likely to increase injuries and stress-related health problems. Such instability could in fact lead to Lolita's death. This prospect, added to the knowledge that she is the subject of a global campaign for her retirement that would follow her to any new captive location, plus her already unlikely longevity for a captive, would probably discourage other parks from taking her.

However, if Lolita is relocated to be retired and given care with the prospect of potential release to her home waters and family, her health would predictably improve and her prospects for a long life would be enhanced.

Months of events commemorating Miami's farewell to Lolita could attract positive publicity to the park and to the city of Miami. Worldwide media attention would focus on efforts in Miami to return America's only native captive orca to her home waters. It would be feasible almost immediately to connect Lolita acoustically, from her tank, via a long-distance phone call to her family in Washington, which would itself be an exciting and newsworthy event, as part of her preparation for transport. The positive glow of global media attention could have many spin-off benefits for a new Miami Seaquarium.

Retiring or releasing Lolita could also enhance environmental awareness, especially for her native Salish Sea. Concern for her welfare is likely to soar as she is portrayed in all manner of media, foraging and socializing in her native marine waters, providing new reasons to protect and restore the natural

productivity of those habitats. The emotional appeal of an orca we know so well, living in her native waters, could greatly enhance environmental protection efforts.

All such scenarios depend on a positive answer to the question: *Is it safe to retire or release this long term captive orca?* A review of this step-by-step, carefully phased program of transport, rehabilitation and retirement/release, professionally planned and carried out, will show that it can be accomplished without significant risk to Lolita or her wild counterparts. This conclusion has, however, been vociferously discouraged by representatives of marine parks since the mid-1960s, and those objections have become well-entrenched in society at large.

Any release plan needs to be comprehensive and guided by scientific principles. When Keiko was delivered to Newport, Oregon in January, 1996, he was underweight, flabby, and ulcerous. He suffered from pappilomatosis-like warty skin disfiguration. Five years later, swimming freely in the North Atlantic Ocean, he had gained 2,000 pounds, his stamina and metabolic strength were excellent, his skin was sleek and shiny, he was catching and eating his own fish, and he showed no trace of pappiloma. Though Keiko's transport from Mexico City to Newport, OR, and then to Iceland, was far more challenging to accomplish than Lolita's transport would be, Keiko demonstrated that a professional transport and rehabilitation program can be successful for a long term captive orca. Much was learned from Keiko's rehabilitation program that is now available to apply to Lolita's retirement plan. One key difference is that whereas Keiko's family was never located and he was in all likelihood never in close proximity to them after his release, each individual in Lolita's entire extended family typically inhabits the waters around the San Juan Islands for several months of every year, and is well known and documented each year, maximizing her opportunities to associate with them.

Lolita remains in relatively good condition at the Seaquarium, despite the fact that the other 40+ orcas caught from her family at about the same time Lolita was captured had all died by 1987. Nevertheless, she would require the same level of medical and pathological examination and evaluation as provided for Keiko prior to his transport to Iceland, and a clean bill of health prior to transport to her native waters. Her good condition is a statistical aberration, but it means that her rehabilitation could probably be accomplished in less time than Keiko needed. It would not be necessary for Lolita to first go to a tank, for example. She could be placed directly in a seapen in her native waters.

For further background and information, see: A Review of the Releasability of Long-Term Captive Orcas, Garrett, H. (1998), at [www.orcanetwork.org/index.php?categories\\_file=Releasability](http://www.orcanetwork.org/index.php?categories_file=Releasability) Home.



## IV. Lolita's Retirement Plan



### REHABILITATION AND RETIREMENT

The primary goal is to relocate Tokitae to a rehabilitation and retirement seapen in her native habitat. The large ocean water seapen is in a protected cove near where her family, the L25 matriline, often travel. During rehabilitation, Tokitae will receive high quality food and medical care. When she demonstrates healthy medical parameters and satisfactory metabolic strength, including a healthy appetite, long dive times and sustained power swims, the rehabilitation phase will be accomplished. Gradually she will be trained for open water. Many details are expected to be modified based on her progress as principle parties work together for her best interests.



**IN 1970 SHE WAS VIOLENTLY CAPTURED FROM HER FAMILY. FIRST SHE WAS NAMED TOKITAE, MEANING "NICE DAY, PRETTY COLORS" IN COAST SALISH. WHEN SHE STARTED DOING SHOWS THEY CALLED HER "LOLITA." IT'S PAST TIME TO BRING TOKITAE HOME TO HER FAMILY.**



Tokitae is native to the Pacific Northwest, a member of L pod of the Southern Resident Community, listed as an endangered population under the ESA. She is the last survivor of the over 40 orca captured for display in marine parks between 1965-1973. Lolita is over 20' in length and has been used for entertainment at Miami Seaquarium for over 40 years in a tank only 80' long and 20' deep. Despite captivity she still calls out in her family's unique dialect, and has responded to her family's calls.



**IT'S TIME TO BRING HER HOME**

### RETIREMENT PLAN

**FREE LOLITA  
RETIRE TOKITAE**



## TRANSPORT AND RETIREMENT PLAN - STEP BY STEP



1. Professional staff will train and prepare Lolita to position herself in a sling.
2. Lolita will be examined by a team of veterinarians for overall health and any communicable pathogens, and appropriate permit applications will be submitted.
3. Lolita will be led by her current caretakers into the stretcher and lifted by crane into a water cradle on a truck trailer.



4. The truck will carry Lolita in her water cradle to Miami-Dade International Airport and load her into a cargo aircraft to Bellingham International Airport. She will be accompanied at all times by her trusted caretakers.

5. Upon arrival by truck to Bellingham harbor, the truck will be driven onto a barge and towed to her seapen in Eastsound, Orcas Island.



6. A crane on the barge will lift Lolita in her sling and lower her gently into the seawater in her seapen. At this moment she will swim again in the water of her birth and will again be known as Tokitae.

7. Tokitae will be cared for in her seapen until she consistently demonstrates good health records



for a period acceptable to her consulting veterinarian.

8. With consent of veterinary and scientific staff, Tokitae will begin boat-recall training to come to an acoustic signal within the seapen. During this time she should demonstrate the ability to forage effectively on live fish while fresh and dead fish remain available.

9. Boat-recall training will take place outside her seapen, in a larger, temporary pen.

10. After Tokitae has regained her metabolic strength and stamina and continues to demonstrate her competence to forage she will be allowed free range of the Salish Sea.

11. A permanent care, companionship and provisioning station will be staffed and maintained at a location familiar to her, available anytime she chooses.

### TAKE ACTION



Avoid patronizing any orca or dolphin display or swim park. They perpetuate the notion that whales and dolphins can be confined and subjugated for our entertainment.



Understand the facts: dolphins and whales are highly conscious creatures, aware of their surroundings and their conditions. Learn about orcas and share your knowledge.



The biggest impediments to Lolita's release and Tokitae's return are commonly accepted beliefs that underestimate her capabilities and overestimate the risks. Visit [www.orcanetwork.org](http://www.orcanetwork.org) to learn more.



Please read and share the plan. Lolita is basically healthy and would benefit from immersion in her home waters. Her transport and rehabilitation pose no significant risk to her or her family.



[WWW.ORCANETWORK.ORG](http://WWW.ORCANETWORK.ORG)



[info@orcanetwork.org](mailto:info@orcanetwork.org)



1-866-ORCANET

### A. The goal

- The primary goal of the Lolita Retirement Plan is to relocate Lolita to a rehabilitation/retirement facility in an ocean water seapen in a protected cove in her native habitat in Washington State. Throughout the transport and relocation, and as long as she remains in human care, she will continue to receive high quality food and medical care. A medical lab will be established on Orcas Island to conduct analysis of blood and other samples. The rehabilitation phase will be considered accomplished when Lolita demonstrates satisfactory metabolic strength and healthy medical parameters, including a healthy appetite, long dive times and sustained power swims.
- The secondary goal is to train Lolita for gradual open water exercises with progressively longer boat-follow training based on US Navy Operation Deep Ops (<http://www.orcanetwork.org/Main/PDF/Project%20DeepOps.pdf>) to further build her strength to eventually approximate the physical condition typical of Southern Resident orcas. Structured exercises, monitoring and potential intervention by staff will continue to be conducted throughout this phase of the project.

This proposed plan includes valuable scientific research opportunities associated with every phase of this project. The following is a general outline of the plan and the organizational structure needed to carry it out. Some details of this plan are expected to be reconsidered and modified as principle parties work together for Lolita's best interests.

**B. Permitting:** Application will be made to NOAA as per the ESA requirement for a Section 10 permit for scientific research and to better understand the social cognition, memory and bonding to act to improve the chances of survival of the endangered Southern Resident orca community. The Public Display provision will be satisfied primarily by live video and audio, as well as recorded and produced media for public distribution. An Animal Welfare Act license to operate will be obtained if needed. All relevant permits for use of the retirement site will also be sought, including an Aquatic Resource permit from the Washington Dept. of Natural Resources, a Coastal Zone Management Program permit from Dept. of Ecology, and any other state, county and town permits and approvals.

### **C. Pre-transport protocols:**

In the weeks or months leading up the time of transport, several achievements will need to be met:

- Tokitae's overall health – cardiovascular and metabolic robustness and leukocyte count – will need to show adequate immuno-competency and absence of infectious tissue that would require antibiotic or prophylactic treatment.
- Her mental health will be addressed daily through interactive activity with humans who she knows well, the introduction of new objects to provide stimulation, and careful management of any changes in her conditions to minimize any sources of stress.
- At the same time the incoming water from Biscayne Bay may require ozone treatment or other filtering processes to minimize introduction of potentially infectious pathogens.
- Seaquarium whale bowl water temperatures, reportedly kept at 55°F, should if possible be gradually lowered 3-5 degrees to better approximate the average seawater temps at the East Sound seapen site.
- Any dolphins should be removed from the tank.
- Also simultaneously, performance of display routines should cease, and trainer interactions and food provisioning should be intermittent but not tied to behaviors.
- Gradually, whole fish can be offered to Toki. As she accepts whole fish, primarily Chinook salmon but based on her familiar diet, contingent on whether she responds well to whole fish, stunned or chilled fish can be gradually introduced. If she seems ready for more challenges healthy fish could be introduced.



- Food should be shared in a manner more closely resembling the way orcas worldwide share in the catch of whatever their particular diet may be, to help Toki feel comfortable with the new protocols.
- As these new protocols go into effect and Tokitae shows a comfort level with the above changes, recordings of her family's calls should be played for her, to provide comfort and reassurance that they are still alive.
- If, after a period of playing recorded calls, Tokitae's body language indicates acceptance of the calls, i.e., she shows low stress levels, a live hydrophone and underwater speaker should be established to allow actual interactions between Tokitae and her family, assuming any Southern Resident orcas traverse the area of reception. This connection could help improve her energy levels and possibly help facilitate her reintroduction after she regains her stamina in the Salish Sea.
- In concert with the recordings and the opportunities for live interactions, films of Southern Residents in the habitat where she was born, where she learned her family's traditions and vocalizations, and became a member of her clan, should be shown on the big screen behind the med pool, also to raise her spirits and improve her health prior to transport (See **A Killer Whale's (Orcinus orca) Response to Visual Media:** [http://www.orcanetwork.org/Main/index.php?categories\\_file=Captivity%20Studies#visualmedia](http://www.orcanetwork.org/Main/index.php?categories_file=Captivity%20Studies#visualmedia)).

#### **D. Transport:**

See: **Lolita Transport Plan.pdf** - Transport of Lolita from Miami to her Natal Water.

**Environmental assessment of retirement site:** Space requirements, water quality, perimeter security, etc. will be examined prior to transport.

**Preparation for transport:** Lolita will be comprehensively examined by a team of veterinarians and pathologists for overall health including blood and chemistry parameters and to ensure she is negative for any communicable pathogens. As normally practiced at the Seaquarium, examinations should look for blowhole, fecal, urinary, gastric, girth, and other issues. Regimens for clearing up any infected areas with targeted antibiotics or other means, or treatments for parasites, should be implemented.

**Desensitization to transport by stretcher:** Seaquarium staff and other experienced personnel will condition Lolita to position herself in a stretcher custom-made for her. Other pre-transport protocols will be followed. At the time of transport Lolita will enter the stretcher, be positioned appropriately, then lifted by crane into the transport cradle.

A transport cradle will be located or fabricated to ride on a flatbed semi-truck for transport from the Seaquarium to Miami-Dade International Airport. Either a commercial carrier or military aircraft such as a C-130 Hercules will carry Lolita in her cradle to Bellingham International Airport, located 3 miles from the Bellingham wharf, where industrial dock and ramp facilities allow Tokitae's (upon immersion in her native waters she will be referred to as Tokitae, the name that honors her Northwest home) transfer on a flatbed truck carrying her in her stretcher and still in her cradle. The truck carrying Lolita will be loaded on a barge equipped with a crane, to be towed the thirty miles to the seapen, where she will be lowered into her native waters in the stretcher and allowed to swim free inside the seapen. This will be her first contact with her native habitat since her capture in 1970.

**E. The Facility:** A protected cove in the San Juan Islands in East Sound, Orcas Island has been chosen and approved by the property owner as the site of Tokitae's retirement facility. In addition to the stationary seapen defined by netting creating an area approximately 600' by 400' and at maximum 50+' deep, the facility will include accommodations for veterinary, training, diving and security staff, acoustic recall device. Both dead and live fish storage and preparation will be required, including a cleaning area and scales. A small barge within the seapen enclosure will be needed to provide a slideout for examinations. While a scale might be ideal, the expense, infrastructure, and potential stress for Tokitae may be more important factors than the benefit of knowing her weight, which can be estimated by measuring her girth.

As the maps and charts above show, the quality of the seawater at the seapen location is equivalent to the overall San Juan Islands' water quality. Twice-daily tidal flushing of up to 12' from low to high tides occurs, but the current itself is minimal because the seapen is six miles from fast tidal currents, at a point where the sound is 1.3 miles wide, with the narrowest point of the sound being .6 miles wide. There is no marina or industry on the sound and only scattered homes along the shores and a small town, Eastsound, at the north end, approximately 1.25 miles from the seapen site. The Buck Bay oyster farm sits at the mouth of East Sound, where water quality is closely monitored. Monitoring at the seapen site should include tests for any toxins or unusual algae growth, fecal coliform, or hydrocarbons.

Security will be provided to prevent public intrusion during the course of Tokitae's rehabilitation and retirement. The site is away from public roads. Access by land and water can be controlled by 24-hour security to prevent unauthorized approaches.

**F. Rehabilitation procedures:** See: **Rehabilitation Training Plan.pdf** - Rehabilitation Training Plan. Procedures to be followed prior to her departure from Miami and after Tokitae's return to Washington State will be adapted to her behavioral and medical responses. Protocols will be adjusted by veterinary staff,

training staff and scientific advisors, as coordinated by the Project Manager (see **G. Project management** below), depending on her physical health and other contingencies.

### **Phase one - Transport, post-transport and transitional period:**

Beyond implementing **(C. Pre-transport therapy and stress-reduction)** above, before, during and immediately after transport Tokitae should be provided with as much continuity with her previous personnel and conditions as possible. In addition to pre-transport training and other preparations, her trainer(s), veterinarian(s), and other support staff should accompany her in flight and during all stages of the transport, and should remain with her as long as needed after her arrival in Washington. Caretaker interactions will remain a cornerstone of environmental enrichment before, during, and after her relocation to East Sound, and during her transitional period unless and until her interest in human caretakers wanes. Her current dietary regime, medical procedures and any medications, supplements, etc., should be continued at initial immersion and lowered gradually at the discretion of her attending veterinarian.

The medical staff should include at least one experienced marine mammal veterinarian responsible for a written program of health care. Routine site visits should be conducted as prescribed by the veterinary and husbandry staff, including physical examinations and blood sampling and collection of other specimens, as directed by the veterinarian.

Tokitae's progress from any given phase of these procedures to the next will be contingent on her ability to demonstrate sufficient health, vigor and behavioral adaptability to proceed to the next phase. Thus, an exact timetable for the duration of each phase cannot be determined in advance of concurrent observations of her behavior and condition. The immediate goal is to provide Tokitae with a suitable retirement situation in her native waters. Tokitae will be maintained in the seapen unless and until she consistently demonstrates clean health records for a period acceptable to the consulting veterinarian and contingent on her demonstration by body language that she is interested in exploring beyond the seapen. At that time preparations will be made for "boat follow exercises" into a larger netted area within East Sound, and eventually beyond East Sound. A National Marine Fisheries Service (NMFS) scientific research permit (SRP) application may be submitted for eventually reintroducing Tokitae to her family.



**Tokitae's Retirement Center – East Sound, WA**

**Phase two - Subsequent maintenance and training protocol:**

After Tokitae is fully acclimatized to her seapen, surroundings and staff, and is observed to exhibit normal metabolic strength, stress levels and physical parameters, and as she begins successful foraging on live fish, boat-follow exercises should be carried out, partly based on PROJECT DEEP OPS: Deep Object Recovery with Pilot and Killer Whales. (See: **Project DeepOps.pdf.**, Bowers, C.A. and R.S. Henderson, 1972). In 1970 and 1971 two juvenile male killer whales captured in Puget Sound were maintained in US Navy seapens in Hawaii and were trained to follow boats up to fifty nautical miles and dive hundreds of feet deep on an almost daily basis. Similar Navy training regimens continue to be carried out using bottlenose dolphins. With the consent of veterinary and scientific staff, Tokitae will begin boat-recall training, in which she will be trained to come to an acoustic signal, while remaining within the seapen. During this time, she should demonstrate the ability to forage effectively on live fish. Subsequently, boat-recall training should take place outside her sea-pen, in a larger area which has been temporarily netted off.

When recall training is accomplished within the larger netted area, she will be led out of East Sound for boat-follow exercises for varying lengths of time into San

Juan Channel, Haro Strait, Rosario Strait and the Strait of Juan de Fuca to further rebuild her swimming and diving strength, stamina and skills. She should be monitored for several months during extended boat-follow exercises, with food supplementation available if needed. If her behavior and condition do not warrant inception or continuation of boat-follow exercises, they should be discontinued and rehabilitation procedures within the sea-pen will be resumed.

Use of a harnessed radiotag for monitoring in case of Tokitae's dispersal from the boat or the seapen should be considered. Such a tag would provide two to four months of telemetry data before it is shed, and would leave no permanent mark on Tokitae. No additional identifying factor is required because photoidentification and visual recognition will suffice for monitoring purposes.

If efforts to rehabilitate Tokitae to a level of health and stamina that is normal for the species are not successful after six months to a year of extended boat-follow exercises, long-term care and facilities should be arranged for Tokitae's permanent retirement (see below).

**Phase three - Potential reintroduction procedures:**

After a succession of extended boat-follow exercises for a period of several months, soft-release will occur for a period of months after she demonstrates normal health and stamina. Soft-release is defined as providing a permanent opening in the perimeter fence of the sea-pen, while maintaining the infrastructure at the facility to assist her should she return to the sea-pen and solicit companionship or food. Medical examinations will continue throughout this time.

If soft-release proves successful, as determined by her behavior and condition and verified by her veterinarian, post-release monitoring will commence, in which Tokitae will be located by radio tag and a network of trained observers from shore and from boats, and aerial surveys, to be conducted for a minimum of twelve months after initial release.

If her condition and behavior continue to indicate successful readaptation at the end of this period, reintroduction will be considered complete and a final report will be submitted to NMFS. Systematic and opportunistic monitoring will continue indefinitely through an established observer network consisting of American and Canadian marine mammal researchers, commercial whale-watch operators and naturalists, boater education programs, and boat and shore-based citizen science observers. Observations should be received and coordinated by the Orca Network Sightings Network to be transmitted to appropriate personnel and authorities.

**Phase four – Establishment of care station(s):**

If Tokitae continues to return to East Sound for companionship and/or provisioning, one or more care stations will be established in nearby waters at a

protected location in the San Juan Islands, to provide whatever may be indicated by her body language and physical condition. The care station(s) would consist of a dock or floating platform anchored in bay or cove with shelter for caretakers, where live and frozen fish could be stored, requiring access to electricity. Tokitae would be initially led there by boat follow so she knows she can find food, care, and companionship at that location. Precedents for establishing care stations include the 15 months Keiko was cared for in northern Norway. Keiko died there, however his situation was different from Tokitae's in two important ways. One, Keiko while in Norway was in unfamiliar waters far away from his Icelandic origins, whereas Tokitae will be in and have access to the waters in which she was born and learned how to be a member of her unique extended family. Two, the overall philosophy of the Keiko project, while not consistently applied, was to withhold eye contact and companionship with the intention of compelling him to go out to find and join wild orcas. Tokitae should be provided consistent human companionship by trained, designated personnel who have built trusting relationships with her, at any time she seeks it.

L98 Luna, known by the Mowachaht-Muchalaht people as Tsu'xiit, the L pod calf who became solitary in Nootka Sound, was provided unconditional companionship by a designated tribal fisheries agent, and remained safely away from random contacts with humans, until the federal government imposed penalties on anyone even making eye contact with him.

If issues arise such as human encroachments on Tokitae's movements or her encroachments on humans, vessels or other potentially dangerous situations, or for medical requirements, a care station could be contained inside a perimeter net to hold Tokitae in order to treat or prevent any hazards.

#### **D. Potential retirement procedures:**

If, during or after the soft-release or monitoring phases, she does not return to the seapen and does not appear to be successfully readapting to the wild (e.g., if she is exhibiting weight loss, erratic or aberrant behavior such as approaching boats or shorelines), a plan should be initiated to bring her back to the seapen, by enclosing her in a wide net attached to a towable seapen, but not lifting her from the water, to return her to the sea-pen for additional rehabilitation. If a second effort at reintroduction proves unsuccessful, she should be maintained indefinitely at a permanent bay pen facility. An endowment fund would be created to provide financial support for her long-term care and nutritional needs.

#### **E. Research goals:**

Natal population research: As discussed by Brill and Freidl (1993) in their report to Congress concerning reintroduction of surplus Navy dolphins, an important component to any reintroduction program is a thorough understanding of the native population into which the animal is to be released. Since 1973, Tokitae's

natal community has been, and continues to be, comprehensively documented, and is considered the most intensively researched cetacean population worldwide. Demographic parameters such as longevity, birth rates, maturation rates, mortality rates, prey selection and availability, social systems, reproductive strategies, contaminant exposure, habitat usage, genetic profile and acoustic communication systems are well documented on an on-going basis. Little or no additional effort will be required to accomplish this goal.

## **G. Project management:**

### **1. Steering committee**

An executive steering committee should be created and tasked with overall direction of the project. The steering committee should include members of the Tokitae Retirement campaign, Salish Sea tribal representatives, the Project Manager, a representative of the Seaquarium, and respected members of the marine mammal scientific community.

### **2. Project manager**

A salaried Project Manager should enact on-site management and guide day-to-day operations. The Project Manager should have thorough and up-to-date knowledge of the Southern Resident orca community, the natural history of *Orcinus orca* and cetacean care and maintenance, as well as financial and personnel management experience.

**The Project Manager** will balance the needs of Tokitae and staff in preparations for transport while assisting with the construction and protocols at the seapen location. This includes assisting with the development and implementation of the transport and acclimation plan. In addition, the Project Manager will work with staff, and consultants to develop and execute a pre-transport training program to ensure successful relocation and acclimation in East Sound.

This individual must be a strong leader who is passionate about ensuring a safe and healthy relocation in the East Sound seapen and can leverage the strengths of other team members in providing a successful transport, rehabilitation, and long-term care as needed. Creativity, problem-solving and data-based decision-making skills are a must. This individual must be motivated by the mission and understand how this position and its responsibilities holds the potential to change the way humanity cares for our ocean planet and its inhabitants.

Additional responsibilities include:

- Supervises Tokitae Retirement team, including the recruitment, selection, training, scheduling, professional development and direction of work of staff and team
- Serves public relations functions associated with Tokitae's Retirement
- Maintains knowledge of new information and techniques.

- Attends professional meetings and conferences.
- Communicates regularly with professional colleagues.
- Creates an environment where changes in process, technique, philosophy and problem-solving are welcome, often leading to innovative practices and activities to improve Tokitae's welfare.

#### **QUALIFICATIONS:**

- Bachelor's or higher degree in biology, humanities, animal training, animal husbandry, or a related science.
- Three to five years' experience in aquarium or zoological field specializing in marine mammals, including one year in a supervisory capacity. Equivalent experience in a related scientific field will be considered.
- Innovative and creative problem-solving and balanced, informed decision-making abilities required.
- Animal relocation experience or knowledge with focus on orcas or dolphins preferred including acclimating animals to a novel environment.
- Must have sound professional knowledge of biology and husbandry concepts and be able to apply to a natural setting. Should be highly proficient regarding the recognition and treatment of cetacean diseases, husbandry techniques, and seapen maintenance.
- Adept at observation to watch for any signs of illness or injury, monitor eating patterns, or any changes in behavior. Should be able to remain stimulated by doing routine tasks.
- Ability to establish safety procedures and implement an effective safety program.
- SCUBA certification preferred.
- Must possess a valid Washington driver's license and be able to drive vehicles.

The Tokitae Retirement Project is committed to diversity and invites individuals who bring a diversity of culture, experience and ideas to apply.

The work environment to carry out this project is high-energy and high-performance. The pace may be very fast, and change is likely due to the urgency of the project. Our mission and communications are rooted in evidence-based science.

#### **3. Scientific committee**

The scientific committee, to be chosen by the Project Manager, should advise the Project Manager on all aspects of procedures involving diet, care, training, transport, rehabilitation and reintroduction.

#### **4. Fund-raising, fiduciary and legal committee**



Should include members of the Tokitae Retirement campaign, an impartial accountant and legal representatives of the Miami Seaquarium and the Tokitae Retirement campaign. This committee should oversee fund-raising and expenditures See Retirement budget for proposed budgetary estimates.

See the **Tokitae Transport Plan.pdf** and **Tokitae Rehabilitation Plan.pdf** for details about the following items and personnel.

## **5. Expenses**

A full time **Project Manager will be required to contract for one year at a cost of approximately \$200,000 plus expenses.**

Prior to transport, **fabrication of a transport cradle in Miami is estimated at between \$40-50,000.** It is possible a cradle could be borrowed from a marine park. We will request that SeaWorld in Orlando allow us to use one of their cradles. Shipping costs may total approximately \$5,000.

The cost for **fabrication of the stretcher is estimated to be around \$8,000.** (Ortega's Canvas in San Diego is experienced in fabricating cetacean transport slings - <http://www.ortegascanvas.com/>) If borrowed, **shipping cost are estimated at \$500.**

The cost of contracting for professional services **of at least three veterinarians and pathologists selected by NOAA and/or the USDA to examine Tokitae to ensure she has a healthy immune system and carries no communicable diseases could amount to approx. \$40-50,000.**

**A Load Master**, experienced in all aspects of orca transport, is needed to oversee all phases of Tokitae's transport from Seaquarium tank to seapen, **to be contracted at approx. \$10-20,000.**

**Two teams of six qualified divers** will be required at the Seaquarium to assist in preparing Tokitae and positioning her in the stretcher, lifting her into the cradle and to accompany her on the truck to the aircraft at MIA, and another team of divers will be needed to accompany her from BLI to Bellingham Harbor and on the barge to assist in Tokitae's immersion into her seapen at East Sound.  
**12 divers x \$4,000 each = \$48,000.**

The cost of **air transport** is difficult to accurately predict, considering the unusual cargo and the potential for services to be provided pro bono in exchange for the massive positive publicity from the move. UPS moved Keiko from Mexico to Oregon and reported it was the best advertising money they ever spent. The plan entails using a C-17 Globemaster, C-130 Hercules, 747 Dreamlifter, or C-5 Galaxy aircraft, to transport Tokitae in her cradle from Miami International Airport to Bellingham International Airport (runway 6700'). A flatbed truck will then transport her, still in her sling, suspended in her cradle, partially immersed in

icewater, 3 miles to Bellingham harbor, where the truck with Tokitae on board will be towed by tug 25-30 miles to East Sound, Orcas Island, where a crane on the barge will lift Tokitae from the cradle and lower her into the waters of East Sound. If contracted with commercial cargo service, **cost is estimated at \$100-200,000.**

**Crane and operator services at Seaquarium is estimated to total \$75-100,000.**

**Air transport estimated at up to \$100,000 (if not donated).**

**Truck transport services at both the Miami end and in Bellingham are estimated to total \$30,000.**

**Tug and/or barge (equipped with a crane of sufficient size) from Bellingham Harbor to East Sound estimated at \$30-50,000.**

Approx. **1,000 feet of seine net** for outer perimeter of seapen is estimated to **cost \$500. Installation of seine net may cost \$200,000.**

A fine-mesh net will be needed for holding live and freshly caught or raised Chinook salmon. The cost of salmon from the boat varies from \$1 to about \$8/lb. She'll need approx. 150-200 lbs/day, so that means **\$150 to \$1600 per day for fish**, so maximum \$584,000/ yr., although some Chinook will be donated from the Long Live the Kings hatchery, and in all likelihood she'll be catching at least some of her food herself within a few weeks or months.

**An ice chest and ice** will be needed for storage of dead fish for the first few weeks of Tokitae's rehabilitation. **Cost = \$500**

**Security personnel** will be required, both for land and sea protection, which can be professional staff ready to call authorities in case of any intrusion. Anticipated expenses are approximately **\$10-15,000/month.**

We estimate about **\$20-30,000 plus expenses to contract for one veterinarian for one month from time of transport. This should be a current Miami Seaquarium veterinarian.**

**A veterinary assistant will also be required for one month, at a cost estimated at \$5,000.**

**After the first month a local veterinarian will be contracted for consultations and to remain on-call and for regular visits at an estimated cost of \$5,000 plus expenses per month for up to a year.**

**Police and security services** to escort the transport truck both in Miami and in Bellingham are expected to **cost approximately \$10,000.**

**Personnel Required during rehabilitation at seapen (2-3 months):**

<b>Divers (2)</b>	—
<b>Care-givers for irregular feed schedule (2)</b>	—
<b>Water quality technician (1)</b>	—
<b>Per feed-Video footage observers (3)</b>	—
<b>Food intake observers (6)</b>	—

Thereafter the project will require at least one marine mammal vet on call if needed, for at least one year.

Totals for maximum expenses would run between **\$1,000,000** and **\$1,500,000 for the first year**. Additional expenses if needed for **50,000 pounds of salmon and other fish per year, plus professional caretaking and possible veterinary services would be approximately \$1,000,000 per year as needed.**

Literally millions of people are eager to see Tokitae return to her native habitat. When the need for major funding approaches, fund-raising is not expected to be problematic.

## RESOURCES AND APPENDIXES

[Transport Plan for Lolita/Tokitae](#)

[Rehabilitation Training Plan for Lolita, aka Tokitae](#)

[Lolita to Tokitae Retirement Budget](#)

[A Review of the Releasability of Long-Term Captive Orcas with special consideration of Lolita/Tokitae at the Miami Seaquarium](#)

[Appendix A - Range of Southern Resident orca community](#)

[Appendix B - Orcinus orca and Lolita](#)

[Appendix C - Cetacean Releases](#)

[Appendix D - An Annotated Bibliography of Cetacean Releases](#)

[Project DeepOps \(US Navy killer whale “ocean walk” program\)](#)

[1998 - Summary Report of Keiko Evaluation Panel](#)

[Marine Biologist Kenneth Balcomb’s Comprehensive Retirement Plan](#)

A proposal to return and rehabilitate a captive killer whale named Lolita to her home waters in Greater Puget Sound. Prepared by Center for Whale Research for the 1995 Annual Meeting of the Association of Zoos and Aquariums in Seattle