

## Testimony of Dr. George R. Harker regarding the Notice of Intent to Prepare a Programmatic Environmental Impact Statement on Implementing Recovery Actions for Hawaiian Monk Seals

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### Proposed Action and Possible Alternatives

This notice initiates a public scoping period that will help determine the structure of each alternative considered in the PEIS. NMFS has identified the proposed action and several other alternatives, including the No Action Alternative. The final scope and structure of the alternatives will reflect the combined input from the public, research institutions, affected State and Federal agencies, and NMFS administrative and research offices. The number and structure of the alternatives that are analyzed in the PEIS will be determined at a later date. Themes to include in the range of potential alternatives are presented here to provide a framework for public comments:

**No Action Alternative: Under this alternative, currently permitted research and enhancement activities on Hawaiian monk seals would continue until expiration of the permit in 2014 (NMFS ESA-MMPA Permit No. 10137-04 issued to the NMFS Pacific Islands Fisheries Science Center). Recovery Plan actions authorized by this permit would not be implemented beyond 2014.** Currently, the existing research and enhancement activities include, but are not limited to:

**1. Population assessment (e.g., counting, resighting, marking for identification, flipper tags);** Some observations on population assessment. With the low numbers in the main Hawaiian Islands it should be relatively easy to get a handle on the existing population. It is quite conceivable that each seal can be photographed and identified by its natural markings. (Data sheets released on <http://monksealmania.blogspot.com/> support this premise.. Obtaining this information directly from NOAA has been unsuccessful)

Bleach marking seals is not necessary for this reason. Additionally most seals have flipper tags which can be readily seen on a hauled out resting seal and can be easily documented with telephoto lenses. <http://monksealmania.blogspot.com/> routinely publishes tag photos of seals that it encounters.

There is much data on the numbers of Monk Seal that needs to be assessed. Information published on [monksealmaniablogspot.com](http://monksealmaniablogspot.com/). suggest that a great deal of information on the number and movement of seals is known and just needs to be analyzed and reported.

There is no need for the biannual counts. A spot check at a particular time does not really provide any useful information. With information known on most every existing seal in the Main Hawaiian islands, including births what is needed is the availability of this information to the public or interested scientist.

The literature suggest and NOAA asserts Monk Seals are “Sensitive to disturbance.” The

elimination of marking techniques that are redundant and lead to confusion, i.e. such as bleaching should be eliminated. Bleach markings have to be renewed annually since the seal molts. MonkSealMania accounts reveal that there can be confusion caused by this and the legibility of the numbers themselves. I personally have been misled by the bleach markings on a seal that I knew that I did not know had been marked. I also note that obtaining information from NOAA about marked seals had been difficult. Then of course there is the aesthetic question, do we want to see our loved critically endangered Monk seal defaced by a brand?

**2. Health and disease studies (e.g., tissue sampling, morphometric measurements);** It appears that a lot of interesting and useful information is being collected. However, it also appears that much of this information is not readily available to the public or scientific community. To my knowledge there are no published proceedings from annual stranding conferences where this material is presented and discussed.

**3. Foraging studies (e.g., telemetry, scat collection);** The telemetry component poses an unacceptable risk to seals. The presence of the device on the seals back has the potential to snag on fish lines or nets, underwater rock out cropping which the seal might attempt to squeeze through. MonkSealMania Bog (<http://monksealmania.blogspot.com/>) has numerous reports of such entanglements and/or the tearing off of transmitters by unknown causes. One can only speculate on the circumstances surrounding the removal of these transmitters and forces that needed to be exerted to break free. I am reminded of efforts to collect data during WW II on aircraft losses due to taking enemy fire. Records were made of the damage to returning aircraft. At some point it was realized that it was the part of the plane where they had no record of damage that was the vulnerable part that needed attention. How many seal with transmitter in place have not been seen lately and should be presumed lost rather than swimming around with a dead battery?

An analysis should be made of what is happening to the devices. Are they being scraped off by the animal? Are they snagging on underwater obstructions or other elements within the environment the seal. Remember that the streamline capabilities of the seal evolved and remained relatively unchanged for over ten million years. Any change in the hydrodynamic condition of the seals body shape could have a profound implication on its survival value.

Again note that Monk Seals are “sensitive to disturbance.” No doubt the seals are reacting to these devices and adjusting their behavior to deal with the issue. The question of course is whether that adjustment will be beneficial or detrimental to their survival as a species.

**4. De-worming research (e.g., fecal samples, testing anti-parasite treatments);** This is another area where the work that has or is being done is limited in its availability. Techniques that are intrusive to the animals should be evaluated. Results of completed or ongoing research needs to be published and made available to the public and scientific community.

**5. Translocation of weaned pups within the NWHI to improve juvenile survival;** There is no need for translocation of weaned pups to improve juvenile survival. Mother nature has responded successfully to shifting impacts on Monk Seal populations for over ten million years. Shifting freshly weaned or any young juvenile seal is counterproductive because it

curtails the learning process of the seal with its mother and other members of its extended family i.e. the rest of the seals in its initial habitat.

Translocation and interference with seal pups has had clearly negative impacts that most people are probably not aware of.

KP2 as example of translocation of unweaned pup. KP2 was removed from his mother because she allegedly abandon him. He had been observed trying to suckle a rock and mother was observed biting him on the face .within a day or two of birth. I note that the literature suggest that it may take a few days for the newborn seal to find a nipple ( citation here to be added Monk Seal in University course notes)

Filming Koki at ten days old I recorded him approaching a ocean rock clearly suggesting that he thought he was approaching his mother. This is recorded in raw data videos of Koki taken on October 19, 2009 when he was ten days old. In this and virtually every other video it is not uncommon to see the two interacting by “biting” each other on the face.

Snatching KP2 to improve his chance for survival?

Supposedly KP2 was snatched because he was too friendly. Then the “discovery” of cataracts precluded his being returned to the wild. As I understand things from the 4 th Annual Stranding conference June 2-4 of 2009, KP2 developed the cataracts under the care of National Marine Fisheries Services when he was incarcerated after being allegedly abandoned by his mom. It was reported at the session Hawaiian monk seal “KP2” by Dr. Gregg Levine that there were a number of cases of seals developing Corneal Edema. It is quite common for marine mammals in captivity to develop this and subsequently go blind.

It has come to my attention that many of the marine mammals held in captivity around the world are actually blind suffering from eye effects such as cataracts due to problems associated with their confinement.

KP2 is the poster child for a completely failed Monk Seal Restoration Program. I am fearful that it will not be to far in the future when I take my grandsons to n aquarium to see the last living Monk Seals. In my mind I can hear the dialogue, “Yes, son that is what a live monk seal looks like. You were lucky you got to see the Koki the monk seal grow up in the video. When he died there were about a thousand alive. Today there is just KP2.”

I suppose the good point of a seal incarceration is that one can get a much better view than one can have in the wild if complying with the NOAA directive of 150 feet. Plus you can make eye contact!

**Problems with removing any pup (weaned or otherwise) from parent.** Part of growing up is learning information essential for survival from the parent. NMFS suggest that Monk Seals tend to be solitary animals living in isolation. They suggest that the mother in rearing the pup mostly nurses the pup on the beach. After feeding the pup for 5 to 7 weeks mom supposedly leaves the pup to fend for itself.

Observation in the field and reviewing the material posted on Monksealmania.blog show this is not the case. Mother is constantly working with the pup to teach it the skills necessary for

survival. This process does not stop with weaning. Contrary to NMFA's statements to the contrary, the mother still interacts with the pup. Indeed the pup is part of the extended seal family. And through its life it will interact and learn from its associates.

Koki's mom, RO 15 experienced significant trauma at the hands of NOAA that may explain aspects of her behavior. Her daughter, "RO 42", was captured and removed from the main Hawaiian Islands in February 2009. This occurred eight months prior to Koki's birth on Maui. There is no doubt that RO 15 knew this occurred, one wonders if this had an effect on mom going from the Big Island to have pup number eight on Maui.

NMFS had intensive coverage of that event on Maui. Volunteers manned barriers and kept up a constant barrage of activity and chatter in close proximity to the seals. About half way through the raising, mom moved the pup off the beach and down the coast to a nearby fish pond. (A review of Monksealmania.blog which reports observations on a number of seal pupping on Oahu and Molokai does not report any relocation of pups to a different permanent location that I could find.)

NMFS personnel moved barriers and the general commotion of their outreach program to close proximity to the seals at the fish pond. Surveillance continued with much interaction between the volunteers and the seals. This occurred 24/7 for two months.

Koki the pup was ultimately tagged and also had a transmitter placed upon his back. In April the last transmission was received. He has not been seen or heard from since that time.

A word about tagging and transmitter placement. How traumatic is this process to the seal? In each case four or more people grab the seal and hold it while tags are attached to rear flippers or transmitter is glued to back. I have heard accounts attributed to people involved in the capture that it was such an unpleasant experience for the captor that they did not want to do it again. Presumably they were reacting to the vibes given out by the struggling animal.

In the period between his weaning and disappearance, he was occasionally seen sharing a beach with his mother. Similar interaction between offspring and their parents is reported on MonkSealManiaBlogspot. (<http://monksealmania.blogspot.com/>)

Jumping to October 2010 we find that mother RO 15 has returned to the Big Island. Last information made available to me by NOAA-NMFS is that the seal is fourteen miles up a river stream which is difficult to reach. The obvious question is what has brought this extraordinary change about in her behavior? Is it the actions by NOAA-NMFS?

Where seal choose to birth has tremendous implications for the survival of the species. The Mediterranean Monk Seal was inclined to birth in surface shoreline sea caves rather than open beaches. Tidal shifts and other natural phenomena resulted in the loose of a significant number of pups. This observation is based on material presented in the website: <http://www.monachus-guardian.org/factfiles/medit01.htm>

## **6. Mitigation of fishery interactions (e.g., disentanglement, removal of fishing hooks);**

**and** Over the past few years I have been aware of a number fishing hook ensnarement. From what I have heard and observed most such hooking resolve themselves without human intervention. (Koki had two at one point)

A number of entanglements documented by MonkSealMania involve lines and other material entangled on the transmitter packs stuck on the backs of the creatures. Seals have evolved a smooth coat and sleek body shape that is effective in cutting through the water and past obstructions such as rock outcroppings and vegetation entanglements. The addition of these man made impediments is not supportive of increasing survival rates.

## **7. Mitigation of adult male aggression (e.g., removal and relocation of aggressive males).**

I doubt it this has any significant effect on Monk Seal survival. Ten million years of successful interaction between the sexes of Monk Seals pretty much tells the story.

Status Quo Alternative: The Status Quo Alternative would consist of the existing types and scope of management, research and enhancement activities (including those identified in the No Action Alternative). **New permits would be issued to maintain the current levels of research and enhancement activities. Existing management activities include but are not limited to protecting seals that haul out on recreational beaches and creating effective outreach messages, brochures, signs and volunteer programs to minimize human disturbance and other adverse impacts.**

There are a number of problems with the continuation of the **Status Quo Alternative** which are quite serious and need to be addressed immediately.

**1) Existing management activities include but are not limited to protecting seals that haul out on recreational beaches.** The current existing management activity intended to protect the seal haul out on recreational beaches is the **main form of harassment** experienced by the seal whether on a recreational beach or any other location known to NOAA.

Ironically it is the existing management activities intended to “protect” the haul out of seals on recreational beaches that is significantly changing the character of these encounters between traditional beach users such as people and monk seals. Prior to NOAA’s involvement the haul out of a monk seal was a rather non event. A hauling out seal might attract attention to a few in proximity to the event. But most beach users would be unaware.

Today “volunteers” or NOAA employees descend on the scene and force through threat of law that people back off from the seal one hundred and fifty feet. It is suggested that this protective corridor is necessary for the benefit of the seal.

By placing stakes and yellow ribbons boundaries are defined that while intended to effect people also tend to define and restrict the movement of the seal.

The extent and level of animosity created in the beach visitor is generally not known and usually not reported.

MonkSealManiaBlog reports on the actions of their volunteer posse and the number of seals they “protect.” One incident that particularly struck me involved a volunteer who had

engaged some children and their parents in a discussion about their intrusion inside the signs to approach a sleeping seal. After the conversation someone in the crowd threw a rock with such force that the man was brought to his knee's The rock struck above and behind the temple. I believe this volunteer is lucky to still be with us.

**Monk seal as Aumakua.** Many if not all of native Hawaiian's share a connection with various creatures in their environment including sharks, turtles and monk seals. They view a particular animal or thing as their deified ancestor. I have had a number of Hawaiian's tell me they view the monk seal in this way. NOAA's admonition that people can not interact, feed, or touch a seal runs contrary to this very fundamental aspect of Hawaiian culture.

A link and bond to a monk seal or indeed any other creature on earth and humankind is a basic and given condition of the universe. This connection between things can not be disavowed or interfered with by anyone without dangerous consequences.

**Note RH 44 lost pup on Maui April 2009** Had prior pups on Moloki and went back 2010 to have successful pupping. This I believe is a very significant event in the context of Monk Seal survival and it should not go unnoticed and further study should be made of the circumstance surrounding this event

## **2) creating effective outreach messages, brochures, signs and volunteer programs to minimize human disturbance and other adverse impacts.**

Outreach messages, brochures, signs and volunteer programs intended to minimize human disturbance and other adverse impacts actually work to the contrary.

A great deal of information contained in the brochures or distributed by NOAA is incorrect if compared to actual information collected by scientist and often presented at NOAA conferences. Unfortunately these documents are not readily available to the scientific community let alone the general public.

It is rather paradoxical that the "**outreach messages, brochures, signs and volunteer programs to minimize human disturbance and other adverse impacts**" is the **main** human disturbance with regard to the Monk Seal.

1) a sleeping Monk Seal often goes unnoticed. A sleeping Monk Seal surrounded by yellow tape and other signs is hard to ignore.

2) much of the material presented by the volunteers is incorrect. ie, the idea that these seals do not congregate in colonies like other seals,

3) what is the impact of the signage and resulting attention from the volunteers and the public. Numerous data exist that could be analyzed to get a handle on this topic.

4) Signage stating the seals will bite when that is indeed highly unlikely without serious provocation.

**Enhanced Implementation Alternative (Proposed Action): The Proposed Action would result in implementation and continuation of activities identified in the Status Quo, as well as additional activities** to achieve more comprehensive Recovery Plan implementation.

These additional activities would include, but are not limited to:

**1. Vaccination studies (including potential vaccination);** The data regarding death to such items as Taxoplasmosis and other diseases should be examined. Just a cursory look at published material suggest that this is an issue that is being overblown. The number of deaths attribute to diseases picked up from dogs and feral cats appears to be insignificant. The fact that the seals are still here in the face of the interaction between dogs and cats for many, many years suggest this is not a problem.

**2. Aversive conditioning (e.g., the development of tools to modify undesirable seal behavior including interactions with humans or domestic animals);** There is little data to suggest that there are tangible problems with the interactions between seals and with humans or domestic animals. That posse a risk of extinction ... question the need for seal behavior medication when the real risk stems from the actions of humans directed toward the seal. The Navy's use of sonar would be a good example.

**3. Archipelago-wide translocation to improve juvenile survival; and** Moving juveniles that have not had the benefit of rearing within the seal community is replete with all sorts of problems.

**4. De-worming.**

.What is the level of problems with “worms?” Before deworming I would suggest the further collection od data and an effort to determine the nature of threat to the seal population.

The PEIS will assess the direct, indirect, and cumulative effects of implementing the alternative approaches for funding, undertaking, and permitting the management, research and enhancement activities on Hawaiian monk seals as well as other components of the marine ecosystem and human environment. **Anyone having relevant information they believe NMFS should consider in its analysis should provide a description of that information along with complete citations for supporting documents.**

Hawaiian Monk Seal Surfer Girl Hauls out south Lahaina

<http://www.youtube.com/watch?v=3jjJ6OY3oXY>

Monk Seal Interaction with Snorklers

<http://www.youtube.com/watch?v=JLUx-NzKnmc>

Monk Seal at Marine Sanctuary Fish Pond

<http://www.youtube.com/watch?v=EmWtcEY2D5k>

Molting Monk Seal RH 44

<http://www.youtube.com/watch?v=otxRgJpdKCU>

Hawaiian Monk Seal Skeleton

<http://www.youtube.com/watch?v=bPc3W0ORsJg>

Monk Seal RH44 Water Snoozing

<http://www.youtube.com/watch?v=P5gCd9Nn-4w>  
Monk Seals Haulout at Makena State Park

<http://www.youtube.com/watch?v=P5gCd9Nn-4w>  
Monk seal meets Surfer Dude

[http://www.youtube.com/watch?v=IFui0uezH\\_0](http://www.youtube.com/watch?v=IFui0uezH_0)  
Koki Hawaiian Monk Seal Sixty Three days old

<http://www.youtube.com/watch?v=a1lXY2Q4U8c>  
Koki Monk Seal Documentary Play List

[http://www.youtube.com/view\\_play\\_list?p=93D26377C99480E6](http://www.youtube.com/view_play_list?p=93D26377C99480E6)  
Koki Monk Seal 63 days in three minutes

[http://www.youtube.com/watch?v=lyZji\\_3yhjQ](http://www.youtube.com/watch?v=lyZji_3yhjQ)  
Koki Monk Seal 45 days old

<http://www.youtube.com/watch?v=OuWH4YhT7yc>  
Monk Seal Feeding

[http://www.youtube.com/view\\_play\\_list?p=76FA9E8C3A20EABC](http://www.youtube.com/view_play_list?p=76FA9E8C3A20EABC)  
Monk Seal Haulout January 25, 2008 Makena State Park

[http://www.youtube.com/view\\_play\\_list?p=6E872B52DD7921F1](http://www.youtube.com/view_play_list?p=6E872B52DD7921F1)  
Monk Seal Human Interaction (YouTube Playlist)

[http://www.youtube.com/view\\_play\\_list?p=BF5742FBEB4F7EFF](http://www.youtube.com/view_play_list?p=BF5742FBEB4F7EFF)  
Koki Hawaiian Monk SealPup (YouTube Playlist)

[http://www.youtube.com/view\\_play\\_list?p=4EFE75EC98A2B7](http://www.youtube.com/view_play_list?p=4EFE75EC98A2B7)  
Monk Seals and Human Interaction

[http://www.youtube.com/view\\_play\\_list?p=BF5742FBEB4F7EFF](http://www.youtube.com/view_play_list?p=BF5742FBEB4F7EFF)  
Website Koki Monk Seal Documentary

<http://drleisure.com/MonkSealKokiDocumentary.html>

#### Recommendations and Conclusion:

The role of NOAA -NMFS should be the collection and dissemination of information regarding the nature and status of the Monk Seal.

Data collection should be as non intrusive as possible. Techniques currently used are most invasive and are clearly causing adverse effects.

- 1) Telemetry devices on back impeded motion through the water. They snag on things such as fishing lines, nets, and other underwater obstructions. Some researchers (including myself) believe that deaths have resulted.
- 2) Removal of animals from their environment. The removal of young animals has a traumatic affect on the mother and the population. In the case of RO15 after the removal of her daughter she changed her birthing site. After seven pups on the Big Island she moved to Maui. After problems there she returned to a very remote inland location on the Big Island. Why?
- 3) The removal of KP2 from his mother may be based on the incorrect interpretation of nursing

behavior. Nevertheless the results were extremely detrimental to the creature. He developed cataracts which is quite common for marine creatures in confinement. He did not develop the socialization skills associated with his species because he lacked parental direction which is so apparent in the rearing process. (NOAA -MSFS apparently is not fully aware of this phenomena and suggest the relationship between pup and mother is very tenuous and limited before and after weaning. Video documentation by this author suggest a much different story.)

4) The current pro active outreach program built around cordoning off resting seals should be eliminated. It generates a tremendous amount of animosity toward seals. People spend big money to come to Hawaii and find their beach access interfered with. Locals are right, the seals are part of their natural environment and they understand their relationship with them.

Respectively submitted November 14, 2010

Dr. George R. Harker