

February 26, 2008

Senator Carol Fukunaga, Chair and Committee Members
Senate Committee on Economic Development & Taxation
Hawaii State Capitol
415 South Beretania St.
Honolulu, Hawaii 96813
senfukunaga@capitol.hawaii.gov

February 26, 2008 EDT Committee Hearing @ 1:25pm Room 224

Testimony in support of SB 2465 & SB 2464

SB 2465 Relating to the designation of 3rd Sat. April as “Hawaiian Monk Seal Day”
SB 2464 Relating to the designation of the Hawaiian Monk Seal, the State Mammal

Aloha Chair Fukunaga & Members of the Committee on Economic Development & Taxation:

My name is Keiko Bonk, and I am the Program Director for the Marine Conservation Biology Institute, Hawaii. MCBI is a non-profit conservation organization that protects ocean life through science and policy development.

Thank you very much for hearing HB’s 2625 and 2626, introduced by Senator Jill Tokuda, relating to naming the Hawaiian Monk Seal, Ilio-holo-kauaua or “Dog Running Through Rough Waters” the state mammal & dedicating the 3rd Saturday in April as an awareness day for this endemic species. The Hawaiian monk seal is a 13 million year old Hawaiian species in need of your help. This ancient Hawaiian mammal is in critical danger of going extinct. There are less than 1200 monk seals left in Hawaii and the population is rapidly declining. The reasons for the monk seal’s decline are numerous and most threats are related to human impacts:

1. Low survival rate of juveniles & sub-adults due to starvation
2. Entanglement of seals in marine debris
3. Predation of juvenile seals
4. Fishery interactions (over fishing)
5. Mother-pup disturbance on the beaches
6. Pupping beaches lost to erosion (climate change)
7. Potential disease outbreaks

I come here today to alert you to the plight of our Hawaiian seals. I hope you are motivated to take a step for the State of Hawaii to save this grand old creature. The monk seal thrived in our Hawaii home millions of years before our youngest islands were born, long before our species arrived. This mammal is worthy of respect and should be treated as an ancient “elder”. This animal is also an icon of the 21st century because its decline reflects man’s negligence and lack of respect for our natural world. I look forward to the day when we can redeem ourselves as a species by allowing this beautiful species and other endangered species the right to thrive without our assistance. But until that day this animal needs our day-to-day help.

This mammal lives both on Hawaii's land and sea and exemplifies all the wonder, beauty and environmental fragility of our archipelago. The seal a sympathetic "poster child" and would serve to develop the needed attention for all of Hawaii's endangered flora and fauna. This animal instills the charm of a faithful dog and human beings have been connected to dogs as part of our society for a thousands of years. Yes this animal emotes "cute and cuddly".

The Hawaiian Monk Seal was placed on the endangered species list in 1976. Last year, 31 years after these seals were officially designated a prioritized at-risk animal, the Federal Recovery Plan (attached Recovery Plan Summary) was signed. At this public signing last August, U.S. Senator Daniel Inouye endorsed this recovery plan and said he would do everything in his power to protect this animal and ensure generations of Hawaii's children the opportunity to live with healthy numbers of this magnificent Hawaiian mammal. Please take Senator Inouye's promise to heart and do the things necessary to make his vision a reality.

Presently, the State of Hawaii has no official monk seal program or a companion to the federal monk seal recovery plan. DAR incorporates seal response coordination into the State Humpback Whale Sanctuary Program. The State of Hawaii is presently not in compliance with the monk seal protection as required by state and federal Endangered Species and Marine Mammal laws. We need to begin to take responsibility for our natural world in Hawaii and start by caring for our wildlife.

Last year we unfortunately lost seal pups to net entanglements right here on the island of Oahu. A month ago we lost a female pup on Molokai. We need to develop the adequate response & public awareness to protect our seals or we will lose more seals in 2008. With less than 1200, we cannot afford to lose one more pup.

The NMFS Monk Seal Recovery Team met in Honolulu earlier this month. A dedicated group of scientists, policy makers and seal coordinators worked diligently on the implementation programs to save our seals. The science experts projected that if we do not start to take serious action to recover this seal, the population will decline faster in the next 5 years and once that happens, it will not look good for these mammals.

Your support for these 2 initiatives bring the awareness and education needed for residents and our visitors to respect and care for our Hawaiian Monk Seal. Please take this step to bring this species back to healthy numbers. Please take action and name the state mammal the Ilio-holo-kauaua, the Hawaiian Monk Seal. And please do not stop here, but do everything in your power to ensure that generations will live in harmony with this rare & sympathetic Hawaiian mammal.

Thank you for your time and consideration.

Aloha nui loa,
Keiko Bonk
808-734-4234; keiko.bonk@mcbi.org

The Hawaiian Monk Seal

Ilio-holo-ikauaua (*ee-lee-o holo ee ka ooa-ooa*) meaning 'dog running in rough water'
Scientific name: *Monachus schauinslandi*

About the Hawaiian Monk Seal:

Hawaiian monk seals are only found in the Hawaiian Islands, and are a very important piece of Hawaii's natural and cultural history. Hawaiian monk seals are the only tropical seal, the only marine mammal found entirely within US waters, and the best hope for the survival of monk seals on the planet. Caribbean monk seals were last seen in 1952, and the Mediterranean monk seal is on the verge of extinction. Most Hawaiian monk seals can be found around the Northwest Hawaiian Islands in the Papahānaumokuākea Marine National Monument, but seals are also found on the main Hawaiian Islands. In contrast to the rapidly declining monk seal populations in the NWHI, those on the main islands are doing well. A small, but growing number of seals, perhaps 100-150, now live in the main Hawaiian Islands.

Hawaiian monk seals have been around, virtually unchanged, for over 13 million years, longer than Hawaii Island, which is less than 1 million years old. Monk seals grow to be over 7ft long and can weigh more than 400 lbs. They mature at 5-10 years of age and can live for 25-30 years, although many new seal pups fail to reach adulthood. Hawaiian monk seals eat fish and invertebrates, including reef fish, flatfish, eels, octopus, and lobsters. Monk seals dive deep for their food, often to depths of 250-300ft, and sometimes deeper than 500ft.

Monk seals are not social, which is very unusual for seals. They generally stay well away from other seals and humans, and can become aggressive when they get too close or feel threatened. Monk seals, especially pregnant or nursing mothers, appear to be greatly agitated when they are disturbed by humans, so much so that they may abandon their pups.

The Decline of the Hawaiian Monk Seal:

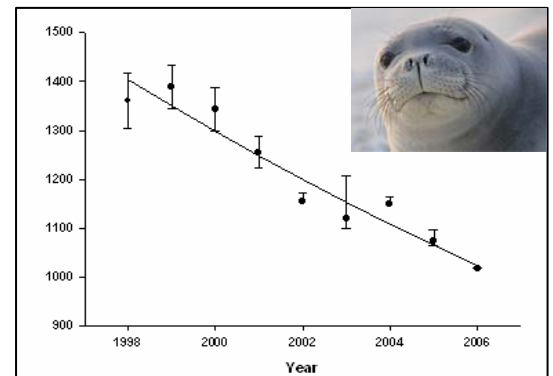
Hawaiian monk seals are the most endangered seal in the USA, and one of the most endangered marine mammals in the world. Over the last 50 years, the Hawaiian monk seal population has declined by more than 60% and is now at its lowest level in recorded history ~ 1,200 individuals. Since 1998 the total number of Hawaiian monk seals declined at an average annual rate of 3.9%. At this current rate of decline, the population size will slip below 1,000 animals in the next few years. With public support and effective state and federal management we will be able turn this situation around.

A number of human and environmental factors have contributed to the decline, including:

- **Habitat loss**
- **Shark predation**
- **Entanglement in marine debris**
- **Human disturbance**
- **Overfishing of lobster**
- **Reduction in food availability**
- **Harassment by male monk seals**
- **Injuries and deaths of pups**
- **Poisoning from harmful algal blooms**

Hawaiian Monk Seal Protection:

Hawaiian monk seals are protected by the Marine Mammal Protection Act and the Endangered Species Act, which listed the Hawaiian monk seal as endangered in 1976. A Hawaiian monk seal recovery team was established by NOAA to coordinate research and management activities for the seal's recovery. They released a new recovery plan that identifies actions that collectively could stabilize and eventually recover the species, including: improving female survival, reducing shark predation, captive care for injured or malnourished seals and seal pups, and removal of hazardous debris.

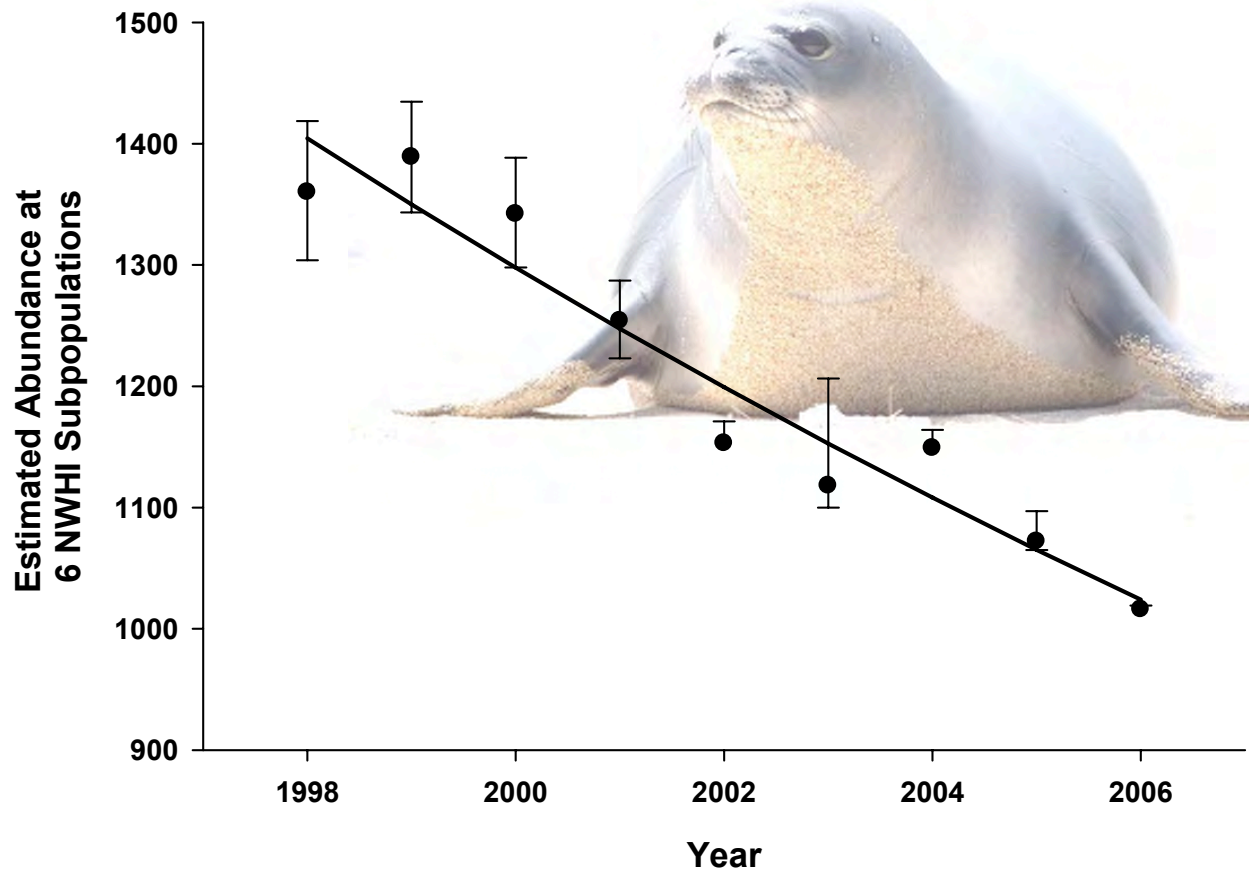


Decline in estimated abundance of Hawaiian monk seals at the six main NWHI colonies since 1998.



RECOVERY PLAN FOR THE HAWAIIAN MONK SEAL (*Monachus schauinslandi*)

REVISION



National Marine Fisheries Service
National Oceanic and Atmospheric Administration

August 2007

RECOVERY PLAN FOR THE HAWAIIAN MONK SEAL
(Monachus schauinslandi)

REVISION

Original Version: March 1983

Prepared by

National Marine Fisheries Service
National Oceanic and Atmospheric Administration

Approved: *William T. Hogarth*

William T. Hogarth, Ph.D.
Assistant Administrator for Fisheries
National Oceanic and Atmospheric Administration

Date August 22, 2007

EXECUTIVE SUMMARY

The Hawaiian monk seal (*Monachus schauinslandi*) is in crisis: the population is in a decline that has lasted 20 years and only around 1200 monk seals remain. Modeling predicts the species' population will fall below 1000 animals in the next five years. Like the extinct Caribbean monk seal and the critically endangered Mediterranean monk seal, the Hawaiian monk seal is headed to extinction if urgent action is not taken. Implementation of this plan, adequate resources, and improved coordination and cooperation provide hope that the species decline can be reversed.

For more than two decades, great effort has been made to manage, study, and recover the Hawaiian monk seal. However, actions to date have not been sufficient to result in a recovering population. The species status would undoubtedly have been worse but for these actions. Nonetheless, significant threats face this species:

- Very low survival of juveniles and sub-adults due to starvation (believed to be principally related to food limitation) has persisted for many years across much of the population
- Entanglement of seals in marine debris has and continues to result in significant levels of seal mortality
- Predation of juvenile seals by Galapagos sharks has significantly increased
- Human interactions in the Main Hawaiian Islands (MHI) including recreational fishery interactions, mother-pup disturbance on popular beaches, and exposure to disease
- Hawaiian monk seal haul-out and pupping beaches are being lost to erosion in the Northwest Hawaiian Islands (NWHI), and monk seal prey resources in the NWHI may have been reduced as a result of climate cycles and other factors
- Potential disease outbreaks could have a devastating effect due to small population size and limited geographic range

Due to low juvenile survival and an aging, breeding female population, there will not be sufficient replacement of breeding females, and birth rates subsequently will decline. This underscores the irony of past and current efforts to reduce these threats in that initial success may only slow a process of decline and even more actions will be required to reverse the decline and prevent the extinction of this species. Recovery of the Hawaiian monk seal depends upon a range of comprehensive actions detailed in this Recovery Plan, as well as the full participation and support of all federal, state and private stakeholders. These actions should be pursued aggressively to prevent the extinction of this species, and funding decisions should give highest priority to actions that will contribute directly to mitigating impacts and sources of mortality that reduce survival rates of Hawaiian monk seals, particularly females and juveniles.

In order to preserve the future reproductive potential for recovery, one of the highest priorities being pursued by NMFS is the development of a captive care program to nutritionally supplement juvenile female seals. The goal of the program will be to increase the survival of female seals during the critical juvenile life stages that are now experiencing low survival. This will likely be a combined effort of NMFS and animal care organizations. A workshop on the development of a 10-year captive care plan was held in June 2007. Without such efforts, the loss of young females will significantly decrease the recovery potential of the species, as there will not be enough females in the population.

CURRENT SPECIES STATUS: The Hawaiian monk seal was listed as an endangered species pursuant to the Endangered Species Act (ESA) on November 23, 1976 (41 FR 51611) and remains listed as endangered. The species has a recovery priority number of one, based on the high magnitude of threats, the high recovery potential, and the potential for economic conflicts while implementing recovery actions. Based on recent counts, the current population is approximately 1200 individuals. Since the publication of the last Recovery Plan for Hawaiian monk seals over two decades ago (Gilmartin, 1983), much has been done to reduce the impact of many of the most direct, and obvious, causes of decline. Nonetheless, the present total population of the species is small and declining. The population is already so small as to be in the range where there is concern about long-term maintenance of genetic diversity.

HABITAT REQUIREMENTS AND LIMITING FACTORS: The Hawaiian monk seal has the distinction of being the only endangered marine mammal whose entire species range – historical and current – lies within the United States (however the species has been sighted outside the U.S. Exclusive Economic Zone). The majority of the population of monk seals now lies in the NWHI with six main breeding sub-populations. The species is also found in lower numbers in MHI where the population size and range both appear to be expanding. The main terrestrial habitat requirements include: haul-out areas for pupping, nursing, molting, and resting. These are primarily sandy beaches, but virtually all substrates are used at various islands.

Monk seals also spend nearly two-thirds of their time in marine habitat. Monk seals are primarily benthic foragers (Goodman-Lowe 1998 et al.), and will search for food in a broad depth range up to 500 m and over different substrates (Parrish et al., 2000, 2002, in review). The food available in their marine habitat seems to be a limiting factor to population growth in the NWHI, with the greatest impact of food limitation being on the survival of juvenile and yearling seals, age of sexual maturity, and fecundity.

RECOVERY GOAL: The goal of this revised recovery plan is to assure the long-term viability of the Hawaiian monk seal in the wild, allowing initially for reclassification to threatened status and, ultimately, removal from the List of Endangered and Threatened Wildlife.

RECOVERY STRATEGY: While recommendations within this report are many and detailed, there are four key actions required to alter the trajectory of the Hawaiian monk seal population and to move the species towards recovery:

1. Improve the survivorship of females, particularly juveniles, in sub-populations of the NWHI. To do this requires the following:
 - maintaining and enhancing existing protection and conservation of habitat and prey base;
 - targeting research to better understand the factors that result in poor juvenile survival;
 - intervening where appropriate to ensure higher survival of juvenile and adult females;
 - continuing actions to protect females from individual and multiple male aggression and to prevent excessive shark predation; and

- continuing actions to remove marine debris and reduce mortality of seals due to entanglement.
- 2. Maintain the extensive field presence during the breeding season in the NWHI. Field presence is critical not just to the monitoring and research efforts, but also to carry out the active management and conservation of Hawaiian monk seal sub-populations in these areas.
- 3. Ensure the continued natural growth of the Hawaiian monk seal in the MHI by reducing threats including interactions with recreational fisheries, disturbance of mother-pup pairs, disturbance of hauled out seals, and exposure to human and domestic animal diseases. This should be accomplished with coordination of all federal, state, local and non-government parties, volunteer networks, and increased outreach and education in order to develop a culture of co-existence between humans and seals in the MHI.
- 4. Reduce the probability of the introduction of infectious diseases into the Hawaiian monk seal population.

RECOVERY CRITERIA: The population will be considered for a reclassification as “threatened” if all the following three conditions are met:

Downlisting Criteria:

1. aggregate numbers exceed 2,900 total individuals in the NWHI
2. at least 5 of the 6 main sub-population in the NWHI are above 100 individuals and the MHI population is above 500
3. survivorship of females in each subpopulation in the NWHI and in the MHI is high enough that, in conjunction with the birth rates in each subpopulation, the calculated population growth rate for each subpopulation is not negative.

Threats-based Criteria:

Factor A. Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Criteria: Measures are in place to manage human factors affecting food limitations, habitat loss and contaminants in the NWHIs. Management measures are also in place to a) minimize human disturbance of monk seals that haul-out on beaches in the MHI, and b) protect major monk seal haul-out habitat in the MHI.

Factor B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Criteria:

1. Procedures, including data collection and analyses, are in place to evaluate and ensure that scientific research on Hawaiian monk seals, including their

observation, handling, and instrumentation, will not cause significant adverse impacts on monk seal survival, behavior, or population growth.

2. Procedures are in place to ensure that any proposed NWHI operations that may increase seal disturbance or threaten survival will be reviewed and carefully scrutinized, and that all applicable laws protecting monk seals and their habitat have been used and enforced.
3. Management and permitting measures are in place to ensure that people, including scientists and research teams, visiting the Midway Islands or any other atoll in NWHI do not disturb monk seals or restrict their haul-out habitat in ways that could adversely affect monk seal survival, behavior, or population growth.

Factor C. Disease or Predation

Criteria:

1. Credible measures for minimizing the probability of introduction of diseases to any of the NWHI subpopulations, or the spread of diseases from the MHI to the NWHI, or importation of diseases that are not yet present in Hawaii are in place.
2. Contingency plans are in place to respond to a disease outbreak or introduction should this occur.
3. Research measures are in place to monitor population size, vital rates, and possible disease outbreaks or disease introductions, in all the subpopulations.
4. Management measures are in place to minimize shark predation and are demonstrably effective at maintaining predation sources at low enough levels to be consistent with continued meeting of the birth rate and survivorship criterion.

Factor D. Inadequacy of Existing Regulatory Mechanisms

Criteria: Measures are in place to manage fishery interactions and are demonstrably effective at reducing these threats and maintaining fishery-related sources of mortality or stress at decreasing or low levels that are consistent with continued meeting of the birth rate and survivorship criterion.

The principle, direct fishery interaction threat currently facing monk seals are MHI recreational fisheries, particularly gillnets and shore-cast gear, which are managed by the State of Hawaii and known to cause monk seal mortalities. Two monk seals drowned in recreational gillnets on Oahu within the past year. Gillnets will still be used in other areas, and enforcement of the new regulations will be important to ensure that the threat is actually reduced. There is a continuing need for intervention for Hawaiian monk seals in the MHI to remove embedded hooks from recreational fishing; however this effort does not remedy the interaction problem itself. More management measures and enforcement of those measures are needed to ensure that this serious threat is reduced.

Factor E. Other Natural or Manmade Factors Affecting Its Continued Existence

Criteria:

1. Management measures are in place to control male aggression, entanglement, biotoxins, and other sources of human-caused mortality or stress. These measures are demonstrably effective at maintaining these threats at low enough

levels to be consistent with continued meeting of the birth rate and survivorship criterion.

2. The causes of the anthropogenic threats to the species are clearly identified and are well-enough understood to be controlled or mitigated, and any newly identified threats are controlled adequately before downlisting.

Delisting Criteria:

The population will be considered for a delisting if the downlisting criteria continue to be met for 20 consecutive years without new crucial or serious threats being identified.

ACTIONS NEEDED: The following 14 categories of actions are necessary for the recovery of the Hawaiian monk seal:

1. Investigate and mitigate factors affecting food limitation
2. Prevent entanglements of monk seals
3. Reduce shark predation on monk seals
4. Minimize the risk of exposure to or spread of infectious disease
5. Conserve Hawaiian monk seal habitat
6. Reduce Hawaiian monk seal interactions with fisheries
7. Reduce male aggression toward pups/immature seals and adult females
8. Reduce the likelihood and impact of human interactions
9. Investigate and develop response to biotoxin impacts
10. Reduce impacts from compromised and grounded vessels
11. Reduce the impacts of contaminants
12. Continue population monitoring and research
13. Create and implement a main Hawaiian Islands Hawaiian Monk Seal Management Plan
14. Implement the Recovery Plan for the Hawaiian Monk Seal

Estimated Cost of Five-Year Recovery Efforts (in thousands):

	FY 01	FY 02	FY 03	FY 04	FY 05	Subtotal	Total
Crucial Threats							
1. Food limitation	1,920	1,900	1,900	1,900	1,900	9,520	
2. Entanglement	1,260	1,260	1,260	1,260	1,260	6,300	
3. Shark predation	300	300	300	300	300	1,500	
Subtotal - Crucial Threats							17,320
Serious Threats							
4. Infectious diseases	605	585	585	585	585	2,945	
5. Habitat loss	250	50	50	0	0	350	
6. Fishery interaction	200	200	200	200	200	1,000	
7. Male aggression*	*	*	*	*	*	0	
8. Human disturbance	800	800	800	800	800	4,000	
Subtotal - Serious Threats							8,295
Moderate Threats							
9. Biotoxins	250	125	125	75	75	650	
10. Vessel groundings	0	0	0	0	0	0	
11. Contaminants	50	0	0	0	0	50	
Subtotal - Moderate Threats							700
* All included in other costs							
Essential Long-term Recovery Actions							
12. Monitoring & Research	1,550	1,600	1,650	1,550	1,550	7,900	
13. MHI Management Plan	200	200	150	150	150	850	
14. Implement Recovery Plan	170	170	170	170	170	850	
Subtotal - Essential Long-term Recovery Actions							9,600
TOTAL ALL ACTIONS	7,555	7,190	7,190	6,990	6,990	35,915	35,915

ESTIMATED COST OF RECOVERY (FIRST 5 FISCAL YEARS): \$35,915,000

ANTICIPATED DATE OF RECOVERY: The time to recovery is not predictable with the current information, but the best case scenario (which is extremely improbable given recent trends) is that the population could grow to the stipulated total population size in the NWHI within 12 years, and the stipulated numbers in the MHI could be reached within 34 years. Provided that the threats-based criteria have also been met, this would elevate the population to a “threatened” classification. The population may be considered “recovered” if the downlisting criteria continue to be met for 20 consecutive years. Therefore, the total time to recovery is anticipated to be 54 years. The Total Estimated Cost of Recovery can be calculated by multiplying the estimated cost of FY 05 (\$6,990) for the next 49 years. Then add that sum to the estimated cost for the first five fiscal years (in Table above). Realistically, the population is not expected to recover in the foreseeable future. In the future, if more is learned about the causes for the current continuing decline, it should be possible to make more informative projections about the time to recovery, and its expense.

TOTAL ESTIMATED COST OF RECOVERY (54 YEARS): \$378,425,000