



**US Army Corps
of Engineers®**

PUBLIC NOTICE

Applicant:
Leo Tudela
Commonwealth Ports Authority

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**Honolulu District
Permit Application No. POH-2024-00027**

TO WHOM IT MAY CONCERN: The Honolulu District of the U.S. Army Corps of Engineers (Corps) has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. §1344) **and/or** Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403). The purpose of this public notice is to solicit comments from the public regarding the work described below:

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WATERWAY AND LOCATION: The project would affect waters of the United States and navigable waters of the United States associated with Tanapag Harbor, Philippine Sea. The project/review area is at Delta Dock and in marine waters surrounding Delta Dock at the Commercial Port of Saipan, Island of Saipan, Commonwealth of Northern Mariana Islands.

EXISTING CONDITIONS: Delta Dock is an 80 ft wide by 265 ft long solid fill, steel sheet pile enclosed dock that juts into Saipan Lagoon near the east end of the island's only commercial harbor. The east, west, and north sides of the dock have been dredged to maintain vessel mooring capacity. The seafloor in the dredged areas are mapped as uncolonized sand. Recent project specific surveys support this characterization, although sparse coral and seagrass cover is present on the sea floor. The west side of the dock is a 165 ft wide blind canal between Delta Dock and Charlie Dock. Water quality in the blind canal is poor due to a storm water outlet, vessel traffic, and nominal water circulation. Waters on the east side are more open with an 800 ft span between Delta Dock and Echo Dock. Starch Factory Spring Creek discharges 100,000 to 130,000 gallons of brackish water daily into the lagoon near the east side of Delta Dock. CNMI Division of Environmental Quality (DEQ) classifies the marine waters surrounding the commercial harbor infrastructure as degraded – Puerto Rico Industrial Class A Waters. Structural inspections discovered severe corrosion and complete wall

loss at several locations on Delta Dock. Based on the inspection results, the CPA condemned the dock and restricted use in September 2015.

PROJECT PURPOSE:

Applicant's Project Purpose: Rehabilitate and extend the condemned Delta Dock so that it can again provide a safe, operational component of the commercial port facilities and increase the capacity of the port to address the current and expected future demand for vessel mooring, including for larger vessel mooring. Construct a boat ramp and boarding pier at Delta Dock to better service CPA operations, patrols, emergency response vessels, and other trailered vessels.

Corps' Basic Project Purpose: vessel mooring and vessel launching

Corps' Overall Project Purpose: Restore safe vessel mooring at Delta Dock and increase mooring capacity at the port to provide for the current and expected future mooring demand, including capacity for larger vessels. Reduce response time for CPA emergency response and patrol vessels.

PROPOSED WORK: The CPA requests authorization to rehabilitate and extend Delta Dock by excavating 1,925 cubic yards of sea floor within 0.17-acres, installing 928 linear ft of steel sheet piles, and discharging 22,682 cubic yards of dredged material, coral rock, and concrete within 0.46-acres below mean high water.

The CPA also requests authorization to construct a boat ramp and pier at Delta Dock by excavating 1,480 cubic yards of sea floor within 0.27-acres, installing 411 linear ft of steel sheet piles, and discharging 3,527 cubic yards of dredged material, coral rock, and concrete fill within 0.27-acres below mean high water.

Work above the mean high water includes pavement, drainage, and utility improvements for the refurbishment of the existing Delta Dock and the new boat ramp. Pavement improvements, include removal of certain parking lot features to provide access to the new boat ramp. The existing power system on the dock would be completely removed and replaced with a new power distribution system to provide shore power to vessels moored at the Delta Dock and the fixed equipment on the dock (cranes, lighting, convenience power for vessel support buildings, etc.).

Delta Dock Rehabilitation and Extension:

The CPA proposes to encapsulate the existing dock by installing a new tied-back sheet pile wall seaward of the existing 265 ft long sheet pile walls on the east and west sides of the existing dock. New sheet pile installation would continue along the same alignment to extend the dock 154 ft seaward and enclose the north end. Quarry rock would be discharged inside the new sheet pile walls to infill the dock extension area and the narrow rehabilitation area along the sides of the existing dock. The entire dock would be capped with a concrete deck. The proposed work would increase the dock dimensions to 90 feet wide by 419 feet long.

Portions of the existing sheet piles on the east and west dock walls would be removed to provide clearance to install the tie-rods of the new sheet pile system into the existing dock. All buildings on the dock would be demolished and disposed at an authorized landfill or other site with no waters of the United States. The dock extension design and construction would be similar to the dock rehabilitation (i.e., sheet pile system connected by steel tie rods and interior infilled with coral rock).

Prior to driving the sheet piles, a linear excavation 8 feet wide and 7 feet deep may be completed along the entire new 928 linear ft sheet pile wall alignment to remove subsurface debris (e.g., tires, wooden poles) that could hinder sheet pile driving. This debris clearing excavation would temporarily remove 1,925 CY of bottom material from 0.17-acres below mean high water. After subsurface debris is removed, the dredged material or clean coral fill obtained from local quarries would be used to back fill the trench.

A temporary sheet pile cofferdam may be installed along the new sheet pile wall perimeter to enable lowering of the water levels during the construction of the concrete deck.

Sheet piles would be driven with a vibratory hammer from the dock or mounted on a barge or other floating platform. Excavation and discharges of fill material would be completed with an excavator from the dock, a barge, or from another floating platform.

CPA Emergency boat ramp:

The CPA proposes to install 411 linear feet of sheet piles to construct the perimeter around the 50 ft wide concrete boat ramp and boarding pier at the southeast corner of Delta Dock. Prior to driving the sheet piles, a linear excavation 8 feet wide and 7 feet deep may be completed along the 411 linear ft sheet pile wall alignment to remove subsurface debris (e.g., tires, wooden poles) that could hinder driving the sheet piles. After subsurface debris is removed, the dredged material or clean coral rock obtained from local quarries would be used to back fill the trench. Once the sheet pile walls are installed, 600 cubic yards of sea floor would be excavated from within the sheet pile enclosed area and replaced with a coral rock base foundation and a concrete boat ramp. Sheet piles would be driven with a vibratory hammer from the dock surface or mounted on a barge or other floating platform. Excavation and discharges of fill material would be completed with an excavator from the dock, mounted on a barge, or from another floating platform.

All work would be performed in accordance with the enclosed plan (8 sheets), dated March 10, 2025.

AVOIDANCE AND MINIMIZATION: The CPA provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

Environmental best management practices (BMP) relevant to the proposed action will be maintained on site per CNMI *Construction Best Management Practices Field Manual*, including a controlled entrance to the staging area, storm water control plans, stockpile protection of excavated soil material, and spill prevention and control measures to keep construction water or chemicals from entering the adjacent marine waters.

CPA would implement the following BMPs from a list provided by the NMFS for marine projects affecting Essential Fish Habitat:

1. All objects will be lowered to the bottom (or installed) in a controlled manner. This can include the use of buoyancy controls such as lift bags, or the use of cranes, winches or other equipment that affect positive control over the rate of descent.
2. Maintain control of construction equipment and materials to prevent dropping construction materials or other items to the bottom during demolition and/or construction
3. All vessels will operate at 'no wake/idle' speeds at all times while in water depths where the draft of the vessel provides less than a 2-meter (6 foot) clearance. All vessels will follow deepwater routes (e.g. marked channels) whenever possible.
4. Markers, and posts, whether attached to the substrate or mounted to a cinderblock, will only be attached to sandy bottoms or non-living hard substrates. Attachments and tethers will be as short as possible to avoid potential entanglement hazards.
5. All equipment, materials and instruments will be examined and rinsed with fresh water prior to use or deployment to ensure no organisms are being introduced or transported from other areas of the island.
6. In-water tethers, as well as mooring lines for vessels and marker buoys, will be kept to the minimum lengths necessary, and shall remain deployed only as long as needed to properly accomplish the required task.
7. Appropriate materials to contain and clean potential spills will be stored at the work site and be readily available.
8. Fueling of land-based vehicles and equipment will take place away from the water, preferably over an impervious surface. Fueling of vessels will be done at approved fueling facilities.
9. Heavy equipment will be used from shore, not below the MHWL.
10. Project-related materials and equipment placed in the water will be free of pollutants. The project manager or heavy equipment operators will perform daily pre-work equipment inspections for leaks. All heavy equipment operations will be postponed or halted should a leak be detected and will not proceed until the leak is repaired and equipment cleaned.
11. Turbidity and siltation from project-related work shall be minimized and contained according to conditions in the DEQ Section 401 Water Quality Certification.
12. Addressing potential construction impacts to annual coral spawning events will follow the DEQ promulgated regulations found in the CNMI Water Quality Standards.

13. No project-related materials (fill, revetment rock, pipe, etc.) should be stockpiled in the water (intertidal zone, seagrass beds).
14. Sediment control measures will be installed before work begins. These include land-based silt fences, an in-water turbidity curtain, and appropriately designed temporary dewatering basins.
15. Turbidity and the suspension or re-suspension of sediment from project-related work must be minimized and contained to the immediate vicinity of the authorized activity through the appropriate use of effective containment devices or measures and based on project-specific conditions. Silt fences, turbidity curtains, or other diversion or containment devices must be installed to contain sediment and turbidity at the work site (a) parallel to, and along the toe of any fill or exposed soil which may introduce sediment to an adjacent aquatic site; and (b) adjacent to any fill placed or soil exposed within an aquatic site. All silt fences, curtains, and other devices must be installed according to the manufacturer's guidelines and properly maintained throughout the construction period and until the impact area is stabilized and/or elevated turbidity levels have returned to ambient levels.
16. Upland containment areas sited in uplands near wetlands, other special aquatic sites and other waters for the purpose of stockpiling, dewatering, etc. must be bounded by impermeable material to prevent return flows of dewatered effluent into such waters.
17. The contractor will protect air quality by controlling dust.
18. Hazardous materials will be properly stored, used, labeled, transported, and disposed of.
19. Construction and demolition debris, un-reclaimed dredge spoils, and green waste will be disposed of at a CNMI Government-approved site. Hazardous materials will be properly disposed in accordance with DEQ regulations.
20. The contractor will prevent litter/trash from the construction site from entering the water.
21. All project-related materials (e.g., fill, rocks, structures, etc.) and equipment (e.g., dredges, backhoes, etc.) authorized to be used or placed in Saipan Lagoon, must be free of invasive plant and animal species.
22. A storm plan will be developed for this effort and implemented. The storm plan includes an assessment of impacts that are directly associated with the construction site following a storm event. Coordination with NMFS during the assessment is recommended in order to evaluate whether project associated impacts was directly the cause for the loss of any coral reef resources.
23. Project structures will be removed once no longer in use.
24. Work shall be curtailed during adverse weather conditions to ensure the proper functioning of the silt containment devices. To the extent possible, schedule work during the non-rainy season and when ocean conditions are known to be calm. In the event of out of season or adverse rain and swell events, work should ideally be ceased, equipment secured, and mitigation measures put in place that are ensured to be effective in controlling potential impacts to the environment during the event.

CPA would implement the following BMPs for minimizing impacts to Endangered Species resources:

1. Searches for the presence of ESA-listed species shall be made prior to the start of in-water work each day, including prior to resumption of work following any break of more than one-half hour.
2. All in-water work will be postponed or halted when ESA-listed marine species are within 50 yards of the proposed work and will only begin/resume after the animals have voluntarily departed the area.
3. Project-related personnel shall NOT attempt to disturb, touch, ride, feed, or otherwise intentionally interact with any protected species.
4. Repair and demolition work will be accomplished in a manner that minimizes the potential spread of invasive species that may reside on the concrete mattress such as immediate removal from the water upon extraction or other appropriate approved containment methods.
5. Turbidity and sediment from project-related work shall be minimized and contained to the immediate vicinity of the project through the appropriate use of effective sediment containment devices and the curtailment of work during adverse tidal and weather conditions.
6. All silt fences, curtains, and other structures shall be installed properly and maintained in a functioning manner for the life of the construction period and until the impact area is permanently stabilized, self-sustaining, and/or turbidity levels, elevated due to construction, return to ambient levels.
7. The work shall be discontinued during flooding, intense rainfall, storm surge, or high surf conditions where runoff and turbidity cannot be controlled.
8. All construction debris and materials removed from the marine/aquatic environment shall be disposed of at a DEQ approved upland disposal site.
9. With the exception of the actual excavation equipment apparatus (e.g. clamshell buckets, or the scoop and articulated arm of a backhoe, hydraulic head, etc.), heavy equipment will be operated from above and out of the water.
10. Fueling of project-related vehicles and equipment will take place away from the aquatic environment and a contingency plan to control petroleum products accidentally spilled during the project will be developed. Absorbent pads and containment booms shall be stored on-site, if appropriate, to facilitate the clean-up of accidental petroleum releases.
11. All sheet piles will be clean and free from containments prior to placing in the marine environment.
12. As practicable, all equipment and materials will be examined and rinsed with fresh water prior to installation in marine waters to ensure no organisms are being introduced from other areas of the island. The portions of the equipment that enter the water will be clean and free of pollutants, including aquatic invasive species.
13. As practicable, work will be conducted during calm sea states with work stoppages during high surf, winds, and currents. In the event of approaching foul

weather (i.e., tropical storms and typhoons), equipment will be either removed from the project site or adequately secured.

14. In-water operations and construction activities will employ the following measures to reduce potential collisions and conflicts with ESA-listed marine species:
 - a. Project associated vessel operators will halt or alter course to remain at least 50 m from ESA-listed marine species.
 - b. Vessel operators will reduce vessel speed to 10 knots or less when piloting vessels in the proximity of marine mammals.
 - c. If approached by an ESA-listed marine species, vessel operator will slowly move away to 50 m from the animal.
 - d. Vessel operators will not encircle or trap ESA-listed marine species between multiple vessels or between vessels and the shore.
15. All anchors (e.g., for vessels and turbidity curtains) will be set on hard or soft, sandy bottom void of corals and seagrass, and chosen anchor locations will take into consideration damage that could occur from the anchor chain if the vessel swings due to currents or tides.
16. The construction contractor will develop a project BMP plan which they will implement throughout the construction period. This plan will include, at a minimum, the following BMPs:
 - a. Silt socks, filter fabric, or an approved equivalent will be used around all topside construction located near waters of the US.
 - b. A plan to prevent trash and debris from entering the marine environment during the construction phase of the project.
 - c. An oil spill contingency plan to control and clean spilled petroleum products and other toxic materials. This plan will include the following:
 - i. Oil or other hazardous substances will be prevented from seeping into the ground or entering any drainage inlet or local bodies of water.
 - ii. When applicable, all temporary fuel oil or petroleum storage tanks will be surrounded with a temporary berm of sufficient size and strength to contain the contents of the tanks (plus 10% freeboard for precipitation) in the event of an accidental release.
 - iii. Fueling of project-related vehicles and equipment will take place at least 15 m away from the water preferably over an impervious surface. All fuel spilled will be cleaned immediately.
 - iv. Lubricants and excess oil will be disposed of in accordance with applicable federal, territory, and local regulations, laws, ordinances, and permits.
 - v. Appropriate materials to contain and clean potential spills will be stored at the work site and be readily available.

Additional minimization measures may be incorporated into a Department of the Army permit Special Conditions based on pending consultations with CNMI Historic Preservation Office, CNMI Department of Environmental Quality, CNMI Department of Coastal Resources Management, NMFS Habitat Conservation Division, and NMFS Protected Resources Division.

COMPENSATORY MITIGATION: The CPA did not provide a compensatory mitigation plan since there is no loss of a special aquatic site. However, the CPA provided additional minimization plans to offset unavoidable functional loss provided by sparse coral and seagrass cover found during marine aquatic environment (Appendix A).

CULTURAL RESOURCES: The Corps is evaluating the undertaking for effects to historic properties as required under Section 106 of the National Historic Preservation Act. This public notice serves to inform the public of the proposed undertaking and invites comments including those from local, Territory, and Federal government agencies with respect to historic resources. Our final determination relative to historic resource impacts may be subject to additional coordination with the CNMI Historic Preservation Officer, federally recognized tribes and other interested parties.

ENDANGERED SPECIES: The Corps has performed an initial review of the application, the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and National Marine Fisheries Service (NMFS) Endangered Species Act Section 7 online resources to determine if any threatened, endangered, proposed, or candidate species, as well as the proposed and final designated critical habitat may occur in the vicinity of the proposed project. Based on this initial review, the Corps has made a preliminary determination that the proposed project may affect species and critical habitat listed below. No other ESA-listed species or critical habitat will be affected by the proposed action.

Endangered green turtle (*Chelonia mydas*), Central West Pacific DPS
Proposed Critical Habitat for green sea turtle, Central West Pacific DPS
Endangered hawksbill turtle (*Eretmochelys imbricata*)
Threatened Scalloped hammerhead shark (*Sphyrna lewini*), Indo-West Pacific DPS

Pursuant to Section 7 ESA, any required consultation with the Service(s) will be conducted in accordance with 50 CFR part 402.

ESSENTIAL FISH HABITAT: Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act 1996, the Corps reviewed the project area, examined information provided by the applicant, and consulted available species information.

The Corps intends to initiate Essential Fish Habitat (EFH) consultation separately from this public notice. A separate EFH consultation package will be sent to the National Marine Fisheries Service (NMFS). The Corps will not make a permit decision until the consultation process is complete.

NAVIGATION: The proposed structure or activity is not located in the vicinity of a federal navigation channel.

SECTION 408: The applicant will not require permission under Section 14 of the Rivers and Harbors Act of 1899 (33 USC 408) because the activity, in whole or in part, would not alter, occupy, or use a Corps Civil Works project.

WATER QUALITY CERTIFICATION: Water Quality Certification may be required from the Bureau of Environmental and Coastal Quality, Division of Environmental Quality (DEQ). Pursuant to Section 401 of the Clean Water Act (Public Law 95-217), the CPA will submit a water quality certification (WQC) request to the CNMI Division of Environmental Quality and the Corps concurrently. Once the WQC application has been reviewed and determined complete per 40 CFR 121.5(b), the DEQ and the Corps will establish a reasonable period of time for granting (with or without conditions) or denying the WQC. The Section 401 WQC will be considered waived if the DEQ does not act on the certification request by end of the reasonable period of time.

COASTAL ZONE MANAGEMENT: The proposed activity may 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 CPA obtains and provides to the Corps a Federal Consistency Concurrence from the CNMI Division of Coastal Resources Management.

NOTE: This public notice is being issued based on information furnished by the applicant. This information has not been verified or evaluated to ensure compliance with laws and regulation governing the regulatory program. The geographic extent of aquatic resources within the proposed project area that either are, or are presumed to be, within the Corps jurisdiction has not been verified by Corps personnel.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impact 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 cumulative impacts thereof; among these are conservation, economics, esthetics, general environmental concerns, wetlands, historical 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. Evaluation of the impact of the activity on the public interest will also include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act or the criteria established under authority of Section 102(a) of the Marine Protection Research and Sanctuaries Act of 1972. A permit will be granted unless its issuance is found to be contrary to the public interest.

COMMENTS: The Corps is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other Interested parties in order to

consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this determination, comments are used to assess impacts to 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 (EA) and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The Honolulu District will receive written comments on the proposed work, as outlined above, until April 10, 2025 HST. Comments should be submitted electronically via the Regulatory Request System (RRS) at <https://rrs.usace.army.mil/rrs> or to Jason Brewer at Jason.d.brewer@usace.army.mil. Alternatively, you may submit comments in writing to the Commander, U.S. Army Corps of Engineers, Honolulu District, Attention: Jason Brewer, PSC 455 Box 188, Santa Rita, Guam 96540. Please refer to the permit application number in your comments.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing will be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

APPENDIX A

Additional minimization and offset plans for unavoidable functional loss of sparse coral and seagrass cover

Coral minimization plan:

1. The NMFS Coral Farm research facility (JAMS) will be allowed to take any corals of their choosing to place in their lagoon coral farm for potential use for research or future coral reef restoration projects. Any corals taken will be recorded by species and colony size;
2. The DCRM Coral Farm facility will be allowed to take any corals of their choosing to place in their lagoon coral farm for potential use for future coral reef restoration projects. Any corals taken will be recorded by species and colony size;
3. The DCRM/DLNR/DFW or NMC will be allowed to collect any of the corals of their choosing to be prepared for educational uses. Any corals taken will be recorded by species and colony size; and
4. Certain corals will be transplanted to an adjacent area east of Delta Dock in the same general area where the corals were transplanted from the Beth 103 Dock repair project. However, other potential sites may be evaluated at the time of relocation. Criteria for determining coral transplantation viability follow:
 - a. The fragile nature of the branching coral *Pocillopora damicornis* does not make this species a good target for transplantation. Previous (MES) transplantation experience in Rota found the colonies easily fracture apart when chiseled from its base;
 - b. Encrusting corals are typically not good for transplanting as the coral colony cannot be separated from the substrate it is growing on. Encrusting corals identified during the surveys included: *Porites rus* (also brittle), *Montipora meandrina* (difficult), *Leptastrea purpurea*, *Montipora meandrina* (difficult), *Porites* spp., *Montipora* sp. Based on discussion with David Benavente – Tasi Research & Consulting.
 - c. Some of the massive corals recorded during the surveys are potentially good candidates for transplantation and include *Porities lutea*, *Porites* sp., *Goniastrea retiformis*, and *Lobophyllia hemprichii*. However, previous experience in relocating large massive corals at the NPS American Memorial Park proved difficult with several of the large coral heads cracking into several smaller pieces as the coral was being chiseled off an artificial substrate. Colonies of *Porites lutea* greater than 20 cm is being proposed for transplantation. Based on actual MES experience and a discussion with David Benavente – Tasi Research & Consulting.
5. Coral transplantation procedures:
 - a. To the greatest possible extent, corals will be transplanted without breaking the water's surface;
 - b. Monitoring reports include initial transplantation report, 6-Month Post Transplantation, and 1-YR Post Transplantation. These assessment reports will be submitted to the USACE and NMFS within 1 month

following data collection. Data presented in the final 1-Year Post Transplantation report will include a comparison to data collected from the initial transplantation report. The survivability goal is 50% at the end of one year;

- c. General photo documentation is required, however not of every individual transplanted coral;
- d. Other corals growing in the immediate vicinity of the transplantation site will be identified and act as reference corals.
- e. If mitigation sites are negatively impacted by activities or natural events beyond the control of the applicant, the impacts will be documented, and the mitigation will be deemed complete.

Coral offset plan:

The CPA proposes to purchase a Reef Ball¹ mold and to fabricate 6 Reef Balls. Reef balls are hollow hemispherical-shaped artificial reef modules that serves as mobile three-dimensional structures for coral settlement (or transplantation surfaces), to increase habitat complexity, and provide habitat for various other invertebrate and vertebrate marine life.

Reef Balls are locally fabricated using a fiberglass mold filled with concrete. They come in a variety of sizes to meet the needs of specific projects. Purposes for using Reef Balls includes: reef restoration, fishery enhancement, coastal protection, and as an educational resource.



Finished product example in front; molds in back.



Fiberglass Reef Ball molds (example).

Possible locations the Reef Balls could be placed include the NMFS and DCRM coral farm facilities in Saipan Lagoon or in the Managaha Marine Preserve. Initial thoughts would be to provide 2 Reef Balls to each site and see what can be done by the managers of the sites. Reef Balls should be placed in position before corals are attached to the outer shell in order for the concrete to “season”. Actual placement of the completed Reef Balls will be determined at a later date in coordination with the USACE, NOAA, DCRM, and DFW.

Future use of these Reef Balls would include being considered as a substrate for future coral transplantation projects, adding habitat complexity in an otherwise two-dimensional sandy habitat, and establishing an area that could be used for educational

purposes. This is a new and unique approach to mitigation in the CNMI and offers multiple future opportunities in reef restoration to build on.

The final product of this mitigation plan would be the placement of 6 Reef Balls in a location (or locations) in the Saipan Lagoon that would be determined at a later date.

Seagrass Minimization and Offset Plan Discussion:

Seagrasses are classified as Special Aquatic Sites under the CWA Section 404(b)(1) guidelines. The *Halophila minor* seagrass identified in the Delta Dock extension footprint is a short-bladed shallow rooted seagrass that provides minimal habitat when compared to the other seagrass species found in the Marianas; *Enhalus acoroides* and *Halodule uninervis*.

Dense patches of *Enhalus* or *Halodule* provide good three-dimensional structural habitat for different life history stages for many fish and crustacean species. To date, there have been four documented seagrass transplantation efforts in the CNMI, all *Enhalus*, with varying degrees of success. Of the three seagrass species found in the CNMI, *Enhalus* is the best candidate for transplantation purposes.

With respect to the Delta Dock project, Marine Research Consultants, Inc. noted *Halophila minor* was detected in sparse patches offshore the northern end of the Delta Dock.

Tasi Research & Consulting also noted the presence of *Halophila minor*, however it was so sparse that it was undetectable in their survey methodology. The seagrass occurred at “minute frequencies” which equated to occurring between 0 to 3% within a 1-square meter quadrant on perhaps 5% of the total quadrants. Most observations of *Halophila* were characterized as a line of seagrass blades along a single rhizome.

Overall, *Halophila* seagrasses are not suitable for transplantation due to the short small blades and delicate shallow rhizome system. This seagrass is locally common in Saipan Lagoon and not limited. *Halophila* growth found in the impact area is very sparse, low stem density and has a diminutive delicate physical structure. Coupled with the area fact that the seagrass was growing on previously dredged substrate with minimal three-dimensional relief, the overall ecological value that the seagrass provides to MUS species is minimal, if any at all.

No offset is proposed for unavoidable impacts to the insignificant amount and low ecological value of the *Halophila* seagrass that occurs in the action area. Expected effects to *Halophila* from the proposed action is expected to incur *de minimis* level impacts. Therefore, it is not practical to develop offset plans for the unavoidable impacts to *Halophila* seagrasses.