

**GERALD W. WINEGRAD**  
*1328 Washington Drive*  
*Annapolis, MD 21403*

February 15, 2011

Mr. Carlton Morris, FWS Project Manager  
U.S. Fish and Wildlife Service, Division of Engineering  
911 NE 11th Avenue  
Portland, Oregon 97232

Re: Engineering Evaluation/Cost Analysis (EE/CA) for Removal of Lead-based Paint from Structures  
and Lead-contaminated Soil from Midway Atoll National Wildlife Refuge

Dear Mr. Morris:

These comments are submitted on the above captioned matter in hopes that they will help expedite the long-overdue removal of lead paint from Sand Island at Midway Atoll National Wildlife Refuge, part of Papahānaumokuākea Marine National Monument. I commend DOI on finally mapping out a robust game plan to resolve this threat to albatrosses and petrels and potentially to the endangered Laysan Duck, but would urge a much prompter completion of the remediation.

**INTRODUCTION.**

By way of introduction, I am an attorney and a Professor of Public Policy at the University of Maryland where I teach graduate courses in wildlife management and Chesapeake Bay restoration that I have authored. I have 40 years of experience in wildlife conservation at the state, national and international levels. I have worked for conservation NGOs since 1969 (National Wildlife Federation) and was Vice President of Policy for American Bird Conservancy from 1995-2008 and worked with Dr. Finkelstein as her supervisor in a post-doc fellowship at ABC in 2004-2005. Beginning in 2004, Myra and I met numerous times with Interior officials, including the Deputy Secretary of Interior, the Chief of Refuges for the FWS, and the General Counsel for the President's CEQ to urge expedited action on Midway lead paint remediation.

I also have spent a week on Midway and observed firsthand the issues at Sand Island. Midway is a remarkable place with a spectacular array of wildlife and I still have wonderful memories of this near paradise for birds and other critters. My wife and I volunteered to pull *verbena* and do nest counts of Red-tailed Tropicbirds. We were constantly surrounded by Laysan and Black-footed Albatrosses as Midway hosts the world's largest nesting colonies of these birds, a large percentage of their global population. It saddens us greatly to know of the long-term poisoning of these Laysan Albatrosses in a paradise despoiled by humans.

## **TIME FOR REMEDIATION LONG OVERDUE.**

The Department of Interior has known since at least 1987 that Laysan Albatross chicks were being poisoned by lead paint on Sand Island. See Sileo, L. and S.I. Fefer, *Paint Chip Poisoning of Laysan Albatross at Midway Atoll*, *Journal of Wildlife Disease*, 23(3):432-437 (1987). This is before Midway was designated a NWR and six years before the Navy announced plans to close Midway and nine years before Interior accepted the transfer of Midway from the Navy.

Laysan Albatross chicks eat peeling lead paint chips directly from 90 aging U.S. Navy structures and 5 old trans-Pacific cable buildings. They also eat the paint chips in the sand immediately surrounding the buildings.

Dr. Myra Finkelstein's research on Sand Island documented that Laysan chicks raised in nests close (< 5 meters) to these old buildings have extremely high elevated levels of blood lead concentrations, averaging 440 µg/dL, compared to an average blood lead of 6 µg/dL in chicks nesting greater than 100 meters from buildings. Laysan Albatross adults on Sand Island had an average blood lead level of 1 µg/dL, which could be considered the background (or normal) blood lead levels for this species. The Center for Disease Control's blood lead level of concern for children is 10 µg/dL and children with blood lead levels greater than 35 µg/dL receive clinical treatment for lead poisoning. Blood lead values greater than 100 µg/dL have been shown to cause encephalopathy and death in both humans and animals. Dr. Finkelstein estimated that the lead poisoning of Laysan Albatross chicks on Sand Island is affecting as many as 10,000 chicks a year with acute levels of lead levels in their blood (average = 85 µg/dL) enough to cause immunological, neurological and renal impairment, thus decreasing their chances of survival. See Finkelstein, M. E.; Gwiazda, R. H.; Smith, D. R. *Environ Sci Technol* (2003), 37, 3256-3260 and Finkelstein, M.; Nakagawa, M.; Sievert, P.; Klavitter, J.; Doak D.F. *Animal Conservation* (2010), 13, 148-156

An estimated one thousand Laysan Albatross chicks a year that nest within five meters of building structures exhibit a condition of peripheral neuropathy referred to as "droopwing". Droopwing manifests itself in the chicks' inability to raise their wings, which commonly drag on the ground resulting in broken bones and open sores. Chicks with droopwing will never be able to fly; hence all will die of starvation or dehydration. This is in addition to the Laysan Albatross chicks that suffer significant other detrimental effects from lead exposure (immunological, neurological and renal impairment).

More recently, U.S. FWS biologists concluded in the December 2009 Midway Ecological Risk Assessment that "Lead paint that is peeling from the buildings and the lead contaminated soil is affecting approximately 6,674 Laysan Albatross chicks each year. This number indicates approximately 1.5% of Midway's chicks are affected annually (Klavitter 2004)."

Dr. Myra Finkelstein and her co-authors, including John Klavitter the Midway Atoll NWR Manager, in late 2009 published *Assessment of demographic risk factors and management priorities: impacts on juveniles substantially affect population viability of a long-lived seabird* in a peer-reviewed journal and found that "for Laysan albatross that breed on Sand Island up to 7% of chicks on Sand Island fail to fledge as a result of lead poisoning, which will create a 16% reduction in the Laysan albatross population size (190,000 less birds) at 50 years into the future. We demonstrate how straightforward

management actions that increase juvenile survivorship (e.g. removal of lead-based paint) can help slow population declines..."

In releasing the EE/CA Tom Edgerton, Superintendent of the Papahānaumokuākea Marine National Monument, was quoted as saying: "Unfortunately, lead-based paint was used on most of the buildings, and high levels of lead-based paint are still found on buildings and in soil surrounding them. This poses an unnecessary risk to the refuges Laysan albatross colony, with as many as 10,000 chicks, or up to 3 percent of the hatchlings, dying from lead poisoning each year."

And yet Interior proposes to take six years or more to accomplish the necessary remediation.

The principal Refuge management objective on Midway's land "is to enhance the quality of habitat for the full diversity of nesting seabird species." This objective is being violated by the failure to remediate the lead paint in a timely fashion.

Interior officials, including attorneys and biologists, were offered the opportunity by the Navy to have any and all buildings torn down and removed from Midway before the turnover of Midway to Interior but Interior inexplicably decided to allow 95 structures with lead paint issues to remain when there were plans to use only some of these structures, 36 at present. All people concerned with this issue acknowledge that the preferred solution is to completely tear down and remove the 59 structures that Interior has no intent to use and that they present continuing threats to human and wildlife health and safety. After their removal, all lead paint would be removed from the 36 other structures, the structures would be encapsulated, and the soil around these 95 building would be removed to a depth that assures a safe level to a level no more than the proposed cleanup level of 75 mg/kg for lead in the soil. The only justification given for not doing this is cost, with an earlier DOI estimate at \$55 million.

Given the egregious error DOI made in accepting all 95 lead-based paint contaminated buildings from the Navy, and given the clear documentation of significant Laysan Albatross lead poisoning from the buildings and surrounding soils, DOI should have corrected these errors long ago by remediating the lead paint problem. Bonin Petrels also are affected by lead poisoning and ESA-listed Laysan Ducks could be as well.

The Midway Ecological Risk Assessment published in December 2009 by the U.S. FWS found that: "Based on the findings of this PA/SI, the FWS concludes that hazardous substances have been released, as defined in Section 101 (22) of CERCLA, and there is a substantial threat of ongoing and future releases into the environment at Midway Atoll that pose an imminent and substantial threat to the public health or welfare or the environment and a removal action is appropriate to address the lead contamination."

Despite this substantial threat of ongoing and future releases into the environment at Midway Atoll that poses an imminent and substantial threat to the public health and welfare, the DOI preferred alternative and other alternatives propose to take six years to end this imminent and substantial threat to the public health and welfare. Indicative of the delay is how Interior has delayed the publication of the draft EE/CA for months, potentially setting back remediation efforts even further. That Interior would continue to allow the poisoning of trust resources for at least six more years in a National Wildlife Refuge in a Marine National Monument is not acceptable and is contrary to our nation's most

important wildlife conservation laws, including the Migratory Bird Treaty Act (MBTA) and the Endangered Species Act (ESA). Taking so long also violates a core Refuge management objective to enhance the quality of habitat for the full diversity of nesting seabird species.

### **SPECIFIC COMMENTS ON EE/CA QUERIES.**

DOI seeks comments on the entire EE/CA and specifically asks for comments on these three items:

1. The proposed cleanup level of 75 mg/kg for lead in soil (Appendix C, Streamlined Risk Evaluation in Midway EE/CA Report).
2. Schedule and cleanup priorities as the FWS will not be able to address the entire site in the first year of cleanup.
3. The removal of historic buildings in Decision Unit 1 and Decision Unit 2 (Sections 8.1 and 8.2 in Midway EE/CA Report).

I will attempt to address each of these starting in reverse order:

#### *\*The removal of historic buildings in Decision Unit 1 and Decision Unit 2.*

Again, the ideal would be to remove all 59 of the structures that are not and will not be used by the U.S. FWS. This would be the preferred alternative. Absent that, DOI should act to immediately take down and remove the crumbling lead-contaminated buildings in Units 1 and 2. The old cable buildings are wooden structures more than 100 years old and have deteriorated badly. They should be the first to come down and the soil remediated around them as many albatrosses have been poisoned around them. These buildings currently are not of historic merit in their very poor deteriorated condition.

Unit 2 consist of the 70-year old Marine barrack buildings and these also have deteriorated badly and should be immediately taken down and removed. There are high levels of lead-contamination on and around these buildings, too. Adding to this urgency is that the EE/CA rates Units 1, 2, and 6 as having the greatest adverse impact to wildlife of all the 9 units.

While I live in the historic city of Annapolis and am sensitive to historical concerns, the buildings in Units 1 and 2 are so badly deteriorated to have little historic merit and would cost many millions of dollars to rebuild. **TEAR THEM DOWN NOW!** I say this as a veteran of the U.S. Navy having served from 1970-1974 on active duty and having reached the rank of Commander in the Reserves as a JAG. My father was an enlisted man in the U.S. Navy serving on destroyers in WWII.

#### *\*Schedule and cleanup priorities as the FWS will not be able to address the entire site in the first year of cleanup.*

The six year phase of remediation is the major flaw in the EE/CA. After many years in delaying comprehensive remediation, DOI needs to act much more quickly to prevent the imminent and substantial threat to the public health and welfare these buildings and their surrounding soils present to wildlife and potentially human resources.

As noted above, DOI has known for decades about the lead paint poisoning of trust resources and Dr. Finkelstein's research documented without equivocation the source of the lead contamination from the extant buildings. Dr. Finkelstein and I, along with other conservation group NGOs, have pressed

ranking DOI officials since 2004 to act expeditiously to remediate the lead paint problem and even had contact with then First Lady Laura Bush who visited Midway and was aware of the problem. She promised action on the problem back in 2007, nearly four years ago.

In a Washington Post story dated December 18, 2006 (attached) on Lead Poisoning of Midway Albatrosses, the Post story reported this: "The Interior Department estimates it will cost \$5.6 million to clean up the atoll....'Incrementally, over the next several years, we believe we can take care of the problem' said Marshall Jones, deputy director of the U.S. Fish and Wildlife Service."

More than four years have passed since Deputy Director's comments and the problem is still severe and presenting an imminent and substantial threat to the public health and welfare. I suggest that the total removal of the buildings suggested in Units 1 and 2 under Alternative 3 be accomplished this year along with the buildings in Unit 6 under the preferred alternative as well having all lead contaminated soil removed that is above the 75 mg/kg level.

I fully realize that there is a small window to do the work when the albatrosses are off Sand Island in the late July or early August to October period, but these remediation actions need to be expedited.

I further suggest that the remainder of the buildings' surrounding soil be removed down to the 75 mg/kg level and that the soil be removed to such a depth so as not to have to use a membrane in Units 1, 6, and 9. These membranes will deteriorate over time and will lead to eventual contamination of trust resources again. Previous efforts to place polyethylene matting/tarps and snow fencing around 15 buildings has not prevented lead poisoning in the chicks, and chicks have been observed with droopwing on the matting. Some seabirds have been snagged on the tarps and fences and have been injured or died as a result. All soils around all units that exceed the 75 mg/kg should be removed at the radius where the chicks have access.

The continued allowance by Interior of lead paint "takes" of Laysan Albatrosses and contamination of Bonin Petrels is a direct violation of the MBTA and the ESA involving the Laysan Duck as this latter species has been observed around the contaminated buildings in several of the highest priority Units. I again urge that all Units be remediated in two years under alternative three.

*\*The proposed cleanup level of 75 mg/kg for lead in soil (Appendix C, Streamlined Risk Evaluation in Midway EE/CA Report).*

This level appears to be satisfactory based on studies, standards for lead contamination, and my discussions with toxicologists. However, it is important that all soils be removed around all nine Units until these levels are met and no membranes be used. The clean-up level should be accomplished wherever the albatross chicks may have access to the soils during their nesting. The EE/CA reports that studies have shown that lead levels in the soil around affected buildings can be as high as 9,300 ppm.

#### **SPECIFIC COMMENTS ON OTHER ISSUES.**

*\*IDEAL WOULD BE TO REMOVE ALL 59 LEAD CONTAMINATED BUILDINGS NOT IN USE OR THAT WILL NOT BE USED.*

As mentioned above, this should be the preferred alternative and should be done if possible. Unfortunately only the structures in Units 1, 6, and 8 are proposed to be removed but others should be as well.

**\*REMOVE ALL LEAD CONTAMINATED SOIL AROUND ALL STRUCTURES IN THE NINE UNITS TO A LEVEL OF NO MORE THAN 75 mg/kg.**

As mentioned above, membranes should not be used in lieu of contaminated soil removal and the removal should be at both sufficient depth and sufficient radius from the structures to achieve the 75 mg/kg level.

**\*ALL LEAD PAINT SHOULD BE REMOVED FROM ALL 95 STRUCTURES AND ALL STRUCTURES IN THE 9 UNITS.**

The EE/CA mentions that 25 structures have been encapsulated with lead paint abated. Unfortunately, many have not had all the lead paint removed. For example, nine officers' quarters buildings did not have all lead paint removed and do to the warm, tropical marine environment will be peeling again unless constantly maintained. The best solution is to remove all lead paint from the exterior of all structures. If it is not possible to take down buildings or where it is not feasible to remove all the lead, funds must be set aside and strict guidelines promulgated to assure that these buildings with lead paint remaining will have proper maintenance/encapsulation on a regular schedule.

**\* SUPPORT THE ON-SITE DISPOSAL OF THE DEMOLITION DEBRIS AND SOIL USING EX-SITU SOIL STABILIZATION METHODS (USE OF PORTLAND CEMENT-TYPE MIXTURE TO SOLIDIFY SOILS IN A CONCRETE MONOLITH) IN THE CONSOLIDATION UNIT.**

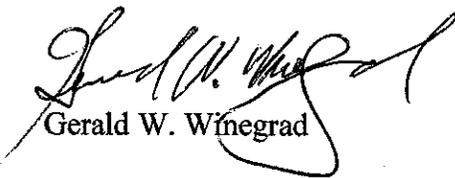
I fully support the planned on site disposal of debris and soil with lead paint in the R2 concrete lined consolidation unit and the stabilization with Portland cement. I have observed the old concrete lined water reservoir (R2) and think it is a sound disposal practice to place the materials there.

**\*MORE STUDIES ON BONIN PETRELS AND NEW BLOOD STUDY NEED TO BE DONE ON LAYSAN DUCK.**

The EE/CA notes that there are elevated lead blood levels for some Bonin Petrels and that no checks have been made on Laysan Ducks (ESA-Endangered) even though they have been seen around highly lead contaminated structures and soils. These studies need to be done.

Thank you for this opportunity to comment and for the EE/CA that finally sets a course—albeit over too long a period—for remediating this problem that is leading to the deaths of as many as 10,000 Laysan Albatrosses, the lead poisoning of an unknown number of Bonin Petrels, and the possible lead poisoning of Laysan Ducks. By expediting the remediation, DOI could help fulfill the principal refuge management objective on Midway's land "to enhance the quality of habitat for the full diversity of nesting seabird species."

Respectfully Submitted,

  
Gerald W. Winegrad