

# **Lolita Translocation and Reintroduction Action Plan**

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## Background and Assumptions

The orca Lolita (or Tokitae) is a member of the Southern Resident Community of the Pacific Northwest, which comprises by last count 88 individuals in three family groups, or pods – J-Pod, K-Pod and L-Pod. It is widely considered to be the most intensively studied and best-known marine mammal population in the world. Photographic records and historic accounts suggest Lolita is a member of L-Pod, specifically the L25 or L91 Matriline.

In December 2004, the Southern Residents were listed as “Endangered” under the Endangered Species Act (“ESA”). The Canadian government also lists the population as Endangered under its Species At Risk Act (SARA). The data employed by federal scientists and agencies on both sides of the border came largely from The Center for Whale Research on Washington’s San Juan Island. Since 1977, The Center has been photodocumenting and compiling other research on the Southern Residents’ association patterns, genealogical structure, maturation rates, birth rates, longevity and mortality rates and habitat usage patterns.

At the age of two or three, Lolita and a group of Southern Residents were herded into Penn Cove, off the east side of Washington’s Whidbey Island, on August 8, 1970. Seven orcas were curated for marine parks, including Lolita, who was sent to Miami Seaquarium. Out of the orcas herded into Penn Cove, it is believed that 14 female members of the Southern Resident Community present at the time of Lolita’s capture in 1970 are still alive – three could possibly be Lolita’s mother.

In Miami, Lolita joined a juvenile male named Hugo, who was captured in February 1968 and was also thought to be a Southern Resident whale. Hugo died in March of 1980 of a brain aneurism. Since then, Lolita has not had contact with other orcas – only Pacific white-sided dolphins, a Japanese Risso’s dolphin and at least one sea lion. Whereas Lolita could have been exposed to pathogens carried by these other animals, or through human contact, it is believed that her reintroduction does not pose a threat to the wild population.

Despite residing for the last 37-½ years in the smallest killer whale tank in the United States, Lolita is in remarkable condition due – due no doubt to her regular activity regimen, the highest quality medical attention and diet provided by Seaquarium staff, and the provision of clean, chilled natural seawater in her facility. Her care has been exceptional during her stay in Miami.

Her longevity is also extraordinary. She has outlived all of the 45 other Southern Resident orcas removed from the Pacific Northwest between 1966 and 1975, and today is believed to be the second-oldest orca in the care of humans, just slightly younger than Corky, a Northern Resident Community whale now residing in SeaWorld San Diego. Lolita also has an exceptional memory. She continues to vocalize in the calls used only by her family, which is considered a critical factor in her prospects of recognizing and reintegrating into the wild population.

It is thought that Lolita may be beyond breeding age, but her successful reintroduction could still provide a great benefit to the recovery of the Southern Resident Community. Orcas, and the Southern Residents in particular, are some of the most familial caretakers in the marine mammal world. It takes a village to raise young orcas, and another healthy female introduced to a matrilineal population can only enhance the prospects of recovery – particularly among a community of orcas beset with high loads of bioaccumulative toxins such as PCBs. PCBs are thought to be a major factor in the decline of the Southern Residents, impacting among other things the reproductive and rearing success of the population. When calves are born, they are fed enormous loads of PCBs stored in their mother’s milk and flushed directly into the nursing babies. Some newborns in the Southern Residents have been equated to human “crack babies,” with similar prospects of survival. If they do survive that nursing period, undoubtedly they require an extensive network of caretaking to have any chance of growing into productive members of the community. Moreover, as PCBs are thought to act as hormone mimickers, high loads are hardly mother’s helpers. Creatures thought to be some of the best caretakers in the animal kingdom have over the last several years surprised scientists with their shortcomings – i.e., the displacement of the L-Pod orca L98, or Luna, in Nootka Sound, BC, and the discovery of the Northern Resident orca A73, or Springer, alone in Puget Sound, some 250 miles from her home waters. In the 33 years of intensive study of both the Northern and Southern Residents, never has there been a recorded occurrence of a young whale being dispersed from its natal pod, and yet it’s happened twice in just the last few years. Toxic contamination could be a culprit.



Of course, PCBs and other toxins are also creating orphans, as Lolita was. But in every instance of a mother dying and leaving a young orca on its own, other whales, even males, have been observed and documented taking over the caretaking duties. Sometimes in spectacular fashion. In one remarkable event in Puget Sound, an L-Pod calf (one of Lolita’s relatives) was orphaned before he was weaned. Despite his dismal prospects, “Tweak,” as the whale was known to researchers, was kept alive for several weeks by his aunt and uncle – the uncle captured on videotape actually catching salmon (*left*), tearing off small pieces and attempting to force-feed his young nephew.

Orca societies are remarkably similar to human societies in this regard – the more help families get from each other, the better chances they have at raising their young. Even if Lolita never has a baby in the wild, having her back with the Southern Resident Community will be a tremendous biological benefit to the population.

The first objective of the post-release monitoring plan is to gather scientific data to contribute to a long-term collaborative study of social organization in Southern Resident orcas. The study has shown that resident killer whales of both sexes spend their entire lives in their natal pod in association with their maternal kin. No permanent emigration from or immigration into a resident pod has been documented in 30 years of field work, and genetic analysis shows that such events, if they occur at all, must be exceedingly rare. The mechanisms that maintain this social cohesion are unknown, although it has long been suspected that pod-specific call repertoires play a critical role. Lolita still uses at least some of the calls of her natal pod, and if calls are the primary determinant of group membership she is likely to be able to rejoin her group. If group membership is also dependent on other factors, such as individual recognition or, for a young individual, close association with a mother or adult maternal aunt (which Lolita may not have), then she may not be accepted into the group. Either outcome will shed light on social behavior in the population.

*The Project Team recommends the development of the following action plan for Lolita:*



### Goal

The overriding goal of this action plan is to mitigate the risk to the public and privation and public property from the actions of Lolita. Were she to reunite with the Southern Residents and become a contributing member of that population, intervention would be considered very successful. However, that Lolita may be able to remain a free-ranging, wild whale that does not pose a public risk, it would also be considered a success. The Project Team recognizes that the relocation of Lolita may not be successful in stopping her from undesirable and risky interactions with people and boats and that, in this case, further intervention may be necessary. Therefore, a series of monitoring and contingency plans have been developed to provide for the protection of the public.

**Cape Flattery and Neah Bay, WA, the Lolita Reintroduction Site.** This spectacular northwestern-most point in the Continental U.S. is considered by some to be the end of the Earth... The Makah like to say, *it's just the beginning*.

## PHASE ONE

### Transport Criteria and Methods

To approve the transport of Lolita to her former range, NOAA Fisheries, the Makah Nation and The Northwest Indian Fisheries Commission must be satisfied that she is releasable. A team of experts consisting of government and non-government veterinarians, pathologists, and marine mammal scientists will be appointed as The Scientific Advisory Team. The Team will develop a protocol for assessment, the collection of diagnostic samples, and the evaluation of clinical observations and diagnostic results, and will provide advice on releasability. The detailed protocol will direct the assessment and approval for transport and will be based on the following general criteria:

#### 1.) Health

The Scientific Advisory Team is satisfied that a thorough medical examination of the evidence of Lolita has revealed that:

- a.) *She does not pose an infectious risk to members of her population;*
- b.) *She does not have medical or genetic condition that puts her at significantly greater risk in the wild than in captivity;*
- c.) *She does not have any health complications likely to put her in danger while being transported to the Bay Pen Site, and;*
- d.) *She does not have any known medical conditions likely to make her survival contingent on on-going medical assistance (human intervention).*

## 2.) Behavior

The Project Team is satisfied that a thorough medical and behavioral examination of Lolita by attending veterinarians indicates that:

- a.) *She shows evidence of physical competence including but not limited to: normal respiratory capacity and swimming capacity;*
- b.) *She does not exhibit aberrant behavior suggestive of an underlying disease or injury that would significantly limit her chance of surviving in the wild (i.e. abnormal swimming or breathing patterns or highly repetitive behaviors such as head bobbing or arching).*

## 3.) Method of Transport

- a.) *Lolita must be transported in a manner that is safe, humane and efficient.*
- b.) *Lolita will be transported in an open top container that provides body support and thermal regulation.*
- c.) *Lolita will be flown from Miami Seaquarium to Neah Bay, WA aboard a C-130 Hercules (UPS) or C-17 Globemaster III aircraft (as used in the Keiko translocations, and the only aircraft that can move a large load like this and deliver it to such a short runway).*
- d.) *Travel time to be minimized.*
- e.) *Lolita will be accompanied by experienced animal care staff and a qualified veterinarian.*
- f.) *Contingency plans for alternate routes, methods and backup equipment must be developed.*
- g.) *Transport approval, in the form of a transport license, to be issued by NOAA Fisheries or USDOA.*



The Translocation of Lolita will be supervised by trained animal care staff assembled by the Free Willy Keiko Foundation (FWKF), with unique expertise in the capture of cetaceans and the care of killer whales. FWKF is the only non-government, non-profit organization in the world with experience in successfully translocating an adult killer whale over long distances – Keiko, from Mexico City to Newport, OR and then Newport to Iceland. *(Left: Keiko's Bay Pen in Iceland.)*

## PHASE TWO



### Holding at Release Site

If Lolita is cleared for transport, she will be moved to a holding pen – the Bay Pen – in Neah Bay. This objective of this step is to:

- a.) *Allow her to stabilize behaviorally following transport;*
- b.) *Provide time for a final medical assessment;*
- c.) *Allow her to become familiar her with the area acoustically and visually;*
- d.) *Re-familiarize her with the sounds of her pod and/ or related killer whales in area, and;*
- e.) *Allow scientific observers to assess her response to killer whales within acoustic range of her holding area.*

In determining the best procedures for the holding and release of Lolita, two overarching, and interconnected objectives have been considered and balanced. The first objective is the need to ensure that conditions for release mitigate the risk to the public safety and property and the second, is that the release provides the optimal conditions for Lolita to reconnect and, hopefully, re-unite with her pod or another in the Southern Resident Community. Reunification of Lolita with other Southern Resident whales is considered to be critical in order for her to no longer be a danger to people and property.

**Proposed Lolita Bay Pen site in Neah Bay, WA** – floating concrete pontoon visible at center, with gated road leading out onto the breakwater and to the proposed Bay Pen site.

Important to achieving these objectives is the choice of release location and the timing of the release. Neah Bay has been chosen based on observations that L-Pod make regular forays west along the coast line of lower Vancouver Island and because it provides protection from the weather such that a holding pen can be maintained. It is also distant from the Gulf Island/Puget Sound area where boater traffic is considered to be a concern.

**Holding and Forage Conditioning at Release Site**

- a.) Allow Lolita to stabilize behaviorally following transport;
- b.) Provide time for a final medical assessment;
- c.) Allow Lolita to become familiar with the area acoustically and visually;
- d.) Provide an opportunity for Lolita to re-familiarize herself naturally with the sounds of her pod and/ or related killer whales in the area, and;
- e.) Allow scientific observers to assess her response to killer whales within acoustic range of her holding area and vice versa.



**Methods**

The following requirements for holding must be met:

- a.) Lolita will be held in the Bay Pen in Neah Bay with dimensions of at least 50m x 50m in preparation for release.
- b.) 24- hour acoustic monitoring and recordings for Lolita vocalizations and passing Southern Resident vocalizations.
- c.) 24-hour trained animal care staff with expertise in the care of killer whales required on site.
- d.) Qualified veterinarians shall be responsible for Lolita’s general health.
- e.) Basic medical health assessment, including hematology and serology, shall be conducted weekly for the first three weeks of holding and a minimum of every three weeks thereafter.
- f.) Site access must be restricted to authorized personnel only.
- g.) A perimeter exclusions zone to be established around the Bay Pen in Neah Bay. The location and distance to be determined in consultation with enforcement officials.
- h.) A site security plan will be developed and implemented in collaboration with local enforcement officials to ensure the safety of program personnel and Lolita, to prevent unintentional escape of Lolita and to restrict access to the site.
- i.) The Project Authority will post Public Notices advising of the risks to personal safety and property, and to the ultimate ability for Lolita to remain wild and potentially reunite with Southern Resident orcas, through interactions with Lolita. Project Authority personnel, in collaboration with relevant local authorities, will undertake action to address violations or preserved disturbances, as defined in the Marine Mammal Protection Act and the Endangered Species Act.

Lolita will be re-taught to catch wild salmon, as well as other prey identified as a food source for Southern Resident orcas. This feeding will begin by hand, with immediate introduction of live, wild salmon remotely delivered into Bay Pen. Lolita will be encouraged to replace an increasing amount of her hand-fed diet with fish she catches on her own.

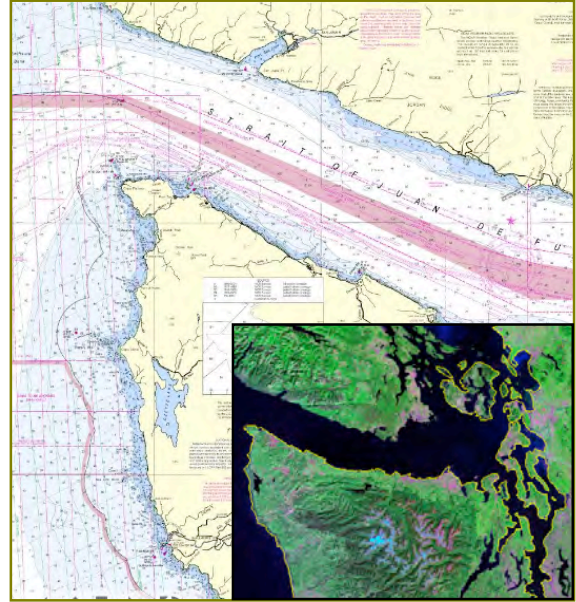
**Ocean Walks at Release Site**

When a determination is made by the Scientific Advisory Team that Lolita is showing an aptitude to forage live salmon and other potential prey, she will be led out of the Bay Pen by the Team on “ocean walks” into Neah Bay, the Strait of Juan de Fuca and ultimately the Pacific. A trained boat team – as DFO Canada used in Nootka Sound with L98 (right) – will gradually increase both time and distances of each walk. Lolita will be encourage to trust this one boat as it invites her out, and then back in. A distinctive sound device will be attached to the Project boat, identifying it very specifically to Lolita. Human interaction with the orca will be minimal at first, then gradually none at all. These ocean walks will not only serve as walk-throughs for the anticipated Reintroduction – the attempt to facilitate intercepts with Southern Resident groups – but also gently re-acclimate the orca to its natal waters.



**Tatoosh Island, Makah Nation** – This picturesque former U.S. Coast Guard station at the very corner of the country will be the site of a state-of-the-art hydrophone array, underwater microphones that will acoustically scan hundreds of miles of Washington and British Columbia coast “looking” for Lolita’s family. The sounds and calls it captures will be sent live back to Lolita’s Bay Pen site in Neah Bay, just a three-mile ocean walk away. This will be the first time in the history of Pacific Northwest orca research where a year-round, 24/7 acoustic survey like this has ever been conducted on these whales. The science it yields will no doubt benefit the Endangered population for generations to come.

The Southern Resident Community of orcas frequent “The Inland Sea” of Puget Sound and Georgia Strait almost daily three months out of the year. The rest of the year, they work the coasts of Washington and British Columbia. The only protected location in the Pacific Northwest that provides opportunities to see all three pods of Southern Resident killer whale 12 months out of the year is the northwest tip of the State – **Neah Bay, The Makah Nation.**



## Release

The timing for the release of Lolita will attempt to optimize those factors that, in the opinion of the Scientific Advisory Team, will have the greatest possibility of reuniting Lolita with her pod or another pod of Southern Resident killer whales. The period in which Southern Resident killer whales are present in Puget Sound and Straits is limited – about three months out of each year. The Neah Bay/Cape Flattery location provides potential reintroduction opportunities *throughout the year.*

Prior to consideration for release, the Project Team must be satisfied that Lolita has been cleared medically and behaviorally and has been judged suitably acclimatized by the Scientific Advisory Team. The attending Bay Pen Team and Boat Follow Team will then be alerted to open the net and lead Lolita to a Southern Resident group. However, it must take into account the following considerations:

- a.) *The proximity of her natal pod within acoustic range of the Bay Pen;*
- b.) *The proximity of other resident killer whales within acoustic range of the Bay Pen;*
- c.) *Lolita’s behavioral and acoustical reactions to the sounds and/or proximity of Southern Resident killer whales;*
- d.) *Indications of aggressive reactions by killer whales in the vicinity of the holding pen to Lolita’s presence and/or vocalizations; and the suitability of the weather and related factors for conducting the post-release monitoring;*
- e.) *Public Notices have been issued and Stewardship programs are arranged and operational, and;*
- e.) *The presence of vessels, aircraft and people that may attract Lolita, distracting her from rejoining other orcas.*

It is possible that Lolita will choose to remain in or near the bay containing the net pen for a considerable period following her release. If this occurs, she will not be chased away, but neither will she be fed or rewarded by human contact.

## PHASE THREE

### Post-Release Monitoring

There are three main objectives for post-release monitoring of Lolita:

- a.) *To assess the success of the Lolita rescue and reintroduction project;*
- b.) *To gather scientific data toward the long-term collaborative study of social organization in Southern Resident orcas;*
- c.) *To provide a means of finding Lolita should she run into serious distress in the initial period following her release.*

The following provides a summary of the approach to be used for post-release monitoring [via suction cup tags]:

- a.) *One VHF tag and one VHF/satellite tag will be attached to Lolita’s back by suction cup prior to her release.*
- b.) *The Center for Whale Research and its annual Orca Survey and The Whale Museum’s Soundwatch Program will help monitor Lolita on a long-term basis.*
- c.) *Boats will be employed to track the whale during the period that the tags remains attached, which is projected to be on the order of several days to one week.*
- d.) *After the initial tracking period, the area of the release site will be carefully monitored by boat and shore-based observers for the presence of the whale and other pods.*
- e.) *A new network of shoreline property owners, pilots, commercial whale watchers and other mariners will be established to provide reports of Lolita’s movements and behavior – on a strictly discreet basis. The information provided the Project Team will be strictly embargoed from release to the media and public, including existing non-government whale-sighting networks. Information about Lolita’s whereabouts will be cleared for release after a waiting period of one week if she’s on the move; indefinitely in the event she is lingering in one area. (It is the hope of the Project Team that individuals and reporters help ensure the success of the Lolita Reintroduction by respecting this embargo... and giving Lolita the space she needs to get reacquainted with her family, without the distraction of curious boaters.)*

The following provides a summary of the approach to be used for post-release monitoring [via VHF/satellite bolt tags]:

- a.) One VHF/satellite tag will be attached to the trailing edge of Lolita's dorsal prior to her release.*
- b.) Project Researchers will monitor and record Lolita's movements, travel speed and depth of her dives.*
- e.) The U.S. Navy will provide additional long-term tracking and reporting and visual observations whenever possible; and also make use of that data in their own operations, toward their stated commitment to avoid using radar when whales and other cetacea are present.*
- c.) Lolita will be carefully monitored by Project boats and shore-based observers.*
- d.) The Center for Whale Research and its annual Orca Survey and The Whale Museum's Soundwatch Program will help monitor Lolita on a long-term basis.*

## **The Question of Tagging**

Most research and recreational whalewatching take place in the summer months. As a result, relatively little information exists regarding the late fall/winter/early spring movements and distribution of resident killer whales. The rugged, relatively unpopulated coastlines of both Washington State and British Columbia has further hampered efforts to track the orcas. It has therefore been suggested that Lolita be fitted with long-lasting telemetry equipment prior to her release so that her movements can be tracked throughout the winter, to advance researchers' database on "off-season" resident travel patterns, even diving depths, and further identify Critical Habitat for Southern Resident orca recovery.

## **Telemetry Methodology:**

The Project Team and Scientific Advisory Team will need to concur on the most effective and humane option for attaching telemetry devices to Lolita prior to her release. There are at least three practical options. The first uses one or more suction cups to secure a tag to the skin. It does not involve breaking the skin, although mild bruising can occur if the suction breaks capillaries near the surface. Tags attached using this method have been used extensively on killer whales and other odontocetes, and typically remain affixed for several days to a week with no discernable long-term effects. The second method uses 2-3 nylon or stainless steel pins which are threaded at the ends and pass through the dorsal fin or dorsal ridge. The pins are bolted to housings at each end, one or both of which contain telemetry equipment and batteries. Tags using this method have been used on a variety of odontocetes including belugas, killer whales, dolphins, and porpoises, and typically last one to six months. The third method uses a cylindrical housing imbedded under the skin and affixed with various types of barbs. An antenna protrudes from the skin. This method has been used with some success on baleen whales, but has rarely been used on odontocetes. It has only been tried on killer whales once and was not successful. If it did prove effective, it would provide a telemetry signal for a period intermediate to those of suction cup and bolt-on tags.

The overriding objective of the Lolita Reintroduction Project – and frankly the justification for the effort and expense – is to provide long-term benefits to a population of orcas recently listed as "Endangered" under the ESA. With the tracking data Lolita could return, scientists will be able to solve one of the last great mysteries surrounding these resident killer whales – where do they go in the winter? Or more specifically, where are they eight or nine months of the year? Some occasionally turn up as far south as Monterrey Bay, CA, or as north as SE Alaska. One of the pods – J-Pod surprise Seattle residents with an occasional foray into the big city chasing winter chum runs. For the most part though, J-, K- and L-Pod spend the colder months out to sea, working the rugged, sparsely populated coasts of Washington and British Columbia. If Lolita successfully reconnects with a Southern Resident group, long-term telemetry could help researchers track these whales for the first time year 'round. And in doing so, help us better understand how to save them.

## **Monitoring Procedure**

The period immediately following Lolita's release from the Boat Team – as with A73/Springer after release from her Bay Pen in Dongchong Bay, Hanson Island – is likely to be critical. Lolita may simply stay in the vicinity of the Bay Pen, move into Neah Bay or the Strait of Juan de Fuca, or move rapidly to the NW or SE. To determine which of these possibilities unfolds, the Project Team plans to monitor her movements closely by telemetry and as much as possible visually from a research boat for several days following her release. The Project Team hopes to prevent Lolita from forming close associations with boats after her release, and will therefore request that whalewatching and other boats in the area give her a wide berth. The research boat will also be moved away from her if she approaches it closely. If she does not appear to be showing signs of serious distress after several days, the monitoring effort will be downscaled so that she is not within constant visual or acoustic range of the research boat. However, members of the newly established Project sightings network will be requested to report her position whenever she is sighted opportunistically, and if her position is known she will be observed at regular intervals until at least mid-September. After this point, every sighting of Lolita will be recorded as part of the long-term collaborative study referred to above. Except in extraordinary circumstances we see no reason to actively search for her. However, whenever she is seen in the course of the long-term study her behavior and association patterns will be closely observed.

## Recapture Criteria

Killer whales, like all wild animals, are subject to various environmental stresses in their daily lives, and death by starvation and disease are natural processes. Thus, re-intervention will only be carried out if Lolita poses a risk to humans or to other members of her population, or if she suffers from health problems that can reasonably be related to her capture, confinement, or transportation. Reunification with her pod or another pod (related or unrelated) will not be used in determining if recapture is necessary. NOAA Fisheries and The Makah Nation, as Project Authority, have the unfettered authority to authorize capture of any marine mammal posing a safety risk to itself or the public – as does the Department of Fisheries and Oceans in Canada. Lolita and the Southern Residents are transboundary whales, and in this part of the world they share their waters with three nations. Before taking action as such, the Project Authority – and it is hoped, DFO – will seek the advice of experts in the field of killer whale biology and medicine, affected government agencies and other experts in determining the necessity for re-intervention.

The following considerations will be taken into account if recapture is being contemplated:

- a.) She shows deteriorating health within approximately 6 weeks of her release and is judged to be unlikely to survive without re-intervention;*
- b.) Her behavior poses a significant risk to human life (for example, repeated physical interference with divers or with kayaks and/or other small vessels);*
- c.) Her behavior or place of residence poses a significant risk either to herself or to other members of her population;*
- d.) Lolita interferes with human activities in a way that is likely to result in her or other members of her population being deliberately or accidentally harmed, and/or;*
- e.) Any other consideration that is deemed to be in the interest of proper management and control of this population, another population/species impacted by this project, or public health and safety.*

In the event of a recapture, the Project Authority will return Lolita to the Bay Pen, where efforts will begin anew toward Reintroduction.

## Potential Outcomes

As previously mentioned in this Action Plan, there are many potential outcomes after release that must be considered and for which contingency plans must be developed. As Lolita's behaviors have been identified as a risk to the public and property, the ability to swiftly intervene is a priority and a requirement for this program to proceed. The following list of potential outcomes is meant to guide development of contingency plans, but is not necessarily exhaustive:

- a.) Lolita joins L-Pod or another Southern Resident pod, ignoring boats and people altogether and leaves with that group for the winter;*
- b.) Lolita joins some group intermittently, is healthy and does not seek boats or people and is, therefore, not a risk to the public or property;*
- c.) Lolita does not join any group, but is healthy and does not seek boats or people and is, therefore, not a risk to the public or property;*
- d.) Lolita seeks boats and people, but interactions pose no risk to the public or property;*
- e.) Lolita seeks boats and people and is a risk to the public or property by interfering with navigation, damaging boats or otherwise putting the public at risk;*
- f.) Engages in life-threatening behavior directly with people or boats;*
- g.) Lolita fails to thrive and long-term survival is in question;*
- h.) Lolita disappears and cannot be relocated;*
- i.) Lolita moves out of the usual range of Southern Resident killer whales;*
- j.) Lolita's actions threaten the survival of another member(s) of the Southern Resident population directly or indirectly;*
- k.) There is a negative/aggressive reaction of other Southern Residents toward Lolita, or;*
- l.) Lolita does not survive capture, transport, holding or release.*

## Contingency Options

The following requirements for contingency plans have been developed for application in U.S. and Tribal waters should there be a need to re-intervene:



**Immediate Intervention**

The following immediate intervention measures have been considered and shall be implemented in an escalating manner, dependent on the seriousness of the incident:

- a.) Primarily, vessels would be instructed to leave the area immediately at speed by the Stewardship Team and/or Enforcement Team, which would not engage Lolita in any way.*
- b.) Secondly, indirect and direct intervention measures with Lolita will be developed by trained animal behavior/training specialists and approved by The Project Team. These measures would be used if a vessel is unable to disengage Lolita and when either the public or property is at serious risk of injury or damage.*
- c.) In an emergency situation, where the life of a member of the public or program personnel is directly at risk, all means of force may be employed, up to BUT NOT INCLUDING lethal force.*

**Medium-Term Intervention – Temporary Holding**

*Recapture and Temporary Holding* – The purpose of medium-term intervention is to remove Lolita from the wild and potentially dangerous interactions with the public and property. As such, the Bay Pen in Neah Bay must remain in place and ready to receive Lolita indefinitely, with personnel, veterinary staff and security on standby pending a potential recapture and holding. The holding requirements established previously shall apply.

**Considerations for Invoking Contingency Plans**

The following section reiterates potential outcomes of the Lolita Reintroduction and possible contingency plans that may be invoked:

	<b>Outcome/Situation</b>	<b>Response/Contingency</b>
a)	Reunites – No public risk.	None – on-the-water tracking discontinued upon approval of The Project Authority or when Lolita leaves with other Southern Resident orcas.
b)	Reunites – Intermittently, no public risk.	None – on-the-water tracking discontinued upon approval of The Project Authority or when Lolita leaves with other Southern Resident orcas.
c)	Remains solitarily, healthy, no public risk	None – on-the-water tracking discontinued upon approval of The Project Authority or when Lolita leaves with other Southern Resident orcas.
d)	Seeks boats but does is not a risk to the public, navigation, property.	Maintain stewardship, monitoring and enforcement efforts.
e)	Repeatedly seeks out boats and people – potential risk to public by interfering with navigation, damaging property or exhibiting aggressive behaviors	Immediate Intervention to diffuse situation.  Evaluate the pattern and consistency of behavior to determine if medium term intervention is necessary. Once medium term intervention is evoked, an evaluation of the necessity for long-term options will commence.
f)	Engages in life-threatening behavior directly with people or with boats.	On-the-ground decision of Project Authority and Project Team as to urgency of the situation. If approved measures to disengage Lolita fail, all measures will be used, up to BUT NOT including lethal force.

g)	Fails to thrive – long-term survival in question.	Let nature take its course.
h)	Lolita disappears/departs from Southern Resident area	Records of travel will be kept and local authorities will be notified of her presence. If tag not functional, general notice will be issued publicly and records will be kept of any sightings. If logistics and resources permit, investigation may ensue.
i)	Departs Southern Resident area – reappears in another location	If not causing a public risk, Lolita will be monitored through local arrangements. If becomes a public risk – Medium-term intervention invoked while consideration is given to long-term intervention.
j)	Lolita’s actions threaten other member(s) of the Southern Resident Community	The situation will be evaluated by the Scientific Advisory Team, in consultation with other experts.
k)	Negative/aggressive reaction of other Southern Residents to Lolita.	Let nature take its course.
l)	Lolita does not survive capture, transport, holding or release.	Carcass obtained if feasible for scientific research, led by either Canadian or U.S. government scientists depending on location of carcass.

## PHASE FOUR

### Long-Term Contingency

Should Lolita’s Reintroduction prove immediately unsuccessful, the Project Team deems it prudent to consider additional long-term contingencies for the care of Lolita in the Bay Pen – perhaps for the rest of her life. Again, the overriding objective of this Reintroduction Plan is to mitigate the risk to Lolita and the public. Were she to reunite with the Southern Residents and become a contributing member of that population, the Project would be a great success. However, if Lolita is only able to remain a free-ranging, wild whale that does not pose a public risk, the project must also be considered a success. But what if she doesn’t connect with her family? What if it takes years to reunite them... or if it never happens at all?

The Budget Estimates of this Lolita Translocation and Reintroduction Action Plan envision a six-month period. If the Project extends beyond six months, The Project Team anticipates at least two opportunities for alternative funding:

*a.) Site Visits for Marine Mammal Programs. A program will be established at Neah Bay providing opportunities for field work for students of veterinary medicine and marine biology, job shadowing and attending the Bay Pen Team.*

*b.) A partnership will be created with the renowned EarthWatch Institute, providing an extraordinary expedition opportunity for its “volunteers” to donate their time and energy – and money – to the scientific field research and husbandry associated with this extraordinary project. EarthWatch has been sending volunteers to The Center for Whale Research on San Juan Island for two decades now, helping support the work of researchers studying Lolita’s family. An expedition to Neah Bay would be a perfect complement to their experience learning about wild orcas in the Pacific Northwest.*



**IT TAKES A VILLAGE TO RAISE A KILLER WHALE.** A new baby in L-Pod – Lolita’s family.