



NOAA
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**Critical Habitat Information Report:
Appendix B
Existing Artificial Substrates and Managed
Areas within the Island Units
of Proposed Coral Critical Habitat**

**Pacific Islands Regional Office
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Appendix B

Existing Artificial Substrates and Managed Areas within the Island Units of Proposed Coral Critical Habitat

1.1 INTRODUCTION

This appendix lists all existing artificial substrates and managed areas within the island units of proposed coral critical habitat. As explained in the Information Report, no such existing artificial substrates and managed areas are included in proposed coral critical habitat. Proposed or planned artificial substrates and managed areas are not included. Since Farallon de Medinilla (FDM) and Wake Atoll are both ineligible for proposed coral critical habitat because of 4(a)(3) (see Section 4 of the Information Report), they are not included in this appendix. Citations for literature cited below are provided in the Information Report.

1.2 ISLAND UNITS

1) Tutuila and Offshore Banks (0 – 50 m depth).

a) Artificial Substrates:

- i) 11 fixed and floating Aids to Navigation (AToNs) (USCG 2015).
- ii) U.S. Army Corps of Engineers (USACE)-managed seawalls (Afono, Aoa, Lepua, Masefau, Matafao, Paloa, Vatia, Pago Pago to Nuuli, and Pago Pago Airport Shore Protection and Beach Erosion Control Projects), as described under the “American Samoa>Tutuila Island” webpages of USACE (2021).
- iii) All other AToNs, seawalls, wharves, docks, boat ramps, bridge supports, moorings, pipes, wrecks, and other artificial structures. No comprehensive list or map is available, although NCCOS (2005) shows some of the larger artificial substrates.

b) Managed Areas:

- i) All harbors and their entrance channels, navigation channels, turning basins, and berthing areas managed by the Port of Pago Pago.
- ii) USACE-managed small boat harbors, basins, and entrance channels (areas within “Federal Project Limits” indicated in Hydrographic Surveys for Aunu’u and Auasi Small Boat Harbors, as described under the “American Samoa>Aunu Island” and “American Samoa>Tutuila Island” webpages of USACE (2021)), their seawall breakwaters, and areas lying between the Federal Project Limits and seawall breakwaters.
- iii) All other harbors and their entrance channels, navigation channels, turning basins, and berthing areas that are periodically dredged or maintained, all seawall breakwaters, and areas lying between the managed areas and seawall breakwaters. No comprehensive list or map is available, although the NOAA navigation charts for American Samoa (NOAA Chart 83484) show some managed areas (link provided below).
- iv) Substrate around AToN bases that is subject to scour by AToN chains or otherwise periodically impacted by the AToNs.

- 2) Ofu and Olosega (0 – 20 m depth).
 - a) Artificial Substrates:
 - i) Two fixed and floating AToNs (USCG 2015).
 - ii) USACE-managed Ofu Airstrip Shore Protection Project, as described on USACE Honolulu District Civil Works' website (USACE 2021).
 - iii) All other AToNs, seawalls, wharves, docks, boat ramps, bridge supports, moorings, pipes, wrecks, and other artificial structures.
 - b) Managed Areas:
 - i) USACE-managed Ofu Small Boat Harbor and entrance channel (areas within "Federal Project Limits" indicated in the Ofu Harbor Hydrosurvey on the Ofu Small Boat Harbor webpage of USACE 2021), their seawall breakwaters, and areas lying between the Federal Project Limits and seawall breakwaters.
 - ii) All other harbors and their entrance channels, navigation channels, turning basins, and berthing areas that are periodically dredged or maintained.
 - iii) Substrate around AToN bases that is subject to scour by AToN chains or otherwise periodically impacted by the AToNs.
- 3) Ta'u (0 – 20 m depth).
 - a) Artificial Substrates:
 - i) Four fixed and floating AToNs (USCG 2015).
 - ii) All other AToNs, seawalls, wharves, docks, boat ramps, bridge supports, moorings, pipes, wrecks, and other artificial structures.
 - b) Managed Areas:
 - i) USACE-managed Ta'u Small Boat Harbor and entrance channel (areas within "Federal Project Limits" indicated in the Tau Harbor Hydrosurvey on the Ta'u Small Boat Harbor webpage of USACE 2021), their seawall breakwaters, and areas lying between the Federal Project Limits and seawall breakwaters.
 - ii) Faleasao Harbor and entrance channel (Demirbilek et al. 2015).
 - iii) All other harbors and their entrance channels, navigation channels, turning basins, and berthing areas that are periodically dredged or maintained.
 - iv) Substrate around AToN bases that is subject to scour by AToN chains or otherwise periodically impacted by the AToNs.
- 4) Rose Atoll (0 – 20 m depth).
 - a) Artificial Substrates: None
 - b) Managed Areas: None
- 5) Guam (0 – 12 m depth).
 - a) Artificial Substrates:
 - i) 32 fixed and floating AToNs (USCG 2015).

- ii) USACE-managed seawalls (Asquiroga Bay Shoreline Protection Project and any marine components of the other flood control and shoreline protection projects), as described under the “Guam” webpages of USACE (2021).
 - iii) All other ATOns, seawalls, wharves, docks, boat ramps, bridge supports, moorings, pipes, wrecks, and other artificial structures. No comprehensive list or map is available, although NCCOS (2005) shows some of the larger artificial substrates.
- b) Managed Areas:
- i) All harbors and their entrance channels, navigation channels, turning basins, and berthing areas managed by the Guam Port Authority.
 - ii) All harbors and their entrance channels, navigation channels, turning basins, and berthing areas managed by the Navy within Apra Harbor, and their seawall breakwaters (DON 2019).
 - iii) USACE-managed small boat harbors, basins, and navigation channels (areas within “Federal Project Limits” indicated in Hydrographic Surveys for Agat and Agana Small Boat Harbors on USACE Honolulu District Civil Works’ website), their seawall breakwaters, and areas lying between the Federal Project Limits and seawall breakwaters.
 - iv) All other harbors and their entrance channels, navigation channels, turning basins, and berthing areas that are periodically dredged or maintained. No comprehensive list or map is available, although the NOAA navigation charts for Guam (NOAA Chart 81048) and Apra Harbor (NOAA Chart 81054) show some managed areas (links provided below).
 - v) Substrate around ATOn bases that is subject to scour by ATOn chains or otherwise periodically impacted by the ATOns.
- 6) Rota (0 – 12 m depth).
- a) Artificial Substrates:
- i) Two fixed ATOns (USCG 2015).
 - ii) All other ATOns, seawalls, wharves, docks, boat ramps, bridge supports moorings, pipes, wrecks, and other artificial structures. No comprehensive list or map is available, although NCCOS (2005) shows some of the larger artificial substrates, and CNMI DLNR (2021) lists and maps several artificial substrates on Rota.
- b) Managed Areas:
- i) USACE-managed Rota Harbor and entrance channel (areas within “Federal Project Limits” indicated in Hydrographic Surveys for the Rota Harbor on USACE Honolulu District Civil Works’ website), their seawall breakwaters, and areas lying between the Federal Project Limits and seawall breakwaters.
 - ii) All other harbors and their entrance channels, navigation channels, turning basins, and berthing areas that are periodically dredged or maintained. No comprehensive list or map is available, although the NOAA navigation charts for Rota (NOAA Chart 81063) show some managed areas (link provided below).
 - iii) Substrate around ATOn bases that is subject to scour by ATOn chains or otherwise periodically impacted by the ATOns.

- 7) Aguijan (0 – 12 m depth).
 - a) Artificial Substrates: None
 - b) Managed Areas: None
- 8) Tinian (0 – 12 m depth).
 - a) Artificial Substrates:
 - i) Six fixed AToNs (USCG 2015).
 - ii) All other AToNs, seawalls, wharves, docks, boat ramps, bridge supports, moorings, pipes, wrecks, and other artificial structures. No comprehensive list or map is available, although NCCOS (2005) shows some of the larger artificial substrates, and CNMI DLNR (2021) lists and maps several artificial substrates on Tinian.
 - b) Managed Areas:
 - i) Tinian Harbor and entrance channel as shown on NOAA Navigation Chart 81071 (link provided below), and its seawall breakwater.
 - ii) All other harbors and their entrance channels, navigation channels, turning basins, and berthing areas that are periodically dredged or maintained. No comprehensive list or map is available, although the NOAA navigation charts for Saipan and Tinian (NOAA Chart 81067) show some managed areas (link provided below), and CNMI DLNR (2021) lists and maps several managed areas on Tinian.
 - iii) Substrate around AToN bases that is subject to scour by AToN chains or otherwise periodically impacted by the AToNs.
- 9) Saipan (0 – 12 m depth).
 - a) Artificial Substrates:
 - i) 15 fixed AToNs (USCG 2015).
 - ii) The USACE-managed seawall at Saipan Beach Road, as described under the “Commonwealth of the Mariana Islands (CNMI)” webpage of USACE (2021).
 - iii) All other AToNs, seawalls, wharves, docks, boat ramps, bridge supports, moorings, pipes, wrecks, and other artificial structures. No comprehensive list or map is available, although NCCOS (2005) shows some of the larger artificial substrates, and CNMI DLNR (2021) lists and maps several artificial substrates on Saipan.
 - b) Managed Areas:
 - i) All harbors and their entrance channels, navigation channels, turning basins, and berthing areas managed by the Commonwealth Ports Authority.
 - ii) The Saipan Harbor and navigation channel, shown in the NOAA navigation charts for Saipan Harbor (NOAA Chart 81076, link provided below).
 - iii) All other harbors and their entrance channels, navigation channels, turning basins, and berthing areas that are periodically dredged or maintained. No comprehensive list or map is available, although the NOAA navigation charts for Saipan and Tinian (NOAA Chart 81067) show some managed areas (link provided below), and CNMI DLNR (2021) lists and maps several managed areas on Saipan.

- iv) Substrate around AToN bases that is subject to scour by AToN chains or otherwise periodically impacted by the AToNs.
- 10) Pagan (0 – 12 m depth).
- a) Artificial Substrates: None
 - b) Managed Areas: None
- 11) Maug Islands (0 – 12 m depth).
- a) Artificial Substrates: None
 - b) Managed Areas: None
- 12) Palmyra Atoll (0 – 10 m depth).
- a) Artificial Substrates: Seawalls, wharves, docks, boat ramps, bridge supports, moorings, pipes, wrecks, and other artificial structures (NCCOS 2010).
 - b) Managed Areas:
 - i) Main entrance channel into lagoon;
 - ii) Dredged area in central lagoon;
 - iii) All other harbors and their entrance channels, navigation channels, turning basins, and berthing areas that are periodically dredged or maintained.
- 13) Johnston Atoll (0 – 10 m depth).
- a) Artificial Substrates: Seawalls, wharves, docks, boat ramps, bridge supports, moorings, pipes, wrecks, and other artificial structures.
 - b) Managed Areas:
 - i) Main Channel, the Turning Basin, and the West Channel (no other dredged channels or areas are considered managed areas because they have not received any sort of management activity in decades and have been left for marine life to recolonize over time; USFWS 2021);
 - ii) Secondary dredged channels extending from turning basin.
- 14) French Frigate Shoals (0 – 10 m depth).
- a) Artificial Substrates: Seawalls, wharves, docks, boat ramps, bridge supports, moorings, pipes, wrecks, and other artificial structures (NCCOS 2003).
 - b) Managed Areas: None.

1.3 *LITERATURE CITED*

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