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wearesouthmaui - Fwd: Suggestions for the South Maui Community Plan?

From: Mark Deakos <deakos@hawaii.edu>
To: <wearesouthmaui@mauicounty.gov>
Date: 1/9/2023 9:57 PM
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Attached is a response letter from National Marine Fisheries (NMFS) in response to DLNR's request for comments on their Small Scale Beach Replenishment Program. The letter outlines in detail the many concerns about both long-term and permanent impacts of beach replenishment projects on essential fish habitats.

Best,

Mark

U.S. DEPARTMENT OF COMMERCE
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Mr. Samuel Lemmo
Administrator
Office of Conservation and Coastal Lands Kalanimoku Building
1151 Punchbowl St., Room 131
Honolulu, HI 96813

August 20, 2019

Dear Mr. Lemmo:

On July 23, 2019, NMFS, Pacific Islands Regional Office (PIRO) received your request for comments and technical assistance on the Draft Programmatic Environmental Assessment for the Statewide Small Scale Beach Restoration program (SSBR). Below is our technical assistance intended to help your permit-applicants comply with the essential fish habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA; Section 305(b)(2) as described by 50 CFR 600.920) as well as the Fish and Wildlife Coordination Act (FWCA), which will be required as part of the U.S. Army Corps of Engineers (USACE), Honolulu District, Regulatory Branch's permitting process. NMFS is concerned that while certain aspects of the proposed permitting process may be streamlined through the SSBR program, there will likely still be a need for individual EFH consultations. In general, PIRO believes that based on the Draft EA, individual projects administered through the proposed SSBR would necessitate individual EFH consultation and in many cases compensation or offset for adverse effects to habitat. This outcome is of course highly dependent on the particular details of a project including scale, location, surrounding habitat, and type of action. We describe our concerns and provide preliminary recommendations intended to help you provide your clients with the best possible compliance package to PIRO.

This technical assistance does not fulfill any federal responsibilities and does not constitute an EFH consultation as EFH consultations, which are mandatory for federal agencies (e.g, USACE) when the proposed activities could reduce the quality or quantity of designated EFH (50 CFR 600.920). Compliance with the EFH provisions of the MSA can be achieved through completing individual EFH consultations with NMFS or in conjunction with other regulatory compliance processes such as the Fish and Wildlife Coordination Act (FWCA, 16 U.S.C. 661-666c).

PIRO Habitat Mandates

Magnuson Stevens Fishery Conservation and Management Act

A consultation with NMFS is required when a federal agency works in an area that will adversely affect EFH (i.e. the federal agency is directly conducting the work, funding work, or permitting work) (MSA; Section 305(b)(2) as described by 50 CFR 600.920). The EFH consultation process entails the federal action agency contacting NMFS and providing an EFH assessment, which contains key information: a description of the proposed action, a determination from the federal agency as to how the action will affect EFH, an assessment of those adverse effects, and proposed ways to mitigate for the adverse effects, if applicable. An adverse effect to EFH is anything that reduces the quality and or quality of EFH. It may include direct, indirect, and site specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of an action. NMFS will then review the assessment and may provide conservation recommendations to avoid, minimize, or offset the listed adverse effects to EFH.

EFH consultations are scalable and commensurate to the severity and type of adverse effects to EFH. The greater the adverse effect, the greater scrutiny is needed to make a determination. As the order of effect increases, qualitative, semi-quantitative, and quantitative EFH assessments are appropriate, sequentially. Often, when EFH resources need to be quantified, PIRO will provide notice as to why an "expanded" EFH consultation is necessary (50 CFR 600.920(h)(i)), unless pre-consultation and/or sufficient avoidance and minimization has been presented along with quantification of unavoidable losses. Although we have provided you and your permit-Applicants with our most recent EFH Draft Consultation Guidance document to assist with the EFH consultation process, below we provide detail specific to your proposal that should be included within an EFH assessment for beach nourishment consultations.

In the main Hawaiian Islands, EFH has been designated in the marine water column from the surface to a depth of 1,000 meters (m), from the shoreline to the outer boundary of the Exclusive Economic Zone (5,150 kilometers/200 nautical miles/230 miles), and the seafloor from the shoreline out to a depth of 700 m. These waters and submerged lands are designated as EFH because they support various life stages for the management unit species (MUS) identified under the Western Pacific Regional Fishery Management Council's, *Pelagic and Hawai'i Archipelago Fishery Ecosystem Plan* (hereafter, Hawai'i FEP). The MUS and life stages found in these waters include: eggs, larvae, juveniles, and adults of Bottomfish MUS; eggs, larvae, juveniles, and adults of Crustacean MUS; and eggs, larvae, juveniles, and adults of Pelagic MUS. Specific types of habitat considered as EFH include coral reefs, patch reefs, hard substrate, seagrass beds, soft substrate, artificial or man-made structures, mangrove, lagoon, estuarine, surge zone, deep-slope terraces and pelagic/open ocean. In addition, the Hawai'i FEP has designated various areas within the Hawai'i Archipelago as Habitat Areas of Particular Concern[1] for providing functions of ecological importance, and being a rare habitat type that is sensitive to human-induced environmental degradation and development activities.

Federal agencies may incorporate an EFH Assessment (EFHA) into documents prepared for other purposes, such as Endangered Species Act Biological Assessments, National Environmental Policy Act documents, or public notices. If an EFHA is contained in another document, it must still include all of the mandatory contents required by the EFH guidelines. It must also be clearly

[1] https://www.habitat.noaa.gov/protection/efh/efhmapper/

identified in the table of contents and text of the document as an EFHA. Alternatively, an EFH Assessment may incorporate by reference other relevant environmental assessment documents that have already been completed. The referenced document must be provided to NMFS with the EFHA.

The EFHA process can also be combined with existing environmental consultation and review processes. The EFH guidelines at 50 CFR 600.920(f) enable Federal action agencies to use existing consultation or environmental review procedures to satisfy the MSA consultation requirements if the procedures meet the following criteria: 1) the existing process must provide NMFS with timely notification of actions that may adversely affect EFH; 2) notification must include an assessment of the proposed action's impacts on EFH that meet the requirements for EFHA discussed in section 600.920(e); and 3) NMFS must have made a finding pursuant to section 600.920(f)(3) that the existing process satisfies the requirements of section 305(b)(2) of the MSA. For the purposes of the beach nourishment programmatic process, the EFHA should be integrated with the Fish and Wildlife Coordination Act (FWCA; see below) coordination process. In situations where a Federal action may adversely designated EFH for Federally managed fisheries, EFH Conservation Recommendations can be considered within the FWCA reporting recommendations.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA, 16 U.S.C. 661-666c) mandates that wildlife, including fish, receive equal consideration and be coordinated with other aspects of water resource development. This is accomplished through consultation with NMFS, the U.S. Fish and Wildlife Service (USFWS), and appropriate state agencies whenever any body of water is proposed to be modified in any way and a Federal permit or license is required. These agencies determine the possible harm to fish and wildlife resources, the measures needed to both prevent the damage to and loss of these resources, and the measures needed to develop and improve the resources, in connection with water resource development. NMFS, the USFWS, and state agencies submit comments to Federal licensing and permitting agencies on the potential harm to living marine resources caused by the proposed water development project, and recommendations to prevent harm (NMFS 2004). In all, the FWCA compliance process includes the following four steps: consultation (notice of initiation); reporting (e.g., field surveys and summary reports) and recommendations to protect, mitigate, and restore natural resources; Action agency consideration of recommendations, and Action agency implementation of recommendations.

Project Description

The Department of Land and Natural Resources (DLNR) wishes to re-authorize and extend the Small Scale Beach Nourishment (SSBN) program to create a Small Scale Beach Restoration (SSBR) program through a streamlined and coordinated state regulatory process. The purpose of the SSBR program is to provide an approach that will allow for the implementation of coastal erosion control projects that will result in ecosystem restoration and improved public beach access while maintaining Hawaii's visitor-based economy. The program would streamline five permits or authorizations in the permit process including those from the Office of Conservation and Coastal Lands (OCCL), State Historic Preservation Division (SHPD), U.S. Army Corps of Engineers (USACE), State of Hawaii Coastal Zone Management Office (CZM), and the Department of Health (DOH).

Projects in the proposed SSBR program are divided into three categories: 1) beach management operations include sand pushing, backpassing, and bypassing, 2) beach maintenance operations including the recovery, transport, and placement of beach compatible fill to maintain the character and functionality of the beach, and 3) beach stabilization structures (e.g., groins) used to stabilize sand within a littoral cell. Projects permitted under the program are limited to the placement of 10,000 cubic yards of beach compatible sand. It is estimated that 30 to 40 SSBR projects will be permitted over the first five years of the program, which equates to about eight projects per year.

NMFS Concerns

NMFS is concerned that while certain aspects of the proposed permitting process may be streamlined through the SSBR program, there will likely still be a need for individual EFH consultations. Considering the anticipated increase in the number and frequency of beach restoration projects, the information needs for consultation could become a bottleneck if they are not adequately addressed before NMFS involvement. Specifically, NMFS is concerned that there are several technical aspects of beach restoration projects not currently being considered: 1) increase in the need for quantitative resource survey assessments and 2) consideration of the full suite of stressors that may cause adverse effects to EFH. Below we provide details related to these concerns and guidance on how these issues can be resolved through early coordination. In addition, we provide an Enclosure at the end of this letter with specific avoidance and minimization measures that would be applicable to permit applicants.

Quantitative Resource Survey Assessments

Project applicants are responsible for providing sufficient resource survey information or benthic habitat maps. Applicants should conduct preliminary, quantitative benthic marine survey assessments of the entire project footprint area within the littoral cell—hard and soft bottom, groin footprints, between groins, offshore of the groins, where sediment models predict deposition (see below), along or nearby sand pipeline pathways, and nearby the sand borrow areas—before an EFH consultation is initiated. The level of complexity of surveys will scale proportionally with the extent of habitat forming EFH resources (e.g., corals and submerged aquatic vegetation) that may suffer adverse effects (i.e., direct, indirect, and cumulative). Surveys and modeling efforts should consider the impacts of climate change, for example increased storm activity and sea level rise, on beach restoration and on the resources.

Contingencies should be designed to accommodate analyses that utilize greater replication and higher statistical power to avoid the need to obtain higher resolution data. Post-action monitoring plans would reduce uncertainty during potential EFH offset determinations. Assessments should be commensurate with the scale of the potential adverse effects as increasing the specificity and resolution of the scientific and natural resources information available will reduce uncertainty of adverse effects and support to EFH determinations. NMFS can provide assistance to Applicants to further refine and clarify the types and complexity of survey information that will be needed.

Sediment Modeling: Depending on the extent of resources present within or near a beach nourishment footprint, modelling may be needed to predict how the proposed projects, including those with groins, will influence sediment transport and water motion. The modelling effort should include and consider the following areas: the groin footprints, between the groins, offshore of the groins, along or nearby sand pipeline pathways, and nearby the sand borrow areas. If there is a

high probability that sediment deposition will occur over sensitive and hard-to-replace hard-bottom habitat, corals, and seagrass, these areas should be prioritized survey areas both before and after construction. Completing these modelling efforts and including them in the EFH assessment would help reduce uncertainty and better inform EFH conservation recommendations and any offset determinations.

Sediment Testing: Information about sediment chemistry, nutrient content, and other chemical characterization would be needed both on bulk samples (i.e., all size fractions) and within each size fraction or sediment class (e.g., mud, silt, fine sand, sand, etc.). This is needed because smaller size fractions that include silt and mud classes typically retain higher organic carbon content and are more detrimental to habitat forming EFH than those sediment types with larger sizes. This information should also be included in the EFH assessment to inform conservation recommendations and potential offset determinations.

Water Quality Monitoring: Robust water quality monitoring (e.g., turbidity, sedimentation rates, nutrients, dissolved oxygen, etc.) is needed to assess conditions before (i.e., baseline), during, and after beach restoration activities. These activities should be informed by the sediment modeling and daily tide and current velocity predictions (https://www.pacioos.hawaii.edu/voyager/) to select sampling. Special attention should be placed on collected turbidity and sedimentation rate information at areas where there are habitat forming EFH resources, including corals and submerged aquatic vegetation. For other criteria needed for beach restoration projects, NMFS would defer to the requirements of the Environmental Protection Agency (EPA) delegated through the state of Hawaii, Department of Health, Clean Water Branch's (DOH), 401 Water Quality Certification (WQC), Applicable Monitoring and Assessment Plans (AMAP).

Stressor Effects

NMFS is concerned that there are a variety of adverse effects from stressors on EFH that have not been fully considered in the Draft EA. Short-term, long-term to permanent, and cumulative adverse effects to EFH are likely to occur from beach restoration projects due to physical damage, sedimentation and turbidity, and nutrients and chemical contamination.

Physical Damage: Direct contact to habitat forming EFH resources (e.g., corals and submerged aquatic vegetation) from construction equipment and materials, as well as from installation activities, can lead to permanent and lesser adverse effects. The level of these adverse effects (i.e., short-term, long-term to permanent, and cumulative) will vary on a case-by-case basis dependent on the density and extent of EFH resources present and the dredge and/or sediment retention design that are chosen. For example, the 2012 Waikiki Beach Nourishment and Dredging Project resulted in physical damage to the fossil limestone reef rock bordering sand borrow areas that were dredged (*Draft EA*, Section 4.2.2.3). In addition, recent projects in Waikiki have chosen to use a geotextile material to construct a sandbag groin. The long-term durability of this material is currently unknown and therefore carries a possibility of becoming compromised and potentially posing a risk to surrounding EFH. Due to this stressor, a variety of measures to avoid and minimize physical damage to EFH may be needed to reduce unavoidable losses.

Sedimentation and Turbidity: Short-term, long-term to permanent, and cumulative adverse effects to habitat forming EFH may occur due to sedimentation and turbidity during proposed

beach nourishment projects. Sedimentation and turbidity from hopper dredging at borrow areas may occur due to disruption from drag arms and heads and unmitigated overdredge disposal of fine sediment classes; land-based beach filling activities, after-the-fact from micritic calcium carbonate leaching from beach fill, and resuspension from groins is they alter local hydrodynamics.

Nutrients and Chemical Contamination: Adverse effects may occur during dredging from borrow areas and after beach fill is placed due to release of sediment-bound nutrients and chemical contaminants; the latter may also occur from leaking construction equipment and introduction of treated materials into the marine environment, including lumber during multiple types of beach restoration projects.

Conclusion

We greatly appreciate your early EFH coordination and the opportunity to provide comments on your Draft EA. In summary, we expect that proposed beach nourishment projects will have short-term, long-term to permanent, and cumulative adverse effects to EFH. Due to these anticipated effects, we anticipate some projects will entail compensation or offset through individual EFH consultation. NMFS is concerned that there are multiple aspects of the EFH consultation that are not currently addressed in the Draft EA. First that these individual EFH consultations will necessitate an increased level of information and monitoring data to be included in the EFH assessment and that there are potential stressors to EFH that have not been so far addressed. We have described the stressor impacts to EFH from your proposed activities; and provided guidance on the EFH consultation process, content to include in an EFHA, and avoidance and minimization recommendations by stressor-type (see the Enclosure).

For all questions related to consultations with us in the future, please contact us through the email address: EFHESAconsult@noaa.gov.

Sincerely,

Gerry Davis
Assistant Regional Administrator
Habitat Conservation Division

cc by e-mail:
Stuart Goldberg, NMFS
Malia Chow, NMFS

Enclosure

Recommended Avoidance and Minimization Measures
Below is a list of avoidance and minimization measures that your permit-Applicant's could anticipate to include in their potential EFH Assessments during EFH consultation.

Physical Damage

1. Restrict all physical contact with the bottom to unconsolidated sediments devoid of coral and seagrass.
2. Work platforms should be selected based on the following preferential hierarchy:
    a. conduct all work from land;
    b. use a barge with auto-positioning systems where thrusters will not cause increased turbidity;
    c. anchor barges to (1) shoreline infrastructure; (2) nearby existing moorings; (3) anchors or spuds in/on sand only (as possible, have SCUBA divers lay anchors by hand in sand areas).
3. Prior to mobilizing, ensure all construction equipment, ballast, and vessel hulls do not pose a risk of introducing new invasive species and will not increase abundance of those invasive species present at the project location.
4. Minimize physical contact by divers and construction related tools, equipment, and materials with live benthic organisms, regardless of size, especially corals and seagrass.
5. Prevent trash and debris from entering the marine environment through the use of nets or barriers.
6. Relocate infrastructure materials (e.g., riprap, piles, boulders) that are colonized with benthic communities according to an approved relocation plan[2]. If infrastructure materials (e.g. riprap, piles, boulders) that are colonized with benthic communities will be removed or destroyed as part of permitted activities, relocate these materials to an appropriate receiving site.
7. Have a qualified marine biologist identify and relocate hard corals that would be otherwise lost to project activities and which can be logistically moved according to an approved relocation plan[3].
8. Ensure that new structures minimize shading impacts to marine habitats. Incorporate measures that increase the ambient light transmission under structures. Some of these measures include: maximizing the height of the structure and minimizing the width of the structure to decrease shade footprint; grated decking material; using the fewest number of pilings necessary to support the structures to allow light into under-pier areas and minimize impacts to the substrate; and aligning the boardwalk in a north-south orientation for the path of the sun to cross perpendicular to the length of the structure and reduce the duration of shading
9. Perform pre-deployment reconnaissance (e.g., divers, drop cameras) to ensure that all anchors are set on hard or sandy bottom devoid of corals and seagrass and that chosen anchor locations

[2] Approved plans must ensure corals are moved to adjacent area(s) with similar habitat conditions, onto suitable substrates, using reliable attachment methods, in similar orientations. Monitoring is not required.
[3] Approved plans must ensure corals are moved to adjacent area(s) with similar habitat conditions, onto suitable substrates, using reliable attachment methods, in similar orientations; and corals must be monitored for success (more frequently at the beginning, and for a duration of no less than 2 years). To provide accountability reference corals or a reference reef site should also be monitored concurrently to compare observed changes.

take into consideration damage that could occur from the anchor chain if the vessel swings due to currents or tides.
10. Require a long-term maintenance plan for gear, instrumentation, and equipment to prevent failures that lead to permanent adverse effects to EFH (e.g., vessel groundings).
11. Ensure structures are properly weighted to prevent movement from currents or waves and implement a maintenance plan to ensure integrity over time.
12. Lower utility lines or cables and maneuver the placement in a controlled manner using SCUBA in order to avoid all coral resources, when practicable.
13. Develop a Wave and Storm Contingency Plan for construction materials and equipment.
14. Develop a monitoring plan to consistently assess the condition of groin materials as well as a contingency plan if the condition is endangering EFH.

Sedimentation and Turbidity

1. Conduct intertidal work at low and or slack tide.
2. Conduct work during calm sea states; stop work during high surf, winds, and currents.
3. Perform work outside of the main coral spawning period in summer (May to August) to minimize sedimentation and turbidity effects to coral eggs and larvae in the area. Peak spawning periods vary by species and geography, and are based on best available science.
4. If appropriate, consider using cofferdams to dewater the project impact site.
5. Install sediment, turbidity, and/or pneumatic curtains, and use real-time monitoring (automated or manual) for barges and dredge vessels to detect failure and implement stop-work processes if pre-determined project thresholds are reached (use standards from Clean Water Act 401 water quality certification). In areas of soft sediment, consider partial length turbidity curtains in order to reduce resuspension of sediment during high winds and currents.
6. Use soft and/or natural engineering solutions to maintain/restore natural flow volumes and velocity.
7. Minimize disturbances to stream banks, and place abutments outside of the floodplain whenever possible. Seek to maintain baseline water flow volume and velocity within the system.
8. Utilize environmental clamshell buckets for mechanical dredging.
9. Design the nourishment activities to maintain or replicate natural stream channel and flow conditions to the greatest extent practicable.
10. Revegetate shoreline areas with appropriate native species and fully stabilize disturbed upland areas prior to removing silt fences and erosion prevention measures.

Chemical Contamination

1. Conduct work during the dry season when possible; stop work during storms or heavy rains. Neutralize or treat contaminated sediments and/or waters prior to release from the project site.
2. Inspect all equipment prior to beginning work each day to ensure the equipment is in good working condition, and there are no contaminant (oil, fuel, etc.) leaks.
3. All equipment found to be leaking contaminants must be removed from service until repaired.
4. All fueling or repairs to equipment must be done in a location with the appropriate controls that prevents the introduction of contaminants to marine environment.

5. Prevent discharges of chemicals and other fluids dissimilar from seawater into the water column.
6. Use materials that are nontoxic to aquatic organisms, such as untreated wood, concrete, or steel (avoid pressure treated lumber).
7. Use diffusers on the end of subtidal discharge pipes to minimize impacts from discharges.
8. Prevent bentonite drilling fluid from contacting live benthic organisms.