



US Army Corps  
of Engineers  
Honolulu District

# Public Notice of Application for Permit

Regulatory Branch (1145b)  
Building 230  
Fort Shafter, Hawaii 96858-5440

Public Notice Date: October 14, 2014  
**Expiration Date: November 14, 2014**  
Permit File Number: POH-2014-00172

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## Kalaeloa Artificial Reef Project

Interested parties are hereby notified that an application has been received for a Department of the Army permit for certain work in waters of the United States as described below and shown on the attached drawings.

APPLICANT: Mr. William Aila, Board of Land and Natural Resources, 1151 Punchbowl Street, Room 130, Honolulu, Hawaii 96813.

AGENT: Frazer McGilvray, Division of Aquatic Resources, 1151 Punchbowl Street, Room 330, Honolulu, HI 96813.

LOCATION: The proposed project is located 1.25 miles directly offshore of the Haseko Development in Ewa Beach, Oahu, Hawaii.

1. 21° 17.022' N 158° 2.880' W
2. 21° 16.998' N 158° 2.820' W
3. 21° 16.944' N 158° 2.820' W
4. 21° 16.500' N 158° 2.850' W
5. 21° 16.500' N 158° 3.000' W
6. 21° 16.950' N 158° 3.000' W

WORK: The State of Hawai'i Department of Land and Natural Resources, Division of Aquatic Resources (DAR) is proposing to complete the following activities:

-Establish an artificial reef site on the seafloor offshore from the 'Ewa District of the Island of O'ahu that is properly placed and of sufficient size to accommodate substantial creation of artificial-reef structures. For this purpose, DAR has delineated an approximately 108-acre area located between depths of 60 and 120 feet that is mostly devoid of coral and valuable marine habitat.

- At least two separate piles (sets) of concrete Z-blocks will be placed on the ocean floor approximately 50 to 100 feet apart. A total of approximately 700-800 blocks will be used for the first increment; these will cover a seafloor area of about 8,000 square feet and provide shelter and surface area that will improve marine habitat quality at the site.

**PURPOSE:** To provide the public with additional fishing and diving opportunities by constructing an artificial reef on relatively flat, barren, and unproductive areas of the Pacific Ocean.

**ADDITIONAL INFORMATION:** Completion of this project is consistent with the DAR mission within the State Department of Land and Natural Resources. DAR believes the reef will provide direct benefits for O'ahu's fishing and marine recreational industries as well as substantial enhancements to the offshore marine environment. It is consistent with a 2004 Memorandum of Agreement (MOA) executed by DAR, HASEKO (Ewa), Inc. (HASEKO), and the Department of the Army. The MOA allows HASEKO to fulfill one of the Special Conditions imposed by the Department of the Army permit for its proposed Ocean Pointe Marina.

**MITIGATION:** No mitigation is proposed as part of the project, as the project will improve marine habitat by providing shelter and surface area where it does not exist currently.

**WATER QUALITY CERTIFICATION:** The **proposed action will result in a discharge of fill material into a water of the U.S.** and will require authorization from the Corps in accordance to Section 404 of the Clean Water Act of 1972 (CWA). Under Section 401 of the CWA (Public Law 95-217), the Corps may not issue a permit for the described work until the applicant obtains a certification, or waiver of certification, from the State of Hawaii, Department of Health – Clean Water Branch.

**COASTAL ZONE MANAGEMENT ACT CERTIFICATION:** **The proposed activity will affect land or water uses in the Coastal Zone.** Under Section 307(c)(3) of the Coastal Zone Management Act of 1972, as amended by 16 U.S.C. 1456(c)(3), the Corps may not issue a permit for the described work until the applicant obtains a Federal Consistency Concurrence from the State of Hawaii, Department of Business, Economic Development, and Tourism – Office of Planning.

**PUBLIC HEARING:** Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state clearly and concisely, the reasons and rationale for holding a public hearing.

**CULTURAL RESOURCES:** The latest published version of the National Register of Historic Places (NRHP) has been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places. The project area is offshore of the Honouliuli ahupua'a, which is the largest and westernmost ahupua'a in the 'Ewa District. At over a mile offshore, the types of historic sites that could be encountered at the proposed artificial reef site are typically limited to shipwrecks. The marine biological survey of the proposed site noted no evidence of shipwrecks or other human evidence that might be considered historically significant. In addition, high resolution (100 kHz) side-scan sonar conducted at the proposed site for the project by University of Hawai'i scientists revealed only one feature (outside of the site) that exhibits some significant vertical extent. No fishponds are believed to have existed in the shoreline area, but the coast has been used extensively for fishing and gathering of limu, fish, lobster, and other shellfish. The surveys contained no indication that the offshore area where the proposed reef site exists is particularly valued for traditional cultural practices.

**ENDANGERED SPECIES:** Pursuant to Section 7 of the Endangered Species Act (ESA), federal agencies must consult with the National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service (USFWS) on any action that may affect a species listed (or proposed for listing) under the ESA as threatened or endangered or any designated critical habitat. Based on the project location, the following protected species have the potential to occur near the project location: Hawksbill sea turtle (*Eretmochelys imbricate*), Green sea turtle (*Chelonia mydas*), Hawaiian monk seal (*Monachus schauinslandi*), and the Humpback Whale (*Megaptera novaeangliae*). The Corps does not anticipate any direct or indirect physical impacts, risks for entanglement or endangerment, exposure to elevated

noise levels, turbidity, pollutants or loss of habitat. The Corps has preliminarily determined that the Kalaeloa Artificial Reef Project **may affect but, is not likely to adversely affect federally listed species** proposed for listing under ESA or their critical habitat due to the low risk of direct impacts, the temporary nature of the installation, combined with the preventative measures proposed in the attached BMP Plan (Appendix A). In accordance with the requirements set forth in Section 7 of the ESA, the Corps will initiate informal consultation with the National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Protected Resources Division (NOAA, NMFS – PRD) on this project.

**ESSENTIAL FISH HABITAT:** The proposed work is being evaluated for possible effects to Essential Fish Habitat (EFH) pursuant to the Magnuson Stevens Fishery Conservation and Management Act of 1996 (Magnuson-Stevens Act), 16 U.S.C. *et seq* and associated federal regulations found at 50 CFR 600 Subpart K. The Honolulu District includes areas of EFH as Fishery Management Plans. We have reviewed the January 20, 1999, Western Pacific Fishery Management Council’s Environmental Assessment to locate EFH area as identified by the National Marine Fisheries Service (NMFS). No live coral heads or coral reefs are known to exist within the project footprint. The installation of the Z-blocks will have an impact on turbidity and involve benthic disturbance. Therefore, the Corps has preliminarily determined that the proposed Kalaeloa Artificial Reef Project **may adversely affect EFH**. In accordance with the requirements set forth in Section 305(b)(1-4) of the Magnuson-Stevens Act, the Corps will initiate coordination with NOAA, NMFS – Habitat Conservation Division (HCD) for the project.

**AUTHORITY:** This permit application will be reviewed under the following authorities:

- (X) Perform work in or affecting navigable waters of the United States – **Section 10** Rivers and Harbors Act 1899 (33 U.S.C. 403).
- (X) Discharge dredged or fill material into waters of the United States – **Section 404** Clean Water Act (33 U.S.C. 1344). The Corps’ public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).
- ( ) Transport dredged material for the purpose of dumping it into ocean waters - Section 103 Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413). The Corps’ public interest review will consider the criteria established under authority of Section 102(a) of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (40 CFR Parts 220 to 229), as appropriate.

**EVALUATION:** The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for the work. To make this decision, comments are used to

assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

**COMMENT AND REVIEW PERIOD:** Conventional mail or e-mail comments on this public notice will be accepted and made part of the record and will be considered in determining whether it would be in the public interest to authorize this proposal. In order to be accepted, e-mail comments must originate from the author's e-mail account. All e-mail comments should be sent to *Michelle.R.Lynch@usace.army.mil*. Conventional mail comments should be sent to the U.S. Army Corps of Engineers, Regulatory Branch, Building 230, Ft. Shafter, HI 96848. Both conventional mail and e-mail comments must include the permit applicant's name and reference number, as shown below, and the commentor's name, address, and phone number. **All comments whether conventional mail or e-mail must reach this office, no later than the expiration date of this public notice to ensure consideration.** Please include the following name and reference number: **POH-2014-00172.**

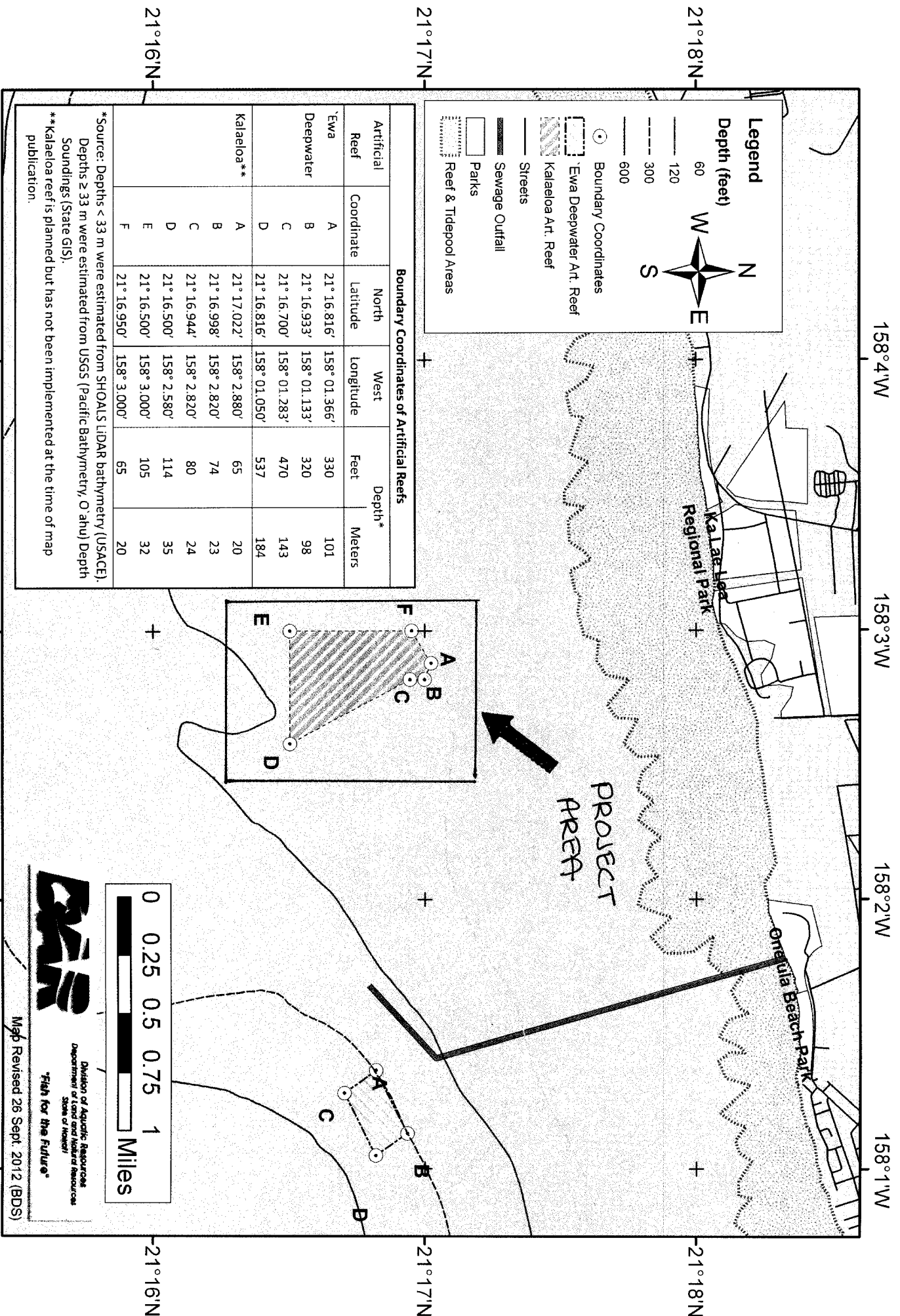
Comments on the described work, with the reference number, should reach this office no later than the expiration date of this Public Notice to become part of the record and be considered in the decision. Please contact Ms. Shelly Lynch at (808) 835-4300 if further information is desired concerning this notice.

Michelle Lynch  
Chief, Regulatory Office

Attachments

1. Map
2. Standard Operating Procedure and Best Management Practices

# Ewa Deepwater & Kalaeloa Artificial Reefs, O'ahu



**Legend**

Depth (feet)  
 60  
 120  
 300  
 600

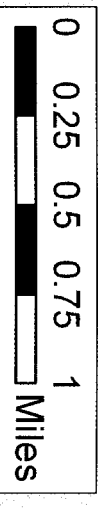
Boundary Coordinates  
 Ewa Deepwater Art. Reef  
 Kalaeloa Art. Reef

Streets  
 Sewage Outfall  
 Parks  
 Reef & Tidepool Areas

**Boundary Coordinates of Artificial Reefs**

Artificial Reef	Coordinate	North Latitude	West Longitude	Feet	Meters	Depth*
Ewa Deepwater	A	21° 16.816'	158° 01.366'	330	101	
	B	21° 16.933'	158° 01.133'	320	98	
	C	21° 16.700'	158° 01.283'	470	143	
	D	21° 16.816'	158° 01.050'	537	184	
Kalaeloa**	A	21° 17.022'	158° 2.880'	65	20	
	B	21° 16.998'	158° 2.820'	74	23	
	C	21° 16.944'	158° 2.820'	80	24	
	D	21° 16.500'	158° 2.580'	114	35	
	E	21° 16.500'	158° 3.000'	105	32	
	F	21° 16.950'	158° 3.000'	65	20	

\*Source: Depths < 33 m were estimated from SHOALS LIDAR bathymetry (USACE). Depths ≥ 33 m were estimated from USGS (Pacific Bathymetry, O'ahu) Depth Soundings (State GIS).  
 \*\*Kalaeloa reef is planned but has not been implemented at the time of map publication.



Map Revised 26 Sept. 2012 (BDS)

# **DAR ARTIFICIAL REEF DEPLOYMENT STANDARD OPERATION PROCEDURES**



**State of Hawaii  
Division of Aquatic Resources  
September 2012**

## OVERVIEW

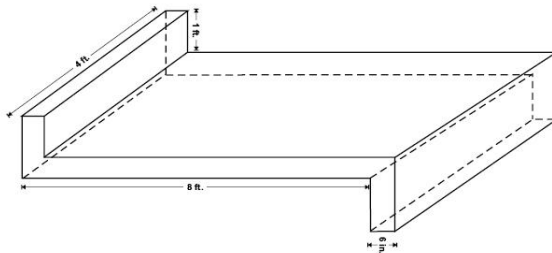
The artificial reef project in Hawaii is funded through the US Fish and Wildlife Sportfish Restoration Program. The goal of this project is to maintain and improve fishing opportunities for recreational fishers.

## MATERIALS

The project deploys various types of material at the artificial reef locations. The material that makes up most of the material deployed so far is the concrete z-module. The project also deploys “materials of opportunity” including vessels, barges, and derelict concrete material from construction companies and/or the military. All “materials of opportunity” must pass United States Coast Guard and State Department of Health inspections prior to deployment.

### Z-module

The z-module have been used since 1990 (35 at Keawakapu) and to date there are over 30,000 deployed at four of the artificial reef locations (Waianae, Maunalua Bay, Kualoa and Keawakapu). The z-module is 1.2m (4') wide by 2.4m (8') long and has two “feet” on opposing ends (as seen below). The z-module is 15-.20m (6-8”) thick and weighs approximately 2400 pounds.



## DEPLOYMENT

The z-modules are loaded onto a barge and deployed by forklift over the side of the barge. An average of 1600-2400 modules is deployed annually.





## **Pre-deployment**

### Assessments

Pre-deployment assessments are done to determine a deployment area for the material that will be deployed and are conducted for every deployment. There are some basic criteria that DAR uses to determine if a deployment area is appropriate. Here are the criteria:

- 1) Barren limestone or sand
- 2) Devoid of coral or coral cover >5%, presence of candidate coral species will be identified and recorded
- 3) At least 100m away from any coral reef
- 4) 18-36m (60-120') depth
- 5) Four GPS points to delineate the four corners of the deployment area
- 6) GPS coordinate(s) for the deployment spot(s) within the deployment area

During these assessments fish and other organisms are sized and counted. This will give us baseline information of what was there before the material was deployed. Once a proper deployment area is found, an additional buffer zone of 50m (165') is required. The total distance away from a coral reef is 150m (495').

### Approval by management

The GPS coordinates for the deployment spot(s) and deployment area are then documented and sent to DAR management for approval with any pictures or video taken during the assessments. After approval, the tug and barge company is contacted to schedule a deployment date. Once a tentative date is agreed upon, Federal, State, and County agencies are notified.

### Notification to other agencies

DAR is required by its permits to notify Federal, State, and County agencies two weeks prior to the scheduled deployment date. Letters are sent to each of these agencies informing them of date of deployment, artificial reef location, material (amount if applicable) and GPS coordinates of the deployment spot(s) and the deployment area. Also included in these letters is language that states the deployment may not occur on the scheduled date if the weather does not permit DAR to do the deployment.



## **Deployment**

### Adverse weather conditions or delays

The deployment date is determined by DAR and the tug and barge company. If the deployment cannot be conducted on the scheduled deployment date due to weather or unforeseen delays, the deployment date will be postponed until a date agreeable by both DAR and the tug and barge company. Federal, State, and County agencies are notified of any change(s) to the deployment date specified in the notification letter.

### Marking area

On the day of the deployment, DAR will use its own boat to mark the deployment area (four corners) and the deployment spot(s) using large red buoys. The barge will be anchored in such a manner that the material deployed will be at the deployment spot(s). If for safety reasons, the barge cannot be anchored, DAR will maintain communication with the tug to make sure the barge stays within the deployment area. At no time are divers allowed in the water while the deployment is taking place. Pictures and video of the deployment will be taken for news media and for permitting agencies. Best Management Practices (BMPs) (attached) will be followed.

### Communication

As a general understanding during deployments, three short blast of the air horn will mean start (or restart) the deployment, two short blasts will mean communication has been lost and deployment halted until communication can be re-established, and one long blast will mean that the deployment vessel is nearing the boundary of the deployment area, deployment will immediately stopped and deployment vessel relocated within the deployment area.

## **Post-deployment**

### Assessments

Post-deployment assessment(s) will occur either a few hours after the deployment is completed or within a couple days of the deployment. This is to ensure that the deployment was done in the proper location and no resources were damaged and/or killed. Pictures and/or video will be taken of the material deployed.

### Notifications

Post-deployment notification letters will be sent out with images and/or video of the deployment to the proper agencies within two weeks of the deployment.

### Monitoring

Fish and habitat surveys will occur twice a year at each location to determine trends in fish biomass, diversity, and coral recruitment and growth. Survey technique is explained in another document.

# **Division of Aquatic Resources (DAR) Best Management Practices (BMP) for Artificial Reef Deployments**

Revised April 2012

DAR recommends implementation of the following BMPs to reduce potential adverse affects on protected marine species. These BMPs are in no way intended to supersede or replace measures required by any other agency including, but not limited to the ACOE, USFWS, USEPA, or NOAA. Compliance with these BMPs is secondary to safety concerns.

Prior to the deployment, assessments of the deployment area must be done to ensure that there are no protected marine species and pristine or well developed coral reefs within the deployment area. In addition, a buffer zone of 50 meters around the deployment area will also be assessed. The deployment area shall be situated such that the buffer zone is not outside the artificial reef boundaries.

## **A. Constant vigilance shall be kept for the presence of ESA-listed marine species during all aspects of the proposed action, particularly in-water activities such as boat operations, diving, and deployment of anchors and mooring lines.**

1. The project manager shall make all of the decisions to maintain a safe and successful deployment.
2. The project manager shall designate an appropriate number of competent observers to survey the marine areas adjacent to the proposed action for ESA-listed marine species.
3. Surveys shall be made prior to the start of work each day, and prior to resumption of work following any break of more than one half hour. Periodic additional surveys throughout the work day are strongly recommended.
4. All in-water work shall be postponed or halted when ESA-listed marine species are within 50 meters of the proposed work, and shall only begin/resume after the animals have voluntarily departed the area. If ESA-listed marine species are noticed within 50 meters after work has already begun, that work may continue only if, in the best judgment of the project manager, that there is no way for the activity to adversely affect the animal(s). For example; divers performing surveys or underwater work would likely be permissible, whereas operation of heavy equipment is likely not.
5. When piloting vessels, vessel operators shall alter course to remain at least 100 meters from whales, and at least 50 meters from other marine mammals and sea turtles.
6. The area within a radius of 100 meters around the deployment vessel must be clear of all protected species before, during, and after the deployment.
7. Reduce vessel speed to 10 knots or less when piloting vessels at or within the ranges described above from marine mammals and sea turtles. Operators shall be particularly vigilant to watch for turtles at or near the surface in areas of known or suspected turtle activity, and if practicable, reduce vessel speed to 5 knots or less.
8. If despite efforts to maintain the distances and speeds described above, a marine mammal or turtle approaches the vessel, put the engine in neutral until the animal is at least 15 meters away, and then slowly move away to the prescribed distance.
9. Marine mammals and sea turtles should not be encircled or trapped between multiple vessels or between vessels and the shore.
10. Do not attempt to feed, touch, ride, or otherwise intentionally interact with any ESA-listed marine species.

**B. Deployment operations shall be carried out with the following BMPs to ensure deployment is within the marked area.**

11. Marker floats shall be placed marking the four corners of the deployment area. Floats shall not have more than 2:1 scope on them. Periodic checks must be done to ensure that the marker floats have not moved from its original position.
12. Deployment vessel shall be anchored or moored to prevent the deployment vessel from moving outside of the deployment area. If anchoring or mooring is not possible due to safety concerns, the deployment will occur with the deployment vessel “live boating” to keep the deployment vessel in place. If the deployment vessel drifts outside the deployment area, the deployment will be immediately stopped until the deployment vessel can be maneuvered back within the deployment area.
13. The project manager will be transported onto the deployment vessel to ensure constant contact with the captain of the deployment vessel. If for safety reasons, the project manager cannot be accommodated on the deployment vessel, contact (vhf radio, cell phone, etc.) with deployment vessel must always be maintained to ensure material (modules, vessels, etc.) is deployed within the deployment area. If communication is interrupted or lost and the project manager or DAR boat captain must contact the deployment vessel, an air horn will be used (two short blasts) to notify the deployment vessel to stop deployment of the material (modules, vessels, etc.).
14. No divers are allowed to enter the water during a deployment, unless the deployment is stopped and the deployment vessel is moved 500 meters outside of the marked area.
15. Post deployment surveys shall take place within 2 hours after the completion of the deployment with the deployment vessel moved to at least 500 meters outside of the marked area. If visibility is less than 10 meters, no dives are to be done until conditions improve.

**C. No contamination of the marine environment should result from project-related activities.**

16. A contingency plan to control HAZMAT is required.
17. Appropriate equipment and supplies to contain and clean potential spills will be stored at the work site, and be readily available.
18. All project-related materials and equipment placed in the water will be free of pollutants. The equipment operators will perform pre-work equipment inspections for cleanliness and leaks. All equipment operations will be postponed or halted should a leak be detected, and will not proceed until the leak is repaired and equipment cleaned.
19. Fueling of land-based vehicles and equipment should take place at least 15 meters away from the water, preferably over an impervious surface. Fueling of vessels should be done at approved fueling facilities.
20. Turbidity and siltation from project-related work should be minimized with the rinsing of the material (modules, vessels, etc.) prior to being loaded onto the deployment vessel.
21. Debris and other wastes deployed with the material (modules, vessels, etc.) will be picked up from the marine environment during the deployment.