# Coastal Zone Management Act Consistency Determination for the Tinian Harbor Geotechnical and Soil Investigation 2024

Submitted to:

Commonwealth of the Northern Mariana Islands
Coastal Resources Management Office
Gualo Rai Center, Suite 201F
P.O. BOX 10007 Saipan, MP 96950

Submitted by:

Naval Facilities Engineering Command Marianas
PSC 455 Box 195
FPO AP, Guam 96540

# 1.0 Introduction

The U.S. Pacific Fleet, United States Navy (Navy), is preparing to conduct soil investigations across the Tinian Harbor, Tinian, CNMI. This Consistency Determination (CD) addresses the potential effects to coastal uses and resources from geo-boring and soil investigation in Tinian Harbor. This activity includes multiple boring tests in Tinian Port as detailed below.

The Navy has prepared this CD pursuant to the Coastal Zone Management Act (CZMA) of 1972, as amended, and 15 Code of Federal Regulations (CFR) Part 930, Subpart C, for the implementation of activities that may have reasonably foreseeable effects on coastal uses or resources of CNMI's coastal zone. Under the CZMA, federal agency activities with coastal effects are required to be consistent to the maximum extent practicable with federally approved enforceable policies of a State (or Territory)'s Coastal Management Program.

Federal agency activities must be consistent to the maximum extent practicable with the standards that underlie a state's permit requirements. However, federal agencies do not have to apply for or obtain a state permit unless required by another Federal law (2020 OCM Federal Consistency Overview; 65 FR at 77140 (2000); and 15 CFR 930.39(e)). Under the CZMA implementing regulations, "the amount of detail in the evaluation of the enforceable policies, activity description and supporting information shall be commensurate with the expected coastal effects of the activity" 15 CFR 930.39(a).

The Tinian Harbor is completely within the coastal zone under the CNMI Coastal Zone Management Program[1]. Navy has determined that the boring activities on land and in water would have potential to affect the coastal land or water uses or resources of CNMI as described in this CD.

# 2.0 Description of Proposed Activity

The Navy intends to conduct a soil investigation to assess subsurface conditions of land and the suitability of soil for future development proposals consistent with the Tinian Harbor master plan (Moffatt & Nichol 2018). The objective of the plan is to repair and improve the harbor for navigational and operational efficiency, improve harbor safety, and reduce damages to vessels and infrastructure. The Navy would accomplish this goal by performing a total of 29 test borings (17 land and 12 overwater; Figure 1; Table 1), ranging from 50 to 100 ft (16 to 31 m) in depth. Prior to all testing, 3 initial borings would occur for sediment sampling and shipped to Guam for analysis of sediment composition prior to performance of further test borings.

[1] "all non-federally owned land and water areas, including submerged lands and waters extending seaward to a distance of three (3) nautical miles. The CNMI is an island chain consisting of 15 islands. Each island in its entirety is designated a "coastal zone" in the context of the CZMA, under 15 C.F.R. Section 923.31(a)(7). Excluded lands include the federally-leased: northern two-thirds of Tinian, all of Farallon de Medinilla and approximately 72 hectares at Tanapag Harbor in Saipan (U.S. Public Law 94-241). Submerged lands in the CNMI were conveyed back to the Commonwealth on January 16, 2014 with the exception of the submerged lands adjacent to the islands of Farallon de Pajaros (Uracas), Maug, and Asuncion, as well as the submerged lands adjacent to federally-leased lands on Tinian and Farallon de Medinilla (Presidential Proclamation 9077)."

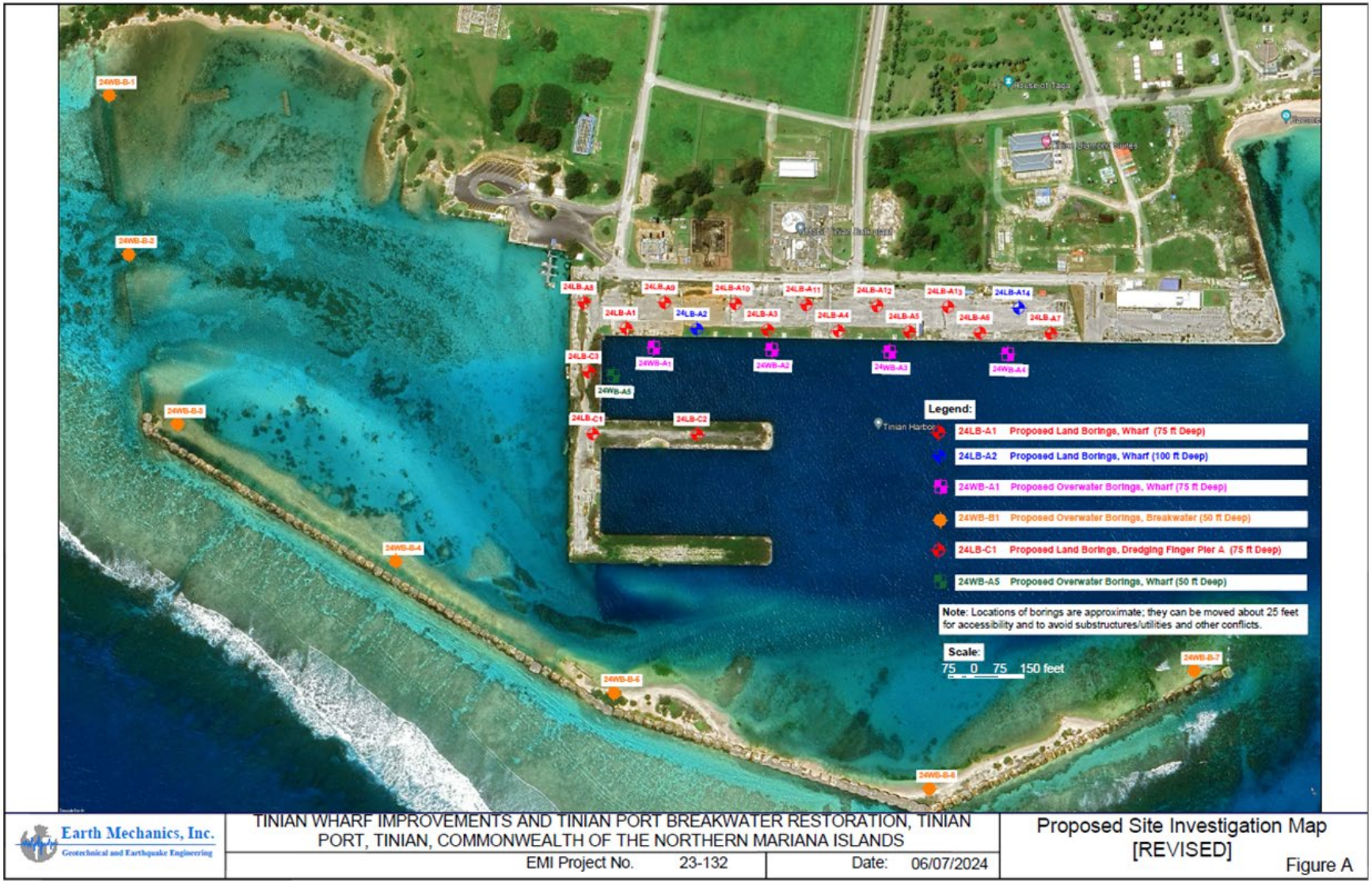



*Figure 1. Satellite imagery of Tinian Harbor with the proposed boring sites. Proposed land borings at 75ft depth is indicated in red (wharf and dredging finger pier A). Proposed land borings at 100ft depth is indicated in blue (wharf). Proposed overwater borings at 75ft depth is indicated in pink (wharf). Proposed overwater wharf borings at 50ft depth is indicated in orange (breakwater) and green (wharf).*

**Table 1. Boring test schedule for soil investigation in Tinian Harbor, Tinian.**

| Location within Tinian Harbor | Summary of Actions | | Duration |
|---|---|---|---|
| Along the Wharf and Breakwater | • Overwater boring<br>• Sediment sampling | | 3 days |
| Along the Wharf | • Land boring<br>• 4 test borings to 75ft deep<br>• 2 test borings to 100ft deep | | 25 days |
| Along the Breakwater | • Overwater boring<br>• 7 test borings to 50ft deep | | 28 days |
| Along the Wharf and Finger Pier | • Overwater boring<br>• Finger pier: 1 test borings to 50ft deep<br>• Wharf: 4 test borings to 75ft deep | | 24 days |
| Along the Wharf and Finger Pier | • Land boring<br>• 11 test borings to 75ft deep | | 33 days |
| **Total Borings** | **32 (29 test borings and 3 sample borings)** | **Total duration** | **113 days** |

The proposed action is intended to span 113 calendar days and is divided into five phases:

1. Overwater boring at various sites along wharf and breakwater (sediment sampling)
2. Land boring along the wharf
3. Overwater borings along the breakwater
4. Overwater borings along the wharf and finger pier
5. Land borings along the wharf and finger pier

Land borings would utilize an 8-inch diameter truck-mounted hollow-stem auger drill. The drill dimensions and specifications are approximately 8 ft wide by 12 ft long by 30 ft high. Overwater borings would utilize a 4-inch diameter tricone drill bit on a JCD 400T model drill rig. This drill rig's dimensions and specifications are approximately 6 ft wide by 10 ft long by 30 ft high.

Land Soil Investigation:
Of the 29 test borings, 17 will occur on the wharf and finger pier A, ranging from 50 to 100 ft in depth. Soil investigation will be performed according to UFC 1-300-09n Chapter 4 and UFC 3-220-01 (Geotechnical Engineering). The overwater borings are divided into two phases (Table 1):

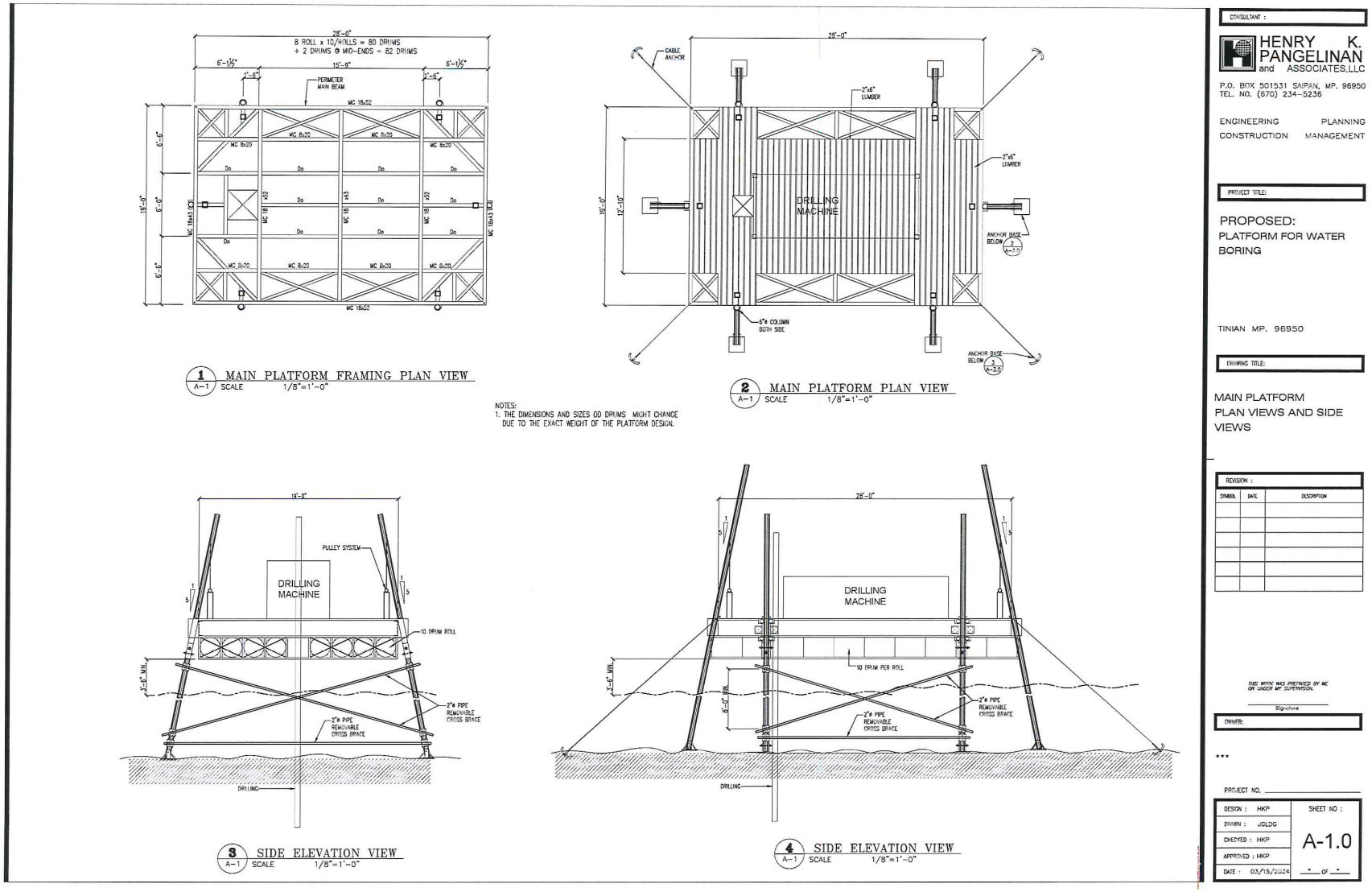
1. 6 test borings along the wharf (25 days)
2. 11 test borings along the wharf and finger pier A (33 days)

During the proposed action, catchment devices will be employed to prevent sediment run-off. Drilled material will be collected and stored 100 ft (30 m) away from the seawall and disposed of properly to prevent unwanted run-off. Absorbent pads will be stored in the truck with the mounted rig to manage potential oil leaks during on-land borings.

Overwater Soil Investigation:
Of the 29 borings, 12 will be conducted overwater along the breakwater, wharf, and finger pier A, ranging from 50 to 100 ft in depth. Soil investigation will be performed according to UFC 1-300-09n Chapter 4 and UFC 3-220-01 (Geotechnical Engineering). The overwater borings are divided into two phases (Table 1):

1. 7 test borings along the breakwater (28 days)
2. 5 test borings along the wharf and finger pier A (24 days)

A 50-ton crane will place a fabricated platform (Figure 2) on the water, housing the drill rig for the 12 overwater borings throughout the harbor (see Figure 3 for setup). Contractors will use a ramp for the drill rig to access the platform, preventing damage to the bulkhead. The platform, equipped with six legs and cable anchors, will serve as a barge pulled by a tugboat with crane support along the wharf. The platform and drill rig will remain on the water throughout the duration of the proposed activity, except when there is an upcoming typhoon. For potential oil spills during overwater borings, a silt curtain and oil boom will border the platform.




CONSULTANT :

HENRY K. PANGELINAN and ASSOCIATES,LLC

P.O. BOX 501531 SAIPAN, MP. 96950
TEL. NO. (670) 234-5236

ENGINEERING PLANNING
CONSTRUCTION MANAGEMENT

PROJECT TITLE:

PROPOSED:
PLATFORM FOR WATER BORING

TINIAN MP. 96950

DRAWING TITLE:

MAIN PLATFORM
PLAN VIEWS AND SIDE VIEWS

REVISION :

| SYMBOL | DATE | DESCRIPTION |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature

OWNER:

PROJECT NO.

| | |
|---|---|
| DESIGN : HKP | SHEET NO : |
| DRAWN : JGLDG | A-1.0 |
| CHECKED : HKP | |
| APPROVED : HKP | |
| DATE : 03/15/2024 | OF |

*Figure 2. Fabricated overwater platform design. The following point of views provided: 1. Main platform framing plan; 2. Main platform plan; 3. Side elevation A; and 4. Side elevation B.*

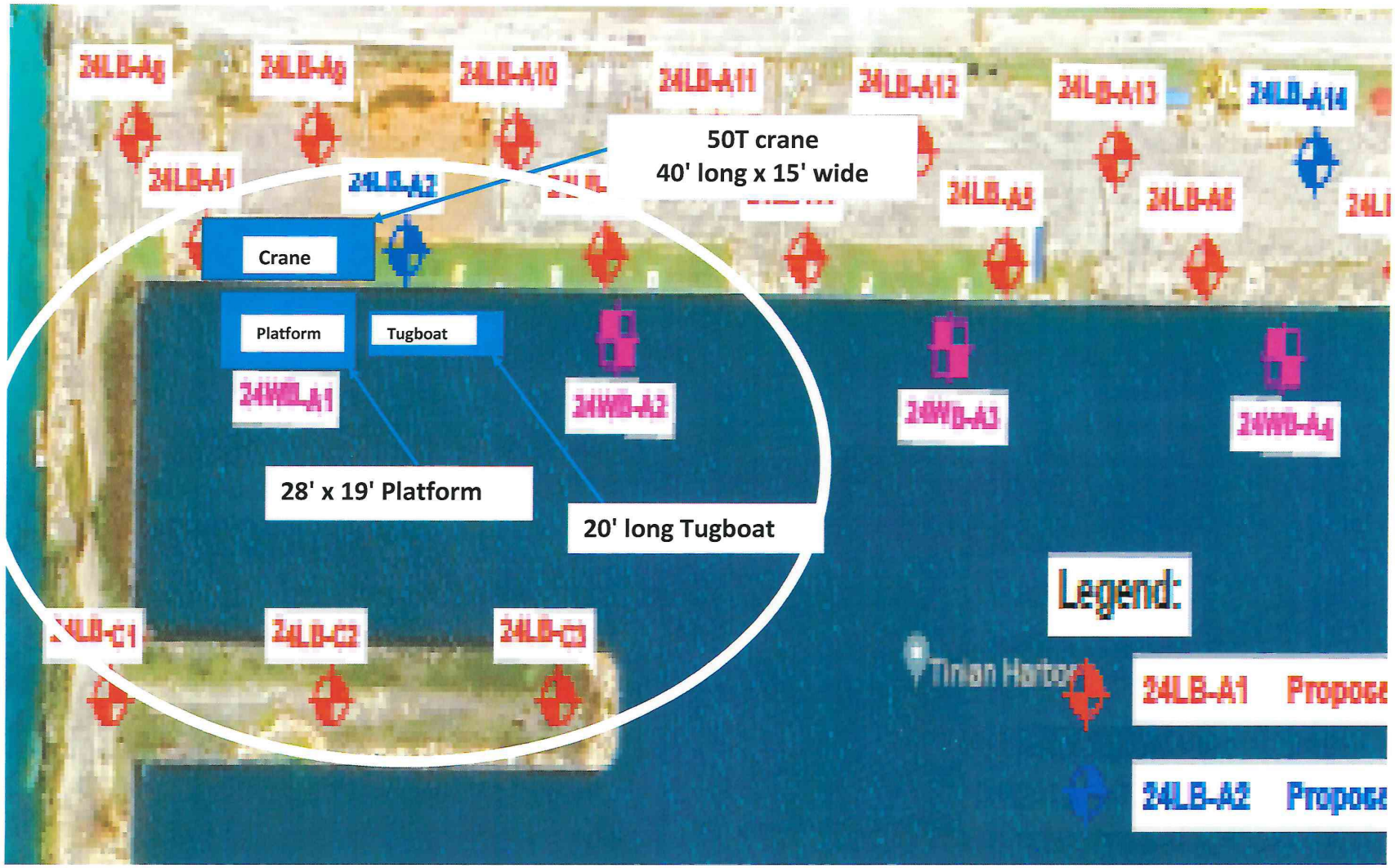



*Figure 3. 50-ton crane would be positioned on the wharf. Fabricated platform would be placed overwater with the crane. The platform would be supported by the crane as it is transported by a tug boat between each boring site.*

## 3.0 Best Management Practices

The proposed action includes implementing various protective measures, such as the Best Management Practices (BMPs), during site preparation and in-water work to minimize impacts on marine species. All personnel involved, regardless of employment status (e.g. employee, contractor), will be briefed on these BMPs and the compliance requirements.

1. To reduce project impacts during activities such as boat operations, heavy equipment usage, diving, and anchor and mooring line deployment, ongoing monitoring will be carried out to identify ESA-listed species. The Project Manager is accountable for ensuring strict compliance with these standards and has the authority to suspend work in cases when BMPs are not adhered to.
    a. Before construction begins, all personnel involved in proposed action must attend an online Natural Resources Training or Natural Resources Briefing provided by Navy natural resource personnel.
    b. The Project Manager will appoint at least one trained marine observer onsite to monitor for ESA-listed marine species prior to and continue throughout proposed activity.
2. A dedicated archeological field technician will be onsite during all boring test (land and overwater). The archaeological field technician will follow procedures according to the Archaeological Monitoring and Discovery Plan that would be prepared prior to proposed project.
    a. ~~The~~ role of the archeological field technician will be to:
        i. Examine site for any remains
3. A dedicated protected species observer (PSO) will be onsite during all over-water work activities (e.g. fabricated platform deployment, drill rig launch, platform installation, soil investigation).
    a. The role of the PSO will be to:
        i. Ensure BMPs are adhered to.
        ii. Report any ESA-related concerns to the Project Manager.
        iii. Monitor and document any impacts or interactions with ESA-listed species to NMFS.
        iv. Maintain a log of marine species observed and any interactions.
    b. During all in-water activities, the PSO will use binoculars to survey the Action Area, starting 30 minutes before work begins and continuing throughout the day. The PSO will record environmental and project-related information.
    c. If any ESA-listed species are seen, the PSO will notify the Project Manager, and work will cease if the animal is within 164 ft (50m) of the Action Area. Work will not resume until the animal has left voluntarily or 30 minutes have passed since the last sighting.
    d. If no ESA-listed marine species are observed, work can commence.
    e. Project personnel are prohibited from interacting (including but not limited to, touching, feeding, disturbing, harassing, harming, injuring, or killing) with protected species and must maintain a distance of at least 164ft (50m) from sea turtles.
        i. In the case, a listed marine mammal is determined by the PSO to have been interacted with, it will be reported to NMFS within one business day. These PSO records, submitted to NMFS, will include:

1. information to be provided in the final report;
2. number and species of listed animals affected;
3. the date, time, and location of each event (provide geographic coordinates);
4. description of the event;
5. the time the animal(s) was first observed or entered the near/in action, and, if known, the time the animal was last seen or exited the area, and the fate of the animal;
6. mitigation measures implemented prior to and after the animal was taken; and
7. if a vessel struck a marine mammal, the contact information for the PSO on duty, or the contact information for the individual piloting the vessel if there was no PSO on duty;
8. Photographs or video footage of the animal(s) (if available).

ii. If PSOs observe an injured, sick, or dead marine mammal (i.e., stranded marine mammal), they will include this in the PSO report. The PSOs will submit photos and data that will aid NMFS in determining how to respond to the stranded animal. Data submitted to NMFS in response to stranded marine mammals will include date/time, location of stranded marine mammal, species and number of stranded marine mammals, description of the stranded marine mammal's condition, event type (e.g., entanglement, dead, floating), and behavior of live-stranded marine mammals.

4. Measures will be implemented during in-water operations to reduce the risk of collisions with ESA-listed marine species.
    a. Vessel operators will halt or alter course to remain at least 164ft (50m) from ESA-listed marine species.
    b. Vessel operators will reduce speed to five knots or less near marine mammals and to 5 knots or less in areas of known or suspected turtle activity. Operators will be particularly vigilant to watch for turtles at or near the surface areas of known or suspected turtle activity.
    c. If approached by an ESA-listed marine species, the vessel operator will put the engine in neutral until the animal is at least 164ft (50m) away, then move slowly to maintain a 164ft (50m) distance.
    d. Vessel operators will not encircle or trap ESA-listed marine species between multiple vessels or between vessels and the shore.
    e. In the case that an ESA-listed species is struck, harmed, or disturbed, refer to BMP 3.e.
5. In-water operations will include measures to minimize direct physical impacts on ESA-listed species.
    a. Before any equipment or material enters the water, the Project Manager will verify that no ESA-listed species are in the area where the equipment, anchors, or materials will contact the substrate.
    b. The fabricated platform for the rig would be carefully lowered onto the water using a 50-ton crane in preparation for all in-water activities.
    c. Diver deployment and in-water activities would be meticulously planned to avoid direct physical impacts on coral reef life and habitat.

        i. All objects, including but not limited to, platform legs and anchors would be carefully guided in a controlled manner onto seafloor/sandy substrate to prevent any harm to diver and coral reef life, especially ESA-listed species.
    d. Heavy equipment will be operated from above and out of the water.
6. For one week prior to all in-water activities, the contractor will establish daily baseline ambient turbidity levels following tidal changes where over-water borings are expected, as well as at a control site at a similar location away from proposed sites.
7. Prior to in-water activities, the fabricated platform for the drill rig will be carefully lowered onto the water using a 50-ton crane to avoid contact with the existing wharf structures and minimize noise.
8. All proposed in-water activities would occur after the annual coral spawning event for hard (*Scleractinian*) corals, with the spawning activity to be 21 days total, including 7 days prior to and 14 days after the July full moon (full moon: July 21, 2024; hard coral spawning period: July 14$^{th}$ to August 4$^{th}$, 2024).
9. Diver deployment and in-water activities would be meticulously planned to avoid direct physical impacts on coral reef life and habitat. Platform legs and anchors would be carefully guided onto seafloor to prevent excess turbidity and harm to coral. The contractor will be required to verify that platform legs and anchors are not placed on substrates that support coral growth and that anchor chains do not damage environments with sensitive benthic organisms. If anchors are used, locations will be chosen to minimize damage from anchor chains if the vessel moves due to currents or tides. Intertidal work will be carried out during low and/or slack tides whenever possible.
10. Work platforms and barges will be oriented to minimize shading. Efforts will be made to position vessels, so the path of the sun crosses perpendicular to the length of the platform, thereby reducing the duration of shading and allowing more ambient light to reach areas under barges and work platforms.
11. A plan will be developed by the contractor to mitigate onsite erosion and off-site sedimentation. The plan will be communicated with all personnel prior to proposed project to ensure quick response is taken in the case of a spill. This plan will include, at a minimum, the following BMPs:
    a. Silt socks, filter fabric, or an equivalent will be used around all work activities.
    a. Catchment devices would be employed during proposed action to prevent sediment run-off. Drilled material would collected and stored 100ft (30m) away from the sea-wall and disposed of properly to prevent unwanted run-off.
    b. A temporary floating debris boom will be installed around all work occurring below the high tide line (HTL). Boom's location will shift to each boring site according to proposed action timeline.
    c. Silt curtain will isolate the in-water work area to prevent turbid water from flowing beyond the project limits. If a plume is observed outside the silt curtains, Project activity will stop immediately, and corrective action will be taken. Work will not resume until the issue is resolved, and the Project Manager will notify NBG if a plume is observed.
    d. An oil spill contingency plan will be implemented to control and clean spilled petroleum products and other toxic materials. This plan will be implemented throughout work activities to prevent oil or hazardous substances from seeping

into the ground or entering drainage inlets or local bodies of water. Disposal of lubricants and excess oil will comply with federal, territorial, and local regulations. Materials to contain and clean potential spills will be readily available at the work site. All Project-related materials and equipment placed in the water will be pollutant-free.

e. The proposed action-related vehicles and equipment will be fueled inside a containment area, ideally on an impermeable surface, and at least 50 feet (15 meters) away from the water. Spill prevention booms will be used to contain any potential spills from equipment (such as the crane on the barge) that cannot be fueled on land.
f. To mitigate the risk of discharge, a thorough inspection and maintenance of all vehicles and equipment will be conducted at the start of each day's activities. Operators will conduct daily pre-work equipment inspections to assess cleanliness and detect any signs of leaking. If a leak is identified, all operations involving large machinery will be delayed or stopped until the leak is repaired, and the equipment is thoroughly cleaned.
g. All diver activities minimize potential introduction of toxicopathological agents (e.g. sunscreens containing oxybenzone, butylparaben, octinoxate, and 4-methylbenzylidene camphor).

12. Work will be conducted during calm sea states as much as possible, with work stoppages during high surf, winds, and currents. In the event of approaching severe weather, such as tropical storms and typhoons, equipment will either be removed from the Project site or adequately secured. Guam's severe weather alert system, with levels I-IV, will guide preparation and response actions. At Condition Level III, indicating a possible typhoon within 48 hours, work activities will begin securing or removing all in-water equipment, vessels, and barges. Post-storm activities will include a safe assessment of equipment and project site conditions before resuming work, with reports of any additional adverse storm impacts.
    a. Guam Typhoon Conditions:
        i. Condition Level I: A typhoon is expected to hit the island within 12 hours.
        ii. Condition Level II: A typhoon is expected to hit the island within 24 hours.
        iii. Condition Level III: A typhoon may possibly hit the island within 48 hours.
        iv. Condition Level IV: Guam is always in Condition IV. A typhoon may develop and hit the island within 72 hours.

## 4.0 Enforceable Policies of the CNMI Coastal Management Program

The CNMI Coastal Management Program incorporates the enforceable policies outlined in Table 2. The comprehensive list of the enforceable policies of CNMI's Coastal Management Program from the CNMI Coastal Resource Management Rules and Regulations, which can be found in the Northern Mariana Islands Administrative Code, Chapter 15-10. In 1983, the Coastal Management Act (Public Law 3-47) was enacted, which established a Coastal Resources Management Office within the Office of the Governor. The Policy Elements are also listed below in Table 2 in the public law. The Navy provides a detailed description of the applicable policies to the proposed action below.

**Table 2. CNMI's Enforceable Policies and Applicability to the Proposed Action. CRM = Coastal Resource Management; APC = Areas of Particular Concern[2].**

| Enforceable Policy | | Applicability to the Proposed Action |
|---|---|---|
| **Description** | **Legal Citation** | |
| **Northern Mariana Islands Administrative Code, Chapter 15-10, Part 300** | | |
| Part 300 – Standards for CRM Permit Issuance: General Criteria | 15-10-305 | Applicable. The Proposed Action would not result in a significant degradation of coastal resources. Further, the Proposed Action would not result in any potential negative impacts to cultural resources and would positively impact aesthetic enjoyment of coastal resources. |
| Part 300 – Standards for CRM Permit Issuance: Specific Criteria APC: Lagoon and Reefs | 15-10-315 | Applicable according to the CNMI permitting tool. The Proposed Action is consistent with the highest use priorities and would comply with given management standards including avoiding significant adverse impacts to reefs and corals to the greatest extent practicable |
| Part 300 – Standards for CRM Permit Issuance: Specific Criteria APC: Coral Reefs | 15-10-325 | Applicable as the area is not geographically defined. Management standards are the same as those applied to the Lagoon and Reefs APC. |
| Part 300 – Standards for CRM Permit Issuance: Specific Criteria APC: Shorelines | 15-10-335 | Applicable according to the CNMI permitting tool. The Proposed Action is consistent with moderate use priorities and would comply with given management standards. |
| Part 300 – Standards for CRM Permit Issuance: Specific Criteria APC: Ports and Industrial Areas | 15-10-340 | Applicable according to the CNMI permitting tool. The Proposed Action consists of the highest use priorities and would comply with given management standards. |
| Part 300 – Standards for CRM Permit Issuance: Specific Criteria APC: Coastal Hazard | 15-10-345 | Applicable. The proposed action falls within FEMA Zone V, which is designated as a coastal high hazard flood area. The proposed action would not hinder activities that are considered high priority use categories and would not contribute to moderate priority use, low priority use, or unacceptable use categories. |
| **Department of Environmental Quality: Water Quality Standards of the CNMI, per 15 CFR § 923.82(e)** | | |
| Water Quality Standards | 65-130 | Applicable. The CD includes an analysis of the Proposed Action and coastal water quality. |
| **Public Law 3-47** | | |

[2] Only applicable enforceable policies are included in the table.

| | | |
|---|---|---|
| Policy Element 4: Plan for and manage any use or activity with the potential for causing a direct and significant impact on coastal resources. Significant adverse impacts shall be mitigated to the extent practicable. | Public Law 3-47 | Applicable. The CD includes an analysis of the Proposed Action and potential for impacts on coastal resources, including discussion of mitigation measures. |
| Policy Element 10: Maintain or improve coastal water quality through control of erosion, sedimentation, runoff, siltation, sewage and other discharges. | Public Law 3-47 | Applicable. The CD includes an analysis of the Proposed Action and coastal water quality. |
| Policy Element 11: Recognize and respect locations and properties of historical significance throughout the Commonwealth, and ensure that development which would disrupt, alter, or destroy these, is subject to Commonwealth laws and regulations. | Public Law 3-47 | Applicable. The Proposed Action does not involve new development or development in areas of cultural significance. The CD includes an analysis of the Proposed Action and historic and cultural areas of significance. |
| Policy Element 12: Recognize areas of cultural significance, the development of which would disrupt the cultural practices associated with such areas, which shall be subject to a consultation process with concerned ethnic groups and any applicable laws and regulations. | Public Law 3-47 | |
| Policy Element 13: Require compliance with all local air and water quality laws and regulations and any applicable federal air and water quality standards. | Public Law 3-47 | Applicable. The Proposed Action would have no effect on water and air quality. The CD includes an analysis of the Proposed Action and compliance with local water quality laws and regulations |

| | | |
|---|---|---|
| Policy Element 15: Manage ecologically significant resource areas for their contribution to marine productivity and value as wildlife habitats, and preserve the functions and integrity of reefs, marine meadows, salt ponds, mangroves and other significant natural areas | Public Law 3-47 | Applicable. The CD includes an analysis of the Proposed Action and ecological resources. |

## 4.1 Northern Marianas Administrative Code, Chapter 15-10, Part 300

### Standard for Coastal resources Management (CRM) Permit Issuance: General Criteria

The Navy is not applying for permits with the Division of Coastal Resources Management (DCRM). Although the activities to be conducted would require a permit if conducted by a private entity (15 Northern Mariana Islands Code [N. Mar. I. Code] part 100), the regulations implementing CZMA provide that federal agencies are not required to obtain state permits unless otherwise required by a federal law, not including CZMA itself (15 CFR § 930.39(e)). However, the Navy is required to ensure that the Proposed Action is consistent to the maximum extent practicable with the enforceable policies that are contained in CNMI's Coastal Management Program.

The following is the Navy's analysis of §15-10-305:

### Cumulative Impacts

The Navy has concluded that the proposed action would not require cumulative analysis as it falls under a Categorical Exclusion. The proposed activities would have no negative impact on the environment, specifically in terms of nonpoint source pollution, watershed setting, or the receiving waters of the watershed. In addition, the proposed action would not have any adverse effects on cultural resources and would allow for future enhancement for the overall aesthetic experience of coastal resources. As a result, the proposed action would not cause any hard to the coastal resources within the CNMI coastal zone.

### Compatibility

The Navy has evaluated the compatibility of the proposed action with management standard and use categories specified for Areas of Particular Concern (APC). According to this analysis (below), it has been determined that the proposed action aligns with the management standards and use categories of APCs.

### Alternatives

The Navy has evaluated that there are no viable alternative locations for conducting the necessary boring tests, as they are crucial for executing the Tinian Harbor Master Plan. According to this analysis, there are no other viable options available that would fulfill the Department of Defense's need to uphold military readiness without the need for new construction.

## Conservation

The Navy has evaluated the proposed action is anticipated to affect but not likely to adversely affect (NLAA) the following ESA-listed species, the green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), and the coral *Acropora globiceps*. Several years of Navy-funded sea turtle monitoring in the CNMI report that the green sea turtle would most likely be in the harbor (DoN 2014). Limited sightings of *A. globiceps* have been documented (U.S. Army Corps of Engineers 2018) along the interior of the breakwater, where seven proposed borings may occur, and along the eastern edge of the north quay wall, where one boring may occur.

The most likely effect on ESA-listed sea turtle species is localized disturbance, which may cause behavioral reactions in sea turtles. Behavioral responses might include disruption of natural activities, such as swimming and feeding. There would be minimal to no occurrence of hearing impairment in sea turtles since: 1. elevated noise levels would occur for a fairly short period (55 days); and 2. sea turtle population within Tinian Harbor should not be significantly affected by noise levels as the area is prone to vessel activity. The presence of divers pose minimal effects that would be avoided by implementing BMPs. During in-water activities, it is highly unlikely that divers would have direct physical contact with any listed turtle species. A silt curtain would be utilized during proposed activity as a physical barrier to protect ESA-listed species from boring tests. Lastly, vigilant monitoring of ESA-listed species throughout the project should prevent any other source of collision that may occur.

## Compliance with local and federal laws

Per the U.S. Environmental Protection Agency Green Book on the Mariana Islands (40 CFR 81.354), a conformity analysis is not necessary for the action as the Islands are in attainment of National Ambient Air Quality Standards.

According to a recent report by BECQ (Yuknavage et al. 2022), the water conditions in the harbor is labeled as “No Aquatic Life Use Support (ALUS)” and impaired for the “Propagation and Support of Aquatic Life”. Despite some improvements in the orthophosphate levels compared to the previous BECQ report (Yuknavage et al. 2020), it is concerning that the nitrate levels continue to exceed standard levels and oxygen levels remain below standard. The proposed activity may cause a temporary and localized increase in turbidity. Nevertheless, it would not further degrade water quality within Tinian Harbor. Proposed Action would not have any impact on air and water quality standards (§65-130-605(e)(1)) and would adhere with all applicable federal and CNMI laws.

According to the Clean Water Act (CWA), the CNMI BECQ has the authority to approve or reject a Water Quality certification (WQC) under the Section 401. This certification is required for any project or activity that involves a federal license or permit and has the potential to release pollutants into the surface waters of the Commonwealth.

## Ensuring access to clean and healthful environment

The Navy has evaluated that the proposed action would preserve the current pier and its usage, and focus on minimizing any necessary construction. The proposed action would assess whether

future development could be made to Tinian Harbor to enhance and protect the Commonwealth's inherent natural beauty and natural resources.

### Effect on existing public services

The Navy has evaluated that the proposed action would ensure continued access to the current facilities and services in Tinian Harbor and the CNMI coastal zone.

### Adequate access

The Navy has evaluated that the proposed action would have no impact on public access to any area within the coastal zone.

### Setbacks

The Navy has evaluated that the proposed action would not require a building set back as no building construction would occur. There are no major fault lines in the proposed area. The proposed action does not present any significant risk to the health, safety, and welfare of the people of the Commonwealth. It also ensures compliance with all applicable laws.

### Management measures for non-point source pollution

The Navy has evaluated that the proposed action would have minimal risk to introduce pollutants into the water. Nonetheless, necessary measures and BMPs will be followed during proposed action for spill prevention and waste management.

### Buffers for environmentally sensitive areas

Although the proposed action is within high risk flood, it would have no effect on flood zone as the structures (connecting pier, north quay wall, berths 1 and 2, and finger pier A) where boring tests would occur already exist.

**CONCLUSION.** The Navy analyzed the proposed action in relation to the criteria of Part 300, §15-10-305 to assess its compliance with the enforceable policy for projects that have the potential to directly and significantly affect APCs within the CNMI coastal zone. Based on this analysis, it can be concluded that the proposed action aligns to the maximum extent practicable with this enforceable policy.

## 4.2 Northern Marianas Administrative Code, Chapter 15-10, Part 300 – Specific Criteria: Areas of Particular Concern

### Lagoon and Reef APC (§15-10-315) and Coral Reefs APC (§15-10-325)

The Lagoon and Reef APC enforceable policy is applicable according to the CNMI permitting tool. The Coral Reefs APC is applicable because it is not area-specific and the Proposed Action has the potential to affect coral. Temporary and localized increased turbidity caused by in-water activities has the potential to impact Lagoon and Reef APC. Impacts from proposed in-water activities such as diver presence and moved objects (e.g. drill, platform legs, silt curtain, and anchors) during boring include: (1) increased localized disturbance that may cause behavioral reactions in nearby species; (2) and increase localized turbidity.

Tinian harbor is naturally turbid due to sediment disturbance from natural (e.g. wave action, tidal cycles, and storms) and anthropogenic activities (e.g. vessel traffic, swimmers, and snorkelers). The proposed action area consists mainly of sand or sand/rubble mix, which tends to settle quickly when disturbed (U.S. Army Corps of Engineers 2018). Diver deployment and in-water activities would be meticulously planned to avoid increased sediment disturbance on coral reef life and habitat. Because of the harbor's natural turbidity, the proposed action would not have a significant effect on the harbor's water quality. The Proposed Action results in boring tests that would determine whether further improvements could be made to the harbor according to the Tinian Harbor Master Plan. The proposed action would not hinder activities that are considered high priority use and moderate priority use categories and would not contribute to low priority use or unacceptable use categories.

### Shoreline APC (§15-10-335)

The Shoreline APC enforceable policy is applicable according to the CNMI permitting tool. Examples of use priorities for the Shoreline APC are located in CNMI Administrative Code §15-10-335. The proposed action is expected to have minimal to no effect on wildlife, coastal areas, and marine systems, as the 17 inland boring tests would only affect a limited section of the harbor. The Proposed Action results in boring tests that would determine whether further improvements and additions could be made to the harbor according to the Tinian Harbor Master Plan. The proposed action would do not interfere with or hinder public recreational activities in coastal regions or other water-related uses. The proposed action would adhere to given management standards, which include: 1. Executing the proposed action with due respect to aesthetic and natural processes; and 2. Reducing the impact of aesthetic and natural processes. The proposed action would not hinder activities that are considered high priority use and moderate priority use categories and would not contribute to low priority use or unacceptable use categories.

### Port and Industrial APC (§15-10-340)

The Port and Industrial APC enforceable policy is applicable according to the CNMI permitting tool. Examples of use priorities for the Port and Industrial APC are located in CNMI Administrative Code §15-10-340. The Proposed Action results in boring tests that would determine whether further improvements and additions could be made to the harbor according to the Tinian Harbor Master Plan. The proposed action would not hinder activities that are considered high priority use and moderate priority use categories and would not contribute to low priority use or unacceptable use categories.

### Coastal Hazards APC (§15-10-345)

This APC enforceable policy is applicable according to the CNMI permitting tool. Examples of use priorities for the Coastal Hazards APC are located in CNMI Administrative Code §15-10-345. During the latter portion of the year, CNMI is frequently affect by tropical depressions, typhoons, and sometimes super typhoons. In 2018, Tinian was impacted by Super Typhoon Yutu, with wind speeds exceeding 175 mi (281 km) per hour, resulting in significant destruction and debris within the island's harbor. The proposed action falls within FEMA Zone V, which is designated as a coastal high hazard flood area. The Proposed Action results in boring tests that would determine whether further improvements and additions could be made to the harbor according to the Tinian Harbor Master Plan. The proposed action would not hinder activities that

are considered high priority use categories and would not contribute to moderate priority use, low priority use, or unacceptable use categories.

**CONCLUSION.** The Navy analyzed the extent of the Proposed Action relative to the APCs specified in Part 300, § 15-10-310 of the CNMI Administrative Code. These APCs are limited to areas within the CNMI coastal zone and explicitly excluding certain areas. The Proposed Action would not contribute to unacceptable use categories and does not interfere with high priority use or moderate priority use categories. Based on this analysis, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy cited at Part 300, § 15-10-310 of the CNMI Administrative Code.

## 4.3Public Law 3-47

### Water Resources (Policy Element 10 and 13 AND DEQ Water Quality Standards Chapter 65-130)

According to a recent report by BECQ (Yuknavage et al. 2022), the nearshore waters of Tinian Harbor are designated Class A, which under the jurisdiction of the CNMI Bureau of Environmental and Coastal Quality are protected for their recreational use and aesthetic enjoyment. Yuknavage et al. (2022) also states that the water conditions in the harbor is labeled as "No Aquatic Life Use Support (ALUS)" and impaired for the "Propagation and Support of Aquatic Life". Despite some improvements in the orthophosphate levels compared to the previous BECQ report (Yuknavage et al. 2020), it is concerning that the nitrate levels continue to exceed standard levels and oxygen levels remain below standard. Tinian is naturally turbid due to sediment disturbance from natural (e.g. wave action, tidal cycles, and storms) and anthropogenic activities (e.g. vessel traffic, swimmers, and snorkelers). For one week prior to all in-water activities, the contractor will establish daily baseline ambient turbidity levels following tidal changes where over-water borings are expected, as well as at a control site at a similar location away from proposed sites. Turbidity levels at any point should not exceed 1.0 turbidity values (NTU) over ambient conditions as stated in NMIAC § 65-130-435. Sediment movement from over-water borings will occur in three periods: sediment sampling (3 days), along breakwater (28 days), and along wharf and finger pier (24 days). Impacts to marine habitats from proposed in-water activities such as diver presence and moved objects (e.g. drill, platform legs, silt curtain, and anchors) during boring include: (1) increased localized disturbance that may cause behavioral reactions in nearby species; (2) and increase localized turbidity. The proposed action area consists mainly of sand or sand/rubble mix, which tends to settle quickly when disturbed (U.S. Army Corps of Engineers 2018). Diver deployment and in-water activities would be meticulously planned to avoid increased sediment disturbance on coral reef life and habitat. The proposed activity may cause a temporary and localized increase in turbidity. Nevertheless, it would not further degrade water quality within Tinian Harbor.

**CONCLUSION.** Based on the above analysis, the Navy finds that the Proposed Action is consistent to the maximum extent practicable with enforceable Policy Elements 10 and 13 on coastal resources of the CNMI coastal management plan.

## Biological Resources (Policy Element 4 and 15)

### Coral

Coral abundance (both ESA and non-ESA) is primarily dominant along the breakwater and outer harbor (U.S. Army Corps of Engineer 2018). Coral cover on the seafloor is estimated at <1%, with all observed corals growing on anthropogenic materials (U.S. Army Corps of Engineer 2018). The likelihood of disturbing *A. globiceps* is low due to its low population density within Tinian Harbor. Limited sightings of *A. globiceps* have been documented (U.S. Army Corps of Engineers 2018) along the breakwater, where 7 proposed boring activities may occur, and the eastern edge of the north quay wall, where one boring may occur. However, an assessment (Smith 2019) on the north quay wall, pier faces, and RO-RO ramp found no ESA-listed coral species. Smith (2019) also reports the common non-ESA-listed species found in the harbor are *Pavona varians, Neomeris sp., Pavona cactus*, and *Porites rus.* All proposed in-water activities will occur after the annual coral spawning event for hard (*Scleractinian*) corals. Although the harbor is naturally turbid and its sediment type tends to settle quickly (U.S. Army Corps of Engineers 2018), silt curtains will be utilized and divers will carefully guide/place objects on the seafloor. This not only heavily localizes turbidity, but also would minimize direct impacts caused from the proposed action. The presence of heavy machinery and equipment in Tinian harbor poses a risk of releasing fuel, petroleum lubricants, and other hydrocarbon-based pollutants, which can expose ESA-listed species to harmful compounds. However, the suggested activity does not involve any intentional release of fuel and/or petroleum-based products. Divers may also pose risk to coral species if toxicopathological agents are used. Because divers would not directly work with and would reduce their proximity to surrounding corals there is minimal potential exposure pathway for toxicopathological agents to encounter corals or to enter the water columns near corals. Nonetheless, strict adherence to BMPs would minimize impacts the proposed action may have on corals.

### Essential Fish Habitat

Activities associated with this project could potentially have adverse effects on EFH from turbidity and direct physical impact.

The proposed activity may cause a temporary and localized increase in turbidity but would not further degrade water quality within Tinian Harbor. Tinian is naturally turbid due to sediment disturbance from natural (e.g. wave action, tidal cycles, and storms) and anthropogenic activities (e.g. vessel traffic, swimmers, and snorkelers). Impacts to wildlife habitats from proposed in-water activities such as diver presence and moved objects (e.g. drill, platform legs, silt curtain, and anchors) during boring include: (1) increased localized disturbance that may cause behavioral reactions in nearby species; (2) and increase localized turbidity.

Branching *acroporid* corals, which are fast-growing hard (*Scleractinian*) corals, are especially vulnerable to physical harm because their carbonate skeletons are comparatively fragile and less thick compared to slow-growing huge corals. Platform anchors, boat anchors, and silt curtains will exclusively be used in regions with soft bottoms, and divers will inspect and modify the objects as necessary to prevent any harm to corals and seagrasses. The risk of physical impact to *A. globiceps* is also minimal due to sparse distribution within Tinian Harbor.

Additionally, the area affected by the action is likely to be much smaller than the identified action area. The 3,926,000 ft² (365,000 m²) of closed harbor habitat is a very large area that would not all be affected by the action because parts of the boring and barge stabilization components would drop within a smaller area (~10.74%; [[(square area of platform with 164 ft [50m] buffer)*(12 boring sites)]/(total area of closed water habitat)]) within the barge platform holding the boring machine transit path, not the entire area.

Based on this analysis, the proposed activity may result in: 1. temporary localized habitat quality, but no reduction in habitat quantity for water column and benthic substrate EFH; and 2. no permanent reduction in the quantity and quality of biogenic habitat EFH designated for the Bottomfish and Seamount Groundfish and Pelagic Fish management unit species. Nonetheless, the smaller affected area and strict adherence to BMPs would minimize impacts the proposed action may have on EFH.

### ESA-Listed Species

The proposed action is expected to affect but not likely to adversely affect (NLAA) the following ESA-listed species, the green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), and the coral, *Acropora globiceps.* Several years of Navy-funded sea turtle monitoring in the CNMI report that the green sea turtle would most likely be in the harbor (DoN 2014). Limited sightings of *A. globiceps* have been documented (U.S. Army Corps of Engineers 2018) along the interior of the breakwater, where seven proposed borings may occur, and along the eastern edge of the north quay wall, where one boring may occur.

The most likely effect on ESA-listed sea turtle species is localized disturbance, which may cause behavioral reactions in sea turtles. Behavioral responses might include disruption of natural activities, such as swimming and feeding. There would be minimal to no occurrence of hearing impairment in sea turtles since: 1. elevated noise levels would occur for a fairly short period (52 days); and 2. sea turtle population within Tinian Harbor should not be significantly affected by noise levels as the area is prone to vessel activity. The presence of divers pose minimal effects that would be avoided by implementing BMPs. During in-water activities, it is highly unlikely that divers would have direct physical contact with any listed turtle species. A silt curtain would be utilized during proposed activity as a physical barrier to protect ESA-listed species from boring tests. Lastly, vigilant monitoring of ESA-listed species throughout the project should prevent any other source of collision that may occur.

The most likely effects on ESA-listed coral, *A. globiceps*, are direct impacts, localized turbidity, introduction of chemicals, and introduction of toxicopathological agents as discussed in previous section.

**CONCLUSION.** Based on the above analysis, the Navy finds that the Proposed Action, with the implementation of protective measures and BMPs, is consistent to the maximum extent practicable with enforceable Policy Elements 4 and 15 of the CNMI coastal management plan.

### Cultural Resources (Policy Element 11 and 12)

There are two properties included in the National Register of Historic Places (NRHP0 located within the proposed action area. Located just inland from the harbor, the House of Taga features

the largest erected latte stones in the Marianas. Since it lies beyond the designated action area, there will be no effects on this historical site. Despite the current deteriorated condition of Tinian Harbor, it maintains its structural integrity as a listing on the NRHP due to its military significance related to the World War II (WWII) atomic bombing mission and B-29 air base, as well as its engineering significance. The suggested action will not interfered with native soil, since the boring tests are limited to berths 1 and 2, as well as finger pier A. While Tinian Harbor could be impacted due to the potential discovery of human remains from both pre-contact and WWII victims, the cultural resources will remain unaffected for the following reasons: 1. the boring tests would impact a small area of the harbor; and 2. No harbor structure would be destroyed or removed. Before the project starts, there will be an archeological monitoring and discovery plan, which would involve an archeological field technician during the entire duration of the project.

**CONCLUSION.** Based on the above analysis, the Navy finds that the Proposed Action, with the implementation of protective measures and BMPs, is consistent to the maximum extent practicable with enforceable Policy Elements 11 and 12 of the CNMI coastal management plan.

## 5.0 Consistency Evaluation

As discussed above, the Navy finds that the soil investigation is consistent to the maximum extent practicable with the enforceable policies of the CNMI Coastal Management Program. Pursuant to 15 C.F.R.§930.41, the CNMI Coastal Management Program has 60 days from the receipt of this letter in which to concur with or object to this Consistency Determination, or to request an extension under 15 C.F.R. §930.41(b).

## 6.0 References


Becker, S. L., Brainard, R. E., & Van Houtan, K. S. (2019). Densities and drivers of sea turtle populations across Pacific coral reef ecosystems. *PloS one*, *14*(4), e0214972. https://doi.org/10.1371/journal.pone.0214972

DoN (Department of the Navy). 2014. Sea Turtle Marine Resources Survey Report in Support of the Commonwealth of the Northern Mariana Islands Joint Military Training Environmental Impact Statement/Overseas Environmental Impact Statement. Prepared by Tetra Tech, Oakland, under contract to SEI and AECOM-TEC/JV. Prepared for U.S. Navy, NAVFAC Pacific. March 2014.

DoN (Department of the Navy). 2021. Marine Resources Surveys in Support of PC19-03 Tinian Harbor Repairs, Tinian, Commonwealth of the Northern Mariana Islands. Prepared by Lyza Johnston. Prepared for U.S. Navy, NAVFAC Marianas. October 2021.

Downs, C.A., Kramarsky-Winter, E., Segal, R., Fauth, J., Knutson, S., Bronstein, O., Ciner, F.R., Jeger, R., Lichtenfeld, Y., Woodley, C.M. and Pennington, P. (2016). Toxicopathological effects of the sunscreen UV filter, oxybenzone (benzophenone-3), on coral planulae and cultured primary cells and its environmental contamination in Hawaii and the US Virgin Islands. Archives of environmental contamination and toxicology, 70(2), pp.265-288.

Erbe, C., & McPherson, C. (2017). Underwater noise from geotechnical drilling and standard penetration testing. The Journal of the Acoustical Society of America, 142(3), EL281. https://doi.org/10.1121/1.5003328

Kolinski, S. P., L. I. Ilo, and J. M. Manglona. 2004. “Green turtles and their marine habitats at

Tinian and Aguijan, with projections of resident turtle demographics in the southern arc of the Commonwealth of the Northern Mariana Islands." Micronesica 37:95-116.

Moffatt & Nichol. (2018). *Tinian Harbor Master Plan*.

Nedwell, J.; Brooker, A. (2008). Measurement and Assessment of Background Underwater Noise and its Comparison with Noise from Pin Pile Drilling Operations During Installation of the SeaGen Tidal Turbine Device, Strangford Lough (Report No. 724R0120). Report by Subacoustech Ltd. Report for Collaborative Offshore Wind Research into the Environment (COWRIE).

Smith, S. H. (2019). May 2019 Assessment of Selected Portions of Tinian Harbor, Tinian Island, Commonwealth of the Northerm Mariana Islands. Naval Information Warfare Center Pacific: Naval Information Warfare Center Pacific. p. 25.

Summers, T. M., Jones, T. T., Martin, S. L., Hapdei, J. R., Ruak, J. K., & Lepczyk, C. A. (2017). Demography of Marine Turtles in the Nearshore Environments of the Northern Mariana Islands1. Pacific Science, 71(3), 269-286.

U.S. Army Corps of Engineers. (2018). Tinian Harbor Modification Study, Island of Tinia, Commonwealth of the Northern Mariana Islands: Interim Feasibility Report Tinian Harbor Modification Study. Honolulu District.

U.S. Department of Transportation. *Construction Noise Handbook: Construction Equipment Noise Levels and Ranges*. 2017, www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm. Accessed 6 Aug. 2024.

Yuknavage, K., Iriarte, I., Maurin, L., Perez, D., Spaeth, T., and Williams, Z. (2022). Commonwealth of the Northern Mariana Islands Integrated 305(b) and 303(d) Water Quality Assessment Integrated Report. p. 182-195 pp.