



# United States Department of the Interior



U.S. FISH AND WILDLIFE SERVICE  
Midway Atoll National Wildlife Refuge  
Battle of Midway National Memorial  
P.O. Box 50167  
Honolulu, HI 96850  
808-792-9480, fax: 808-792-9583

In Reply Refer To:

October 2, 2015  
**Sent by Email**

Gerry Davis  
Assistant Regional Administrator  
Habitat Conservation Division  
NOAA, National Marine Fisheries Service  
Pacific Islands Regional Office  
NOAA Inouye Regional Center  
1845 Wasp Blvd., Building 176  
Honolulu, HI 96818

Dear Mr. Davis:

At the request of the U.S. Fish and Wildlife Service (FWS), your office conducted an Essential Fish Habitat (EFH) consultation for a project to repair a 75' section of the seawall contiguous with Henderson Field at Midway Atoll National Wildlife Refuge. The project was successfully conducted in April 2014 with on-going monitoring of transplanted coral. At that time, NMFS reviewed the results of the biological survey conducted by a FWS Ecological Services biologist on August 8, 2013, and provided conservation recommendations to ensure that any adverse effects as a result of the project to coral reef resources and EFH at Midway Atoll are avoided, minimized or offset. The results of the consultation were communicated to the FWS via a letter from you on October 9, 2013.

I request additional Essential Fish Habitat (EFH) consultation with your office regarding compliance activities related to the issuance of a Programmatic US Army Corps of Engineers (USACE) Clean Water Act permit for the future repair of a 5,700 linear foot section of the seawall near and contiguous with the Runway Safety Area of Henderson Field at Midway Atoll National Wildlife Refuge. The project description is attached. The previous repair falls within this proposed project area and the aim of the project is to provide for a programmatic approach to compliance and permitting of seawall repairs as the FWS and FAA are able to implement them. As before, the Refuge is conducting this project in cooperation with the Federal Aviation Administration (FAA) under the advisement of the USACE and FWS Ecological Services and your office and the Refuge will be the lead for consultations, compliance with federal laws and any other interagency coordination. A FWS Ecological Services biologist is expected to conduct another survey of the entire 5,700 seawall and provide conservation recommendations as before.

I appreciate the support and assistance your staff has already provided and look forward to

continued collaboration. Please contact me at (808) 954-4818 or [Daniel\\_clark@fws.gov](mailto:Daniel_clark@fws.gov) should you have any questions about the project.

Yours in service,

Dan Clark, Refuge Manager  
Midway Atoll National Wildlife Refuge  
Battle of Midway National Memorial

## References

- Garrison, V.H. and Ward, G. 2012. Storm-generated coral fragments – a viable source of transplants for reef rehabilitation. *Biological Conservation*, 141(12): 3089-3100.
- Hogson, G. 1990. Sediment and the settlement of larvae of the reef coral *Pocillopora damicornis*. *Coral Reefs*, 9: 41-43.
- Piniak, G.A. and Brown, E.K. 2008. Growth and mortality of coral transplants (*Pocillopora damicornis*) along a range of sediment influence in Maui, Hawai'i. *Pacific Science*, 62(1): 39-55.
- Richmond, R.H. 1987. Energetics, competency, and long-distance dispersal of planula larvae of the coral *Pocillopora damicornis*. *Mar. Biol.*, 93: 527-533.
- Veron, J.E.N. 2000. *Corals of the World*.
- Ward, S. 1995. The effect of damage on the growth, reproduction and storage of lipids in the scleractinian coral *Pocillopora damicornis* (Linnaeus). *Ecology*, 187(2): 193-206.
- Yap, H.T., Aliño, P.M., Gomez, E.D. 1992. Trends in growth and mortality of three coral species (Anthozoa: Scleractinia), including effects of transplantation. *Mar. Ecol. Prog. Ser.*, 83: 91-101.
- Zakai, D., Levy, O., and Chadwick-Furman, N.E. 2000. Experimental fragmentation reduces sexual reproduction output by the reef-building coral *Pocillopora damicornis*. *Coral Reefs*, 19: 185-188.



**United States Department of the Interior**  
**FISH AND WILDLIFE SERVICE**  
**Midway Atoll National Wildlife Refuge**  
**Battle of Midway National Memorial**  
**1082 Makepono St.**  
**Honolulu, HI. 96819**



April 28, 2017

Mr. Gerry Davis  
Assistant Regional Administrator  
Habitat Conservation Division  
NMFS Pacific Islands Regional Office  
1845 Wasp Blvd., Building 176  
Honolulu, HI 96818

RE: Request to Initiate Essential Fish Habitat Programmatic Consultation for the Seawall Repairs Along Henderson Airfield, Midway Atoll

Dear Mr. Davis:

The purpose of this letter is to initiate an Essential Fish Habitat consultation under Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act. The U.S. Fish and Wildlife Service (Service) and the Federal Aviation Administration (FAA) propose to conduct repairs as needed along a 5,720-foot-long seawall located on Midway Atoll's Sand Island. The action is needed because the existing seawall, constructed in 1957-58, is aging and failing. Repairs would be made by replacing damaged sheet pile with armor rock revetment. Revetments would consist of large (2- to 3-foot diameter) armor rock placed over smaller rocks. Construction materials would be brought to the Refuge from existing quarries on the Pacific Coast, Alaska and/or Hawai'i.

Along with this request letter, additional documentation have been sent that provide greater detail on the proposed action, the resources in the project area, and the mitigation measures that the Service and the FAA are proposing to avoid/minimize the impacts from this project, these include: the Environmental Assessment Seawall Long Term Maintenance Project, the Biological Assessment Seawall Long Term Maintenance Project, Appendix A Description of Proposed Action, Appendix B Implementation Plan, and the Midway Seawall Coral Mitigation Plan.

#### Action Area

The action area is the seawall that protects Henderson Airfield runway, the inner harbor of Sand Island within Midway Atoll; and the waters between Honolulu, HI and the lagoon at Midway Atoll National Wildlife Refuge (also designated as the Battle of Midway National Memorial) which is part of the Papahānaumokuākea Marine National Monument (Monument). The Refuge is managed by the National Wildlife Refuge System, while the Monument is managed cooperatively by four Co-Trustees: the Service, the National Oceanic and Atmospheric Administration, the State of Hawaii, and the Office of Hawaiian Affairs.

#### Proposed Action

This consultation would cover the as needed repairs of the approximately 5,720 feet of the south seawall on Midway Atoll, and the transport and staging of materials and equipment needed to complete the

repairs. Materials would include rock of various sizes that would be transported from Honolulu to Midway Atoll. Repairs would take place on an annual cycle (when funding allows) between mid-August and October to avoid important nesting times for migratory birds. Repairs would consist of removing damaged sheet pile and replacing it with an armor rock revetment that would consist of three layers:

- A shallow trench that would be excavated to 1-foot depth and filled with granular fill. A geotextile fabric may be placed over this layer to keep the smaller sediment in place;
- An approximately 2-foot thick layer of medium size rock weighing around 150 pounds each; and
- An approximately 4-foot thick layer of armor rock weighing around 1,500 pounds each.

Construction materials would be transported from quarries on the Pacific Coast, Alaska, and/or Hawaii. As part of the proposed action, construction materials may be brought to the Refuge well in advance of actual repair actions to take advantage of favorable weather conditions or reduced bird populations. Upon arrival at Midway, the materials would be offloaded by excavator or front-end loaders and would be stacked at the staging area adjacent to the inner harbor for future use. All stockpile areas would be on existing paved surfaces, and all haul routes would be along existing roads, runway access routes or previously cleared areas along the seawall. All construction would be done from land. Existing seawall structure and materials would be removed as needed, but in most cases, the revetment would be placed on top of existing materials and fill using an excavator arm or crane bucket.

To minimize and avoid impacts to EFH, the Service would abide by the following Monument Best Management Practices (BMPs) while conducting the proposed activities:

- Construction materials or sediments should not be stockpiled in the marine environment.
- Construction-related materials should be placed or stored in ways to avoid or minimize disturbance to marine resources.
- All construction-related materials and equipment to be placed in the water should be cleaned of pollutants prior to use. When in service, if pollutants are found to be leaking from any equipment, that piece of equipment should be removed from service until the cause of the leak has been fixed.
- All manmade construction debris would be collected and not allowed to enter waters of the U.S.
- All debris removed from the seawall construction site would be disposed of at an approved upland site.
- If debris or spill material accidentally enters the waterway, immediate actions would be taken to remove the material and proper entities notified.
- Care would be taken in all work to prevent debris, oils, and grease from entering the water.
- Turbidity and siltation from the removal of existing sheet piles would be minimized and confined to the immediate vicinity of the removal and discharge through the use of effective silt containment devices (e.g., silt curtains) and the curtailment of debris removal during adverse sea conditions.
- Fueling of construction related equipment shall occur away from the seawall construction site at a designated location with the ability to handle an accidental spill.
- Contractor would follow protocol in the existing Spill Prevention, Control and Countermeasures Plan for Service, prepared in 2004 and last updated in 2009 (GeoEngineers, Inc).
- A contingency plan to control the accidental spills of petroleum products at the construction site shall be developed. Absorbent pads and containment booms would be stored on-site to facilitate the cleanup of petroleum spills.
- A contingency plan to respond to previously unknown hazardous materials discovered during construction shall be developed. The plan shall include specific chain of communication and steps to contain and/or remove and dispose of hazardous materials.

Over time the entire 5,720 feet of the seawall would be replaced, this would result in a permanent loss of 6.6 acres (287,500 square feet) of EHF. Repairs would be made as needed to protect Refuge resources, with particular emphasis on protecting Henderson Airfield runway. The most likely repair scenarios would be to repair 1,000 linear feet of seawall over the ten-year period covered by this programmatic, resulting in a total footprint of 1.15 acres (50,100 square feet).

A biological marine assessment along the side of the seawall was done by the Pacific Islands Fish and Wildlife Office (PIFWO) from April 20-22, 2016. The evaluation consisted on a series of random 25 m transect surveys (26) along the length of the seawall performed by PIFWO biologists. Due to the sheet pile seawall design, the surveys were split between collecting data on the vertical and horizontal components, with 8 sheet pile surveys performed (vertical), 14 natural benthic surveys performed (horizontal) and 4 artificial surface benthic surveys performed (horizontal). Data on coral was collected on all 26 surveys, while data on fish was collected only on the horizontal surveys.

A total of 9 species were observed in the surveys, with only four species observed in the benthic transects, while all nine were found on the sheet pile surveys. Ten of the surveys (all benthic) did not contain any corals. A total of 373 colonies were recorded, with the most common species being *Pocillopora meandrina*, *P. damicornis* and *P. ligulata*.

#### Conclusion

The Service and the FAA plan to make as needed repairs to the seawall that fronts Henderson Airfield on Midway Atoll. Over time the entire length of the seawall (5,720 feet) will be replaced, but repairs would be done on an as needed basis, when funds are available. Even though repairs along the entire length of the seawall may take decades, the Service is requesting a consultation that will cover the entire length of the seawall in order to consider the cumulative impacts that will occur from replacing the failing sheet pile.

The replacement of the sheet piles with a rock wall revetment, will result in a loss of 6.6 acres of EFH. But, the Service has determined that replacing the current sheet pile with the rock wall revetment will result in fill that will be an improvement over the current sand bottom since the rock will serve as a better surface for recruitment of corals (as indicated by the lack of corals seen in the benthic surveys), and will also provide more structure for fish to aggregate on. The potential of coral mortalities that will have to be relocated will be the most likely other impact. Because of these impacts, the Service has determined that the proposed repairs to the seawall along Henderson Airfield will adversely affect EFH.

To reduce the impacts to EFH, the Service proposes several BMPs and protocols, including relocating the coral colonies found in the project area and using a silt current to reduce sedimentation, as detailed in the supporting documents accompanying this letter. In addition to the mitigation measures described, the Service will be happy to meet to discuss other mitigation measures as deemed appropriate by the NMFS.

Please contact me should you have further questions or concerns.

**ROBERT PEYTON** Digitally signed by ROBERT PEYTON  
Date: 2017.04.28 16:27:11 -11'00'

Robert L. Peyton  
Refuge Manager



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL MARINE FISHERIES SERVICE**  
Pacific Islands Regional Office  
1845 Wasp Blvd., Bldg 176  
Honolulu, Hawaii 96818  
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Mr. Robert L. Peyton  
Refuge Manager  
Midway Atoll National Wildlife Refuge  
U.S. Fish and Wildlife Service

August 21, 2017

Dear Mr. Peyton:

The Habitat Conservation Division of the National Oceanic Atmospheric Administration's National Marine Fisheries (NMFS) Pacific Islands Regional Office has received a request for consultation under the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), from the U.S. Fish and Wildlife Service (USFWS) as the lead agency in partnership with the Federal Aviation Authority (FAA). The USFWS requested that their proposed activities be reviewed as a programmatic EFH consultation that would cover the repairs of the seawall along the airstrip at Henderson Airfield, Midway Atoll within the Papahānaumokuākea Marine National Monument (hereinafter Monument) that are anticipated for the next 10 years. The USFWS has determined that the proposed repairs to the seawall along Henderson Airfield will adversely affect EFH. NMFS agrees with the USFWS determination and agrees to conduct a programmatic EFH consultation, as described in Title 50 CFR 600.920(j), since it will: (1) cover a large number of like and repetitive activities in the same geographic area; (2) sufficient information is available to address all reasonably foreseeable adverse effects on EFH; and (3) is the most efficient and effective way of completing an EFH consultation for the proposed activities. NMFS appreciates that USFWS has coordinated closely to shape their proposed activities to avoid, minimize and offset or otherwise mitigate adverse effects to EFH to the greatest extent possible.

The proposed activities include repair of the approximately 5,720 feet of the south seawall on Midway Atoll, and the transport and staging of materials and equipment needed to complete the repairs. These activities are fully described by the USFWS in the following documents submitted to NMFS: the *Environmental Assessment Seawall Long Term Maintenance Project*, and the *Biological Assessment Seawall Long Term Maintenance Project*, and Appendices which include the *Description of the Proposed Activities* and the *Implementation Plan*, and the *Midway Seawall Coral Mitigation Plan*. These documents, together with the conservation recommendations provided in this letter and the USFWS response to those conservation recommendations to follow (which suitably provides justification for deviation from those conservation recommendation) as well as all relevant communications, will comprise the programmatic consultation record which satisfies the Federal agency consultation and response requirements of section 305(b)(2) and 305(b)(4)(B) of the MSA, and the EFH conservation recommendation requirement of section 305(b)(4)(A).



In addition to the Magnuson-Stevens Act (50 C.F.R. § 600.905 - 930), we offer the following comments also in accordance with the National Environmental Policy Act (42 U.S.C. § 4321 et seq.), the Coral Reef Executive Order 13089, and the Clean Water Act (33 U.S.C. §1251 et seq.).

## **Project Summary**

Construction materials would include rock of various sizes that would be transported from Honolulu to Midway Atoll. Repairs would take place on an annual cycle (as funding allows) between mid-August and October to avoid important nesting times for migratory birds. Repairs would consist of removing damaged sheet pile and replacing it with an armor rock revetment that would consist of three layers:

- A shallow trench that would be excavated to 1-foot depth and filled with granular fill. A geotextile fabric may be placed over this layer to keep the smaller sediment in place.
- An approximately 2-foot thick layer of medium size rock weighing around 150 pounds each.
- An approximately 4-foot thick layer of armor rock weighing around 1,500 pounds each.

Construction materials would be transported from quarries on the Pacific Coast, Alaska, and/or Hawaii. These materials may be brought to the Refuge well in advance of actual repair activities to take advantage of favorable weather conditions or reduced bird populations. Upon arrival at Midway Atoll, construction materials would be offloaded from the barge by excavator or front-end loader and moved by truck to a designated stockpile area near the work site via routes specified by Refuge staff. All stockpile areas would be on existing paved surfaces. All haul routes would be on existing roads, runway access routes, or previously cleared/disturbed areas along the seawall. Construction materials may require storage on Sand Island for several weeks or even months prior to construction, depending on construction windows established to protect birds and on the logistics of getting materials and crews to the island. If barged early, the rock and other construction materials would be loaded onto trucks and driven to a temporary stockpile area void of any environmental concerns.

## **Magnuson-Stevens Act**

Pursuant to the Magnuson-Stevens Act, the Secretary of Commerce, through NMFS, is responsible for the preservation and management of fishery resources found off the coasts of the United States (16 U.S.C. 1801 et seq.). Section 1855(b)(2) of the Magnuson-Stevens Act requires federal agencies to consult with NMFS, with respect to "any activities authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH identified under this Act." The statute defines EFH as "those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity" (16 U.S.C. § 1802(10)).

Adverse effects to EFH are defined further as "any impact that reduces the quality and/or quantity of EFH," and may include "site-specific or habitat-wide impacts, including individual, cumulative or synergistic consequences of activities" (50 C.F.R. § 600.810(a)). The consultation process allows NMFS to make a determination of the project's effects on EFH and provide conservation recommendations to the lead agency on activities that would adversely affect such habitat (16 U.S.C. § 1855(b)(4)(A)).

## **Essential Fish Habitat**

The marine water column and seafloor in the proposed project area is designated as EFH and supports various life stages for the Management Unit Species (MUS) identified under the Western Pacific Regional Fishery Management Council's Pelagic and Hawaii Archipelago Fishery Ecosystem Plans (FEPs). The MUS and life stages that may be found in these waters include: eggs, larvae, juveniles and adults of Coral

Reef Ecosystem MUS; eggs, larvae, juveniles and adults of Bottomfish MUS; eggs, larvae, juveniles and adults of Crustacean MUS; and juveniles and adults of Pelagic MUS.

A review of the documents submitted indicated that a biological marine resource assessment was conducted for the seawall portion of the project and was done by the USFWS Pacific Islands Fish and Wildlife Office (PIFWO) from April 20-22, 2016. The benthic resources were sub-sampled along 26 randomly placed 25 meter transect surveys. The surveys quantified benthic communities on both vertical and horizontal surfaces; surveys included the following: 8 vertical sheet pile surveys, 14 natural bottom surveys, and four artificial bottom surveys. Fish communities were quantified only on the horizontal surveys.

A total of nine coral species were observed in the surveys; four coral species were observed along the bottom transects, while all nine were found on the sheet pile surveys. Ten of the bottom surveys did not contain any corals. A total of 373 colonies were recorded; the most common species was *Pocillopora meandrina* (41 % of all colonies), followed by *P. damicornis* (39%) and *P. ligulata* (11 %). Almost half of the colonies (44 %) were less than 10 centimeters (cm) measured by the longest colony axis, 28 % were in the 10 – 20 cm, 27 % were 20 – 40 cm, and only 1 % of the colonies were greater than 40 cm in diameter. The majority (72 %) of the coral colonies that were greater than 20 cm were *P. meandrina*. Of the colonies found in the surveys, nearly 10 % showed signs of partial mortality.

A total of 39 reef fish species were recorded during the 18 benthic surveys. The species observed in the highest densities were *Acanthurus leucoparietus*, *A. triostegus*, *Neoniphon samara*, *Kuhlia xenura*, *Kyphosus* spp., and *Mulloidichthys flavolineatus*. Biomass was highest for the mixed *Kyphosus* spp. at 129.4 kg/ha and *Mulloidichthys falvolineatus* at 127.9 kg/ha.

### **EFH Determination**

If the entire seawall (5,720 linear feet) is replaced, there would be 6.6 acres (287,500 square feet) of benthic habitat unavoidably lost. However, as indicated by the FWS, it is more likely that only 1,000 linear feet of seawall will be repaired, during the period covered by this programmatic resulting in 1.15 acres (50,100 square feet) of benthic habitat lost. The completion of all repairs along the entire 5,720 feet of the seawall will also result in the displacement of approximately 2,500,000 gallons of marine water, but the most likely amount of water that would be displaced over the 10 year period covered by this programmatic would be approximately 500,000 gallons.

The construction of the seawall, along with other construction-related activities, will result in increased sedimentation and degradation of the nearshore marine environment, including the permanent loss of coral colonies that cannot be moved or die after relocation. To minimize this loss, sediment control measures (such as installing sediment curtains and working during low tides) would be implemented that will limit the impacts to environment to the immediate construction area, while the losses of corals and other benthic organisms will be minimized by an effort to relocate those colonies which can be moved that would otherwise be lost from building the rock wall.

The seafloor that would be permanently lost from the construction of the rock wall is currently sand bottom or a sand veneer on top of hard pavement. The benthic surveys showed that these areas are marginal habitats, with ten of the fourteen bottom surveys having no coral colonies. While the rock wall would result in the loss of 6.6 acres of EFH, and a loss of habitat diversity due to the removal of corals; the rock wall that will replace the current sand bottom will provide more suitable substrate for coral larvae to colonize, and will provide more structure for MUS species to aggregate on. This net benefit should happen almost immediately, and will serve as suitable habitat for many years.

There is the possibility of contaminants from the equipment used in the construction of the rock wall, fuel or oil from an accidental spill, or debris and construction materials being released into the marine environment. These contaminants or materials could result in mortalities of corals or at the very least in reduced fitness and damage. Adherence to the BMPs and NMFS provided conservation recommendations (such as installing silt curtains and requiring spill response materials on site), will allow for an immediate response to any release of contaminants and contain them to the immediate spill area, while other measures will also contain any debris to the immediate construction area and thereby minimize any potential debris-related impacts.

Other measures that will be implemented to avoid or minimize impacts to EFH include: performing all work from land and stopping all construction activities during the times of peak coral spawning. In order to quantify all losses from the construction, the FWS will perform regular monitoring of the corals that would have to be relocated (and report on those that could not be moved), and to undertake suitable actions to offset any losses that occur.

Even with the proper implementation of the BMPs and protocols listed below, due to the scope of the work to be carried out, there will be a permanent loss of EFH from the portions of the rock wall that will extend into the marine environment; potential coral loss due to relocation from the project area, due to sedimentation from the project activities; and from the potential for increased runoff of sediments and pollutants into the marine environment related to project activities and staging of equipment and materials needed for the repairs. NMFS has determined that the proposed activities will adversely affect EFH. We provide the following Essential Fish Habitat Conservation Recommendations aimed at avoiding/minimizing and offsetting these impacts.

### **EFH Conservation Recommendations**

1. The USFWS must fully implement, and ensure all contractors fully implement, the following conservation measures identified in the consultation record:
  - a. Minimize the amount of in-water work (e.g., buildout the rock revetment and underlying support layers from land).
  - b. Minimize project footprint to protect the marine environment.
  - c. Construction will be conducted entirely from land-based equipment to minimize disturbance of the marine environment. A barge will not be present at the project site in order to avoid further disturbance to marine species.
  - d. Relocate, prior to the start of construction, the coral and macroinvertebrates present within the project area that will be damaged by construction (both in the direct fill footprint and adjacent to this, if appropriate) to an area that would not be disturbed (i.e., not alongside unrepaired sections of the seawall or other areas likely to be disturbed at some point in the future).
  - e. A contingency plan to control the accidental spills of petroleum products at the construction site shall be developed. Absorbent pads and containment booms will be stored on-site to facilitate the cleanup of petroleum spills.
  - f. All manmade construction debris will be collected and not allowed to enter waters of the U.S.
  - g. All debris removed from the seawall construction site will be disposed of at an approved upland site.
  - h. All debris or spill material will be properly disposed of at an approved off-site disposal facility.
  - i. All equipment shall be checked daily for leaks and any necessary repairs made prior to commencement of work.
  - j. Turbidity and siltation from the removal of existing sheet piles will be minimized and confined to the immediate vicinity through the use of effective silt containment devices (e.g., silt curtains) and the curtailment of debris removal during adverse sea conditions.

- k. Fueling of construction related equipment shall occur away from the seawall construction site at a designated location with the ability to handle an accidental spill on Sand Island.
  - l. Post-construction, provide information on the species, size and the total amount of any corals impacted from the salvage operations.
2. The USFWS must adhere to the *Implementation Plan, and the Midway Seawall Coral Mitigation Plan*, specifically with respect to coral relocation methodology and ensure the post-repair monitoring is completed. If the USFWS is unable to meet the monitoring and reporting requirements with its staff for any reason, the EFH consultation must be reinitiated and work must stop until an alternative approach to meeting the outstanding requirements has been proposed and agreed to by NMFS.
  3. Unavoidable losses of sensitive and hard to replace EFH resources, including corals and seagrass must be offset. The USFWS must propose a suitable offset that is approved by NMFS prior to the initiation of any repairs.
  4. The USFWS should include surveys of the rock wall revetments as part of the survey and monitoring effort of those corals that were relocated, and quantify the changes to the benthic community in order to justify the expected offset for unavoidable loss of water column volume and bottom EFH.
  5. Conduct work at low and/or slack tide to minimize impacts from sedimentation and runoff.
  6. Stop work during peak hard coral spawning periods, including two weeks prior and after.
  7. The USFWS should submit an annual report to NMFS describing the number of activities undertaken under the auspices of the programmatic, along with an update on surveys and monitoring efforts that were required during the year.
  8. All work should be done during daylight hours to ensure that all mitigation measures put into place can be monitored for effectiveness, and to allow for monitoring and control of sediment that is being produced from the construction.
  9. The USFWS should use stones that made of the same (limestone) or similar material to the island in order to mimic natural conditions.

Please be advised that regulations (Section 305(b)(4)(B)) to implement the EFH provisions of the Magnuson-Stevens Act require that Federal activities agencies provide a written response to this letter within 30 days of its receipt and at least 10 days prior to final approval of the activities. A preliminary response is acceptable if final activities cannot be completed within 30 days. The final response must include a description of measures to be required to avoid, mitigate, or offset the adverse impacts of the activity. If the response is inconsistent with our EFH Conservation Recommendations, an explanation of the reason for not implementing the recommendations must be provided.

## **Conclusion**

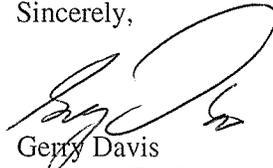
After reviewing the supporting documents for repairs to the 5,720 feet of the seawall along Henderson Airfield and the staging and transport of materials for these repairs, the NMFS Habitat Conservation Division for the Pacific Islands Regional Office has determined that this project will adversely affect EFH due to the likely loss of corals from relocation and sedimentation. The USFWS has proposed several BMPs and protocols that will avoid/mitigate impacts to EFH; to further avoid/mitigate the loss of EFH, NMFS provides the Conservation Recommendations above.

In order to satisfy the conditions of the programmatic consultation in place for the repairs to the Henderson Airfield seawall, the USFWS will be required to submit an annual report (to include information on any required surveys and monitoring efforts) on every action taken under this consultation in a timely manner. A failure to submit the required annual report, or to perform the required monitoring and surveys, or to find alternative means of having the required monitoring done will result in suspension of the programmatic consultation while the USFWS and NMFS enter into discussions on how to address the situation.

Since this programmatic consultation, and the actions covered under it, will likely be performed over several years (if not decades); the USFWS must consider that changing conditions may require the agency to modify certain aspects of each action carried out under this programmatic. The NMFS must be notified (prior to any action being undertaken) of any such changes to project scope or methods, so that our agency can provide additional mitigation measures (if necessary) in order to avoid, minimize, or offset EFH losses.

If you have any questions or comments regarding our recommendations please feel free to contact Richard Hall ([richard.hall@noaa.gov](mailto:richard.hall@noaa.gov)) or Ian Lundgren ([ian.lundgren@noaa.gov](mailto:ian.lundgren@noaa.gov)).

Sincerely,



Gerry Davis  
Assistant Regional Administrator  
Habitat Conservation Division

cc: Mark Harris, USFWS  
Gordon Wong, FAA  
Bob Peyton, USFWS/Refuges  
Nadiera McCarthy, USFWS/ES  
Justin Rivera, NOAA/NOS  
Brenna Hughes, PND Engineers