



DEPARTMENT OF THE NAVY

U.S. NAVAL BASE GUAM
PSC 455 BOX 152
FPO AP 96540-1000

5090
Ser EV/0948
6 Jul 16

William M. Castro
Director
Guam Bureau of Statistics and Plans
P.O. Box 2950
Hagåtña, Guam 96932

Subject: NOTIFICATION OF CONSISTENCY DETERMINATION FOR PROJECT: FY15
MAINTENANCE DREDGE

U.S. Naval Base Guam is proposing to perform maintenance dredging operations at Inner Apra Harbor. The Navy has determined this proposed maintenance dredging will be consistent to the maximum extent practicable with mitigating any unintended effects on the Guam Coastal Zone. This consistency determination was directed in the enclosed Bureau of Statistics and Plans Letter dated 11 May 2016 and is a change from the negative determination submitted by the Navy on 15 Mar 2016.

The Navy has revised the effects test using colored text strike and text addition. The revised effects test is dated 29 Jun 16 and submitted as enclosure 2.

Should you have any questions or require additional information about this proposed project, please contact, Mr. Jeffrey Lambrecht, Environmental Planner, NAVFAC Marianas at (671) 339-2587 or email: jeffrey.lambrecht@fe.navy.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Ed Moon", is positioned below the word "Sincerely,".

E. E. MOON
By direction

Enclosures: 1. Bureau of Statistics and Plans Letter dated 11 May 2016
2. Revised Guam CZM Assessment Test dated 29 Jun 2016

Enclosure 1

Eddie Baza Calvo
Governor of Guam

**BUREAU OF
STATISTICS & PLANS**
SAGAN PLANU SIHA YAN EMFOTMASION



Ray Tenorio
Lieutenant Governor

Government of Guam
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William M. Castro
Director
James T. McDonald
Deputy Director

MAY 11 2016

E. E. Moon
Installation Environmental Program Director
U.S. Naval Base Guam
PSC 455, Box 152
FPO, AP 96540-1000

RE: 5090 Ser EV/0397 15 Mar 16; Notification of Negative Determination for
Project: FY15 Maintenance Dredge

Hafa Adai Mr. Moon,

The Bureau of Statistics and Plans has completed its review of the Department of the Navy's Federal Consistency application in which the Navy has issued a negative determination for the aforementioned project. The application stated that the Naval Base Guam is proposing to perform maintenance dredging operations at Inner Apra Harbor and that no coastal effects will be produced. It further states the proposed project will restore the original navigational depths of approximately -32, -35, and -40 feet MLLW. The total dredge material volume will be approximately 49,000 cubic yards (cy) with an anticipated overall in-water time of 6 to 8 months. The dredge material per day will be approximately 350 cy and will be transported to a Confined Disposal Facility (CDF) #5 located within the Naval Base installation between Marine Drive and Sumay Drive. In addition, the Navy completed the effects test and has determined that there will be no net coastal effect to Guam's Coastal Management Zone.

Upon review of the application and the documentations submitted, the Bureau has determine that the proposed project will have reasonably foreseeable effects on coastal resources and uses to the State of Guam and hereby issues its objection to the Department of the Navy's negative determination.

REASONABLY FORESEEABLE EFFECT ON COASTAL RESOURCES

Based on the enforceable policies, the Bureau has determined that the proposed maintenance dredging operations at Inner Apra Harbor will have coastal effects per the following:

Development Policy 1: Shoreline Area Development, DP8 Erosion and Siltation, and Resource Policy 2 Water Quality

The Bureau has determined that the operations will have reasonably foreseeable effects on coastal resources based on the Navy's dredging methodology utilizing mechanical measures such as clamshell buckets and barge-mounted excavators. Based on the Guam Environmental Protection Agency, Management of Contaminated Harbor Sediments in Guam, September 2000, (MCHS) it states that the use of mechanical measures such as the clamshell buckets and the 50 ton long reach excavator as stated on the Navy's application, will generate massive silt plumes and have an adverse impact on ambient water quality. The report further states that attempts to contain the suspended sediments utilizing marine turbidity curtains can proved to be very difficult, particularly so in harbors experiencing frequent ship traffic.

Resource Policy 3: Fragile Areas and Resource Policy 4: Living Marine Resources

The Bureau finds the proposed action will have reasonably foreseeable effects to the marine community, coral reefs, and all living resources within the waters of Guam based on the following:

The National Marine Fisheries Service (NMFS) letter dated April 7, 2016 to the Department of the Navy regarding the dredging in Northern Inner Apra Harbor, states the effects of dredging on "the site has historically supported significant coral reef habitat for a number of coral reef ecosystem management unit species (CREMUS)" and "the most severe effects are likely to occur due to removal of any existing reef habitat within the dredge footprint or sedimentation of corals or other habitat forming benthos at depths below the bottom of the silt...".

Under the Marine Resource Assessment (MRA) in the Entrance Channel of Inner Apra Harbor, Apra Harbor, February 2005, states that the center of the entrance channel to Inner Apra Harbor has a relatively large reef coral community. The report stated that the "staghorn coral *Acorpora sp.* (tentatively identified as *A. virgata*) was also observed in the entrance channel..." along with other dominant coral. Based on the application's overall site plan, part of the maintenance dredging will include the Entrance Channel, and areas within the Lima/Bravo Wharf. These listed areas for dredging have dense coral and sparse coral as depicted on the MRA report.

In addition, the NMFS letter, referenced above, stated that the Naval Base Guam is to provide data on the presence of coral reef habitat within the dredge footprint. They also requested estimated total reef area within the 500 ft radius of the project site that may be directly impacted by the dredging and estimate of the acres of this habitat that occurs below the bottom of the silt curtains (i.e., deeper than 25 ft) as this is the area most likely to suffer serious indirect impacts from the dredging activities.

Under the MCHS report, it states that “contaminants associated with sediments in Guam’s harbors would be dispersed and have more contact with water column inhabitants such as plankton when dredging disturbs the sediments.” It further states that “[w]hen harbors are dredged...the physical impacts of substrate removal, siltation, sedimentation and turbidity on the living resources in Guam’s waters is believed to be more damaging than impacts from the existing relatively stable chemical contaminants in harbor sediments, barring storm and typhoon movement of sediments.” The report goes on to mention “[d]redging temporarily removes surface-living and shallow-burrowing organisms, including algae, corals, sponges, worms, mollusks, crustaceans, echinoderms, tunicates and fishes.”

Under the effects test, pursuant to the 15 CFR 930.33, the Naval Base Guam “is to determine which of their activities affect any coastal use or resource of States with approved management programs. The effects are determined by looking at reasonably foreseeable direct and indirect effects on any coastal use or resource. An action which may have minimal or no environmental effects may still have effects on a coastal resource, if the activity initiates an event or series of events where coastal effects are reasonable foreseeable.” Based on the information submitted, the Naval Base Guam effects test was insufficient to claim a negative determination since dredging will have coastal effects as mentioned above. In addition, based on further evidence as stated on the NMFS letter, the MRA report and the MCHS report, presences of CREMUS within the dredging area and other existing reef habitat may be affected during the dredging further warrants a Federal Consistency Determination, not a Negative Determination.

Furthermore, information on benthic resources for the areas adjacent to the project site is insufficient. There will likely be significant indirect impacts of nearby resources such as the corals located at the mouth of the Inner Apra Harbor as well as nearby resources located in Sasa Bay Preserve. These impacts would result from the large amount of sediment that will move beyond the project site boundaries through the ~20-25 foot or so gap between the bottom of the silt curtain and the seafloor. A large proportion of the sediment disturbed by dredging will likely be very fine grained, which means it can travel relatively far before settling to the bottom. This fine grain silt/mud is especially harmful to corals and other benthic organisms. It is true that reef resources in this area regularly experience significantly degraded water quality, but the additional sediment contributed by dredging will likely be substantial and potentially fatal or at least highly stressful. And if the dredging occurs right along the slope at the northern edge of the Inner Apra Harbor mouth the coral rubble and sediment dropped as they are pulled towards the surface, or otherwise disturbed during dredging, will readily move outside the dredging footprint (out the bottom of the silt curtain) and down this slope, which the survey data indicates is host to substantial coral reef resources.

Further review of the application lacked information to determine what areas are classified as maintenance dredging versus construction dredging. The Naval Base Guam will need to identify and submit information on the areas that are deemed maintenance dredging

BSP-GCMP Ref. No. FC2016-0011
RE: 5090 Ser EV/0397 15 Mar 16
Notification of Negative Determination for
Project: FY15 Maintenance Dredge
Page 4

(dredged within the past 10 years) and areas deemed construction dredging (areas not dredged or have been dredged over a 10 year period).

In conclusion, the Bureau hereby objects to the Navy's Coastal Zone Management Act (CZMA) negative determination for the FY2015 Maintenance Dredge within the Inner Apra Harbor on the basis of Naval Base Guam activities will have a reasonably foreseeable effect on coastal resources and uses of the State of Guam, and in accordance to the Guam Coastal Management Program (GCMP), CZMA of 1972 (P.L. 92-583) as amended (P.L. 94-370). Therefore, the Naval Base Guam will be required to submit a Federal Consistency Determination in accordance with the provisions of 15 CFR 930.34(a)(1).

Should you need additional information, please contact Ms. Tina Mafnas, Planner at 475-9668 or Mr. Edwin Reyes, Guam Coastal Management Administrator at 475-9672 or email tina.mafnas@bsp.guam.gov or edwin.reyes@bsp.guam.gov, respectively.



WILLIAM M. CASTRO

cc: GEPA
DOAgr-DAWR
USACE
NOAA-NMFS
NOAA-OCM
UOG-CRCP-CRMP

Enclosure 2

GUAM COASTAL MANAGEMENT PROGRAM ASSESSMENT FORMAT

DATE OF APPLICATION: ~~January 28, 2016 (Page 7 added April 12, 2016)~~
June 29, 2016

NAME OF APPLICANT: Edward E, Moon, Installation Environmental Program
Director

ADDRESS: Department of the Navy, Joint Region Marianas
PSC 455, Box 195, FPO AP 96540-2937

TELEPHONE NO. (671) 339-4100

TITLE OF PROPOSED PROJECT: FY15 Maintenance Dredge, Naval Base Guam

COMPLETE FOLLOWING PAGES

FOR BUREAU OF PLANNING ONLY:

DATE APPLICATION RECEIVED: _____

OCRM NOTIFIED: _____ **LIC. AGENCY NOTIFIED:** _____

APPLICANT NOTIFIED: _____ **PUBLIC NOTICE GIVEN:** _____

OTHER AGENCY REVIEW REQUESTED: _____

DETERMINATION: (X) CONSISTENT () NON-CONSISTENT () FURTHER
INFORMATION REQUESTED

OCRM NOTIFIED: _____ **LIC. AGENCY NOTIFIED:** _____

APPLICANT NOTIFIED: _____

ACTION LOG:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

DATE REVIEW COMPLETED: _____

**GUAM COASTAL MANAGEMENT PROGRAM
ASSESSMENT FORMAT**

DEVELOPMENT POLICIES (DP):

1. Shore Area Development

Intent: To ensure environmental and aesthetic compatibility of shore area land uses.

Policy: Only those uses shall be located within the Seashore Reserve which:

- enhance, are compatible with, or do not generally detract from the surrounding coastal area's aesthetic and environmental quality and beach demonstration accessibility, or
- demonstrate dependence on such a location and the lack of feasible alternative sites.

Discussion:

The proposed project is to conduct maintenance dredging at the entrance of Inner Apra Harbor, Guam. Maintenance dredging is planned to restore -32, -35, and -40 feet mean lower low water (MLLW) of navigational depth. The work will consist of removing shoals/sediments along the length of the wharf from no closer than 10'-0" from the wharf face and throughout the dredge footprint. The total dredge material volume is approximately 49,000 cy including two feet of overdredge allowance. The dredging operations will utilize a barge-mounted closed bucket excavator and the sediments will be offloaded at either Quebec Wharf or the Finger Piers and placed at Confined Disposal Facility (CDF) #5. CDF #5 is an existing CDF located within the base between Marine Drive and Sumay Drive. It is comprised of two cells: Field 5a and Field 5b. The cells were built in 2006 for the management of dredged materials from the Alpha/Bravo Wharf Improvements project.

2. Urban Development

Intent: To cluster high impact uses such that coherent community design, function, infrastructure support and environmental compatibility are assured.

Policy: Commercial, multi-family, industrial and resort-hotel zone uses and uses requiring high levels of support facilities shall be concentrated with urban districts as outlined on the Land Use Districting Map.

Discussion: **NOT APPLICABLE**

DEVELOPMENT POLICIES (DP):

3. Rural Development

Intent: To provide a development pattern compatible with environmental and infrastructure support suitability and which can permit traditional lifestyle patterns to continue to the extent practicable.

Policy: Rural districts shall be designated in which only low density residential and agricultural uses will be acceptable. Minimum lot size for these uses should be one-half acre until adequate infrastructure including functional sewerage system is provided.

Discussion: **NOT APPLICABLE**

4. Major Facility Siting

Intent: To include the national interest in analyzing the siting proposals for major utilities, fuel, and transport facilities.

Policy: In evaluating the consistency of proposed major facilities with the goals, policies, and standards of the Comprehensive Development and Coastal Management Plans, the Territory shall recognize the National interest in the siting of such facilities including those associated with electric power production and transmission, petroleum refining and transmission, port and air installations, solid waste disposal, sewage treatment, and major reservoir sites.

Discussion:

Not Applicable

5. Hazardous Areas

Intent: Development in hazardous areas will be governed by the degree of hazard and the land use regulations.

Policy: Identified hazardous lands, including floodplains, erosion-prone areas, air installations, crash and sound zones and major fault lines shall be developed only to the extent that such development does not pose unreasonable risks to the health, safety or welfare of the people of Guam, and complies with the land use regulations.

Discussion: **NOT APPLICABLE.**

6. Housing

Intent: To promote efficient community design placed where the resources can support it.

Policy: The government shall encourage efficient design of residential areas, restrict such development in areas highly susceptible to natural and man-made hazards, and recognize the limitations of the island's resources to support historical patterns of residential development.

Discussion: **NOT APPLICABLE**

7. Transportation

- Intent: To provide transportation systems while protecting potentially impacted resources.
- Policy: The territory shall develop an efficient and safe transportation system, while limiting adverse environmental impacts on primary aquifers, beaches, estuaries, and other coastal resources.
- Discussion:

Not Applicable

8. Erosion and Siltation

- Intent: To control development where erosion and siltation damage is likely to occur.
- Policy: Development shall be limited in areas of 15% or greater slope by requiring strict compliance with erosion, sedimentation, and land use districting guidelines, as well as other related land use standards for such areas.
- Discussion:

Erosion and siltation will be controlled by standard best management practices (BMPs). BMPs for this project includes the use of silt containment devices, implementation of construction debris disposal plan, use of closed clamshell bucket excavator to reduce sediment re-suspension, implementation of a water quality monitoring plan, protection of storm drain inlets and other drainage facilities, and to control and minimize elevated sedimentation and turbidity during in-water construction activities.

Turbidity and siltation from project-related work will be minimized and contained through the appropriate use of effective silt containment devices and the curtailment of work during adverse tidal and weather conditions. Silt curtains will completely enclose dredging operations to the maximum extent practicable.

Turbidity will be monitored at least hourly using a Guam EPA approved Water Quality Monitoring Plan. This monitoring will demonstrate the effectiveness of the silt containment devices. Deviations from the water quality standards will require the contractor to implement BMPs to reduce the plume within the silt curtain. These BMPs will include operation stops, bucket tempo slow down, double silt curtains, and longer silt

curtains. Historically, the Guam EPA reviews the turbidity monitoring records weekly and makes routine site visits to ensure quality control. Maintenance dredging after 2012 at Naval Base Guam does not generate massive plumes outside the silt curtains as demonstrated through Guam EPA site visits and turbidity monitoring records.

These BMPs and water quality monitoring demonstrate that the dredging activities will be consistent to the maximum extent practicable and mitigate any unintended effects on the Coastal Zone.

RESOURCES POLICIES (RP):

1. Air Quality

Intent: To control activities to insure good air quality.

Policy: All activities and uses shall comply with all local air pollution regulations and all appropriate Federal air quality standards in order to insure the maintenance of Guam's relatively high air quality.

Discussion:

The proposed action will not have air emissions exceeding the National Ambient Air Quality Standards and the National Emission Standards for Hazardous Air Pollutants.

2. Water Quality

Intent: To control activities that may degrade Guam's drinking, recreational, and ecologically sensitive waters.

Policy: Safe drinking water shall be assured and aquatic recreation sites shall be protected through the regulation of uses and discharges that pose a pollution threat to Guam waters, particularly in estuarine, reef, and aquifer areas.

Discussion:

The project is not within a groundwater protection zone and the groundwater beneath the upland disposal area is not a drinking water source.

401 Water Quality Certification(s) shall be obtained for this project. Dredging will have visual monitoring for plumes. Competent observers will be designated to visually survey the marine areas within and adjacent to the project footprint for protected species. Additionally, all project-related materials and equipment placed in the water will be free of pollutants. The project manager and heavy equipment operator will perform daily pre-

work equipment inspections for cleanliness and leaks. All heavy equipment operations will be postponed or halted should a leak be detected. Operations will not proceed until the leak is repaired and equipment cleaned.

Potential adverse marine quality impacts will be minimized through implementation of best management practices (BMPs). BMPs will include the use of silt containment devices, implementation of construction debris disposal plan, use of closed clamshell bucket excavator to reduce sediment re-suspension, implementation of a water quality monitoring plan, protection of storm drain inlets and other drainage facilities.

Turbidity will be monitored at least hourly using a Guam EPA approved Water Quality Monitoring Plan. This monitoring will demonstrate the effectiveness of the silt containment devices. Deviations from the water quality standards will require the contractor to implement BMPs to reduce the plume within the silt curtain. These BMPs will include operation stops, bucket tempo slow down, double silt curtains, and longer silt curtains. Historically, the Guam EPA reviews the turbidity monitoring records weekly and makes routine site visits to ensure quality control. Maintenance dredging after 2012 at Naval Base Guam does not generate massive plumes outside the silt curtains as demonstrated through Guam EPA site visits and turbidity monitoring records.

These BMPs and water quality monitoring demonstrate that the dredging activities will be consistent to the maximum extent practicable and mitigate any unintended effects on the Coastal Zone.

3. Fragile Areas

Intent: To protect significant cultural areas, and natural marine and terrestrial wildlife and plant habitats.

Policy: Development in the following types of fragile areas, including Guam's marine protected areas, shall be regulated to protect their unique character.

- Historical and archeological sites
- Wildlife habitats
- Pristine marine and terrestrial communities
- Limestone forests
- Mangrove stands and other wetlands
- Coral reefs

Discussion:

The fragile areas associated with this dredging effort are coral growth on natural substrate at the entrance to Inner Harbor. This coral growth will not be dredged. Strategic use of silt curtains and hourly water quality monitoring will reduce the possibility of impact.

In addition to the sediment control practices outlined in RP2 Water Quality, coral monitoring using divers will observe and record any effects of sediment on the coral at the Inner Apra Harbor Entrance. The coral monitoring will be another BMP to allow the Navy to assess if sediment is properly controlled. The coral monitoring will demonstrate that the dredging activities will be consistent to the maximum extent practicable and mitigate any unintended effects on the Coastal Zone.

4. Living Marine Resources

Intent: To protect marine resources in Guam's waters.

Policy: All living resources within the waters of Guam, particularly fish, shall be protected from overharvesting and, in the case of corals, sea turtles, and marine mammals, from any taking whatsoever.

Discussion:

The proposed action will not have a significant impact on living resources. Strategic use of silt curtains and hourly water quality monitoring will reduce the possibility of impact.

In addition to the sediment control practices outlined in RP2 Water Quality, coral monitoring using divers will observe and record any effects of sediment on the coral at the Inner Apra Harbor Entrance. The coral monitoring will be another BMP to allow the Navy to assess if sediment is properly controlled. The coral monitoring will demonstrate that the dredging activities will be consistent to the maximum extent practicable and mitigate any unintended effects on the Coastal Zone.

5. Visual Quality

Intent: To protect the quality of Guam's natural scenic beauty.

Policy: Preservation and enhancement of, and respect for the island's scenic resources shall be encouraged through increased enforcement of a compliance with sign, litter, zoning, subdivision, building and related land-use laws. Visually objectionable uses shall be located to the maximum extent practicable so as not to degrade significant views from scenic overlooks, highways, and trails.

Discussion:

The proposed action will not degrade the site's existing visual qualities, nor will it affect the natural scenic features of the area.

6. Recreation Areas

Intent: To encourage environmentally compatible recreational development

Policy: The Government of Guam shall encourage development of varied types of recreational facilities located and maintained so as to be compatible with the surrounding environment and land uses, adequately serve community centers and urban areas and protect beaches and such passive recreational areas as wildlife and marine conservation areas, scenic overlooks, parks and historical sites.

Discussion:

This project is located in the Inner Apra Harbor, where recreational activities such as diving, fishing, jet skiing, etc. are prohibited.

7. Public Access

Intent: To ensure the right of public access.

Policy: The public right of unrestricted access shall be ensured to all non-federally owned beach areas and all Territorial recreation areas, parks, scenic overlooks, designated conservation areas and their public lands; and agreements shall be encouraged with the owners of private and federal property for the provision of releasable access to and use of resources of public nature located on such land.

Discussion:

The project area is a military facility and is part of U.S. Naval Base installation. Access to the project site is restricted and only personnel with base access are allowed at the site.

8. Agricultural Lands

Intent: To stop urban types of development on agricultural land.

Policy: Critical agricultural land shall be preserved and maintained for agricultural use.

Discussion: **NOT APPLICABLE**

**FEDERAL CONSISTENCY
SUPPLEMENTAL INFORMATION FORM**

DATE : ~~December 13, 2013~~
June 29, 2016

Project /Activity Title or Description: FY15 Maintenance Dredge, Naval Base Guam

Location: Inner Apra Harbor, Santa Rita Naval Base Guam

Other applicable area(s) affected, if appropriate: N/A

APPLICANT:

Name & Title: Edward E, Moon, Installation Environmental Program
Director

Agency/Organization: NAVFACMAR Environmental Office

Address: Department of the Navy
PSC 455, Box 195, FPO AP

Zip: 96540-2937

Telephone No. during business hours:

(671) 339-4100

AGENT:

Name & Title Jeffrey Lambrecht, NFM Environmental Coordinator

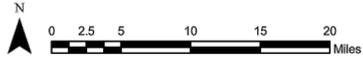
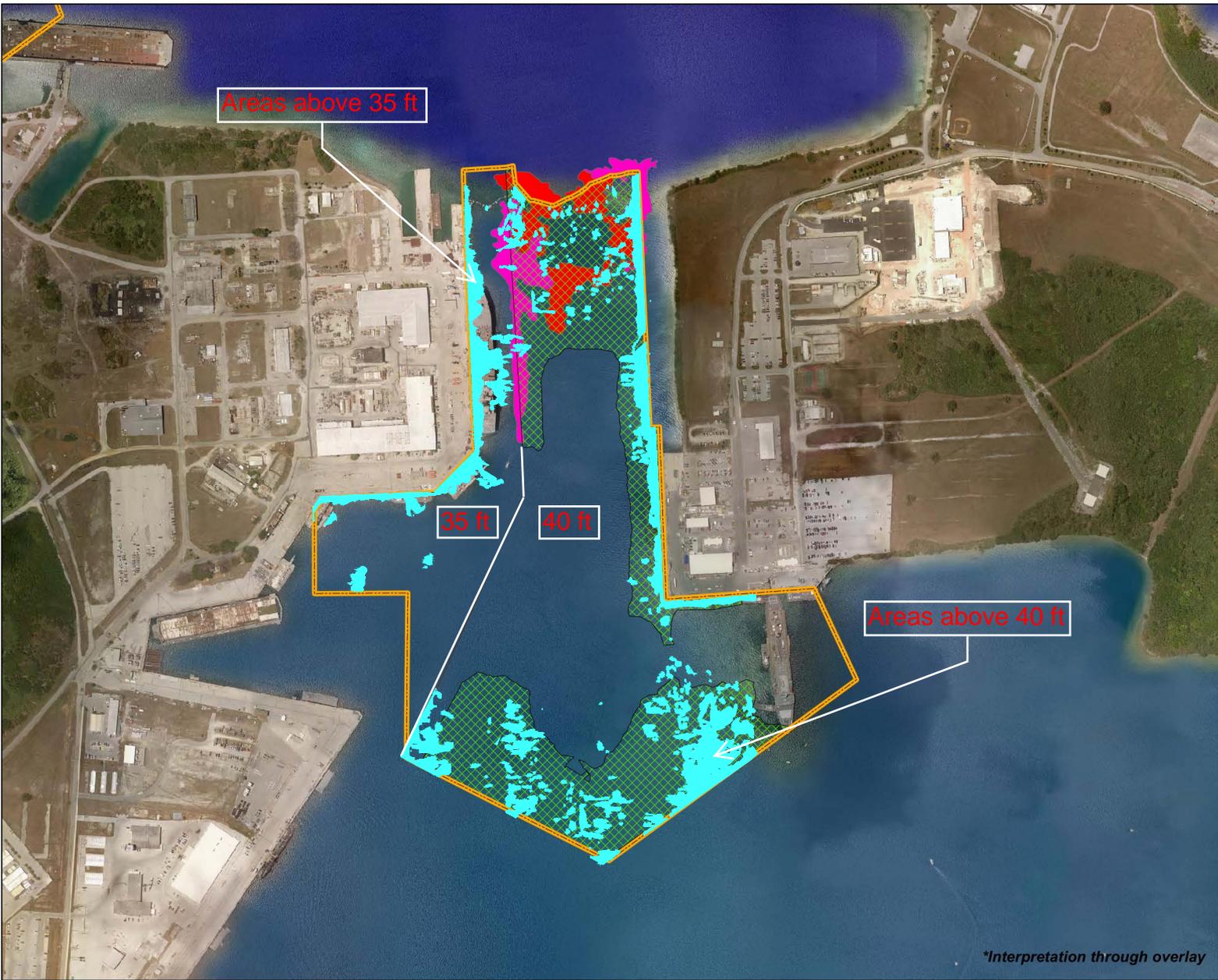
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Telephone No. during business hours:

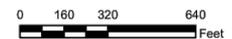
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**Naval Base Guam
Apra Harbor**



Projected Coordinate System: WGS_1984_UTM_Zone_55N
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 False_Easting: 500000.00000000
 False_Northing: 0.00000000
 Central_Meridian: 147.00000000
 Scale_Factor: 0.99960000
 Latitude_Of_Origin: 0.00000000
 Linear Unit: Meter



Public Works Department
 Arlene Bernardo
 339-2619

Legend

	Proposed Dredge
	Previously Dredged 2007
	Sparse Coral
	Dense Coral

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**Interpretation through overlay*