

GUAM DEPARTMENT OF AGRICULTURE
185th WESTERN PACIFIC REGIONAL FISHERY
MANAGEMENT COUNCIL MEETING AGENCY REPORT

SHORE-BASED FISHERIES

The Governor of Guam signed Executive Order No 2021-01 on January 14, 2021 moving Guam from Pandemic Condition of Readiness 1 (PCOR) to PCOR 2 effective January 18, 2021. During PCOR 2, all DAWR surveys involving face to face interaction with the public were initiated and staff began scheduling and conducting these surveys, which included the creel interview surveys.

No update on the shore-based creel surveys due to the creel database computer's hard drive failing. Staff are working on purchasing a new creel database computer and inputting the data on the back up creel database computer system.

BOAT-BASED FISHERIES

Report Period: July 1, 2020 through December 31, 2020.

A calendar year has 96 boat-based creel survey days and 24 participation surveys, or eight (8) creel surveys and two (2) participation surveys monthly. For the reporting period of six (6) months, 48 boat-based creel surveys and 12 participation surveys are regularly scheduled. Due to PCOR 1 (Pandemic Condition of Readiness) that resulted in the shutdown of government office and temporary suspension of face-to-face interaction with the public, only 13 of 48 boat-based creel surveys were scheduled and completed. The number of monthly participation surveys were increased to ten (10) from August through December, therefore, 52 participation surveys were scheduled and completed.

SURVEY	No. Surveys Scheduled	No. Surveys Completed
BOAT-BASED		
Boat-based creel	48	13
Participation	52	52

Table 1. Number of boat-based surveys scheduled and conducted from July 1, 2020 to December 31, 2020

A total of 117 interviews obtained during the time period, all from the months of July and the first half of August. The expansion system estimated 103.5 metric tons of boat-based fish harvested in the time period. Landings, participation, and effort calculated for the time period are shown in Table 2 below.

Boat-Based Method	No. Interviews	Landings (metric tons)	Trips	Hours	Persons
Trolling	77	89.9	4,931	28,204	11,262
Bottom fishing	31	8.6	1,613	6,789	4,797
Spearing	6	4.1	536	1,882	2,900
Atulai night jigging	0	0.4	30	147	90
Other Methods	3	0.5	72	133	216
Total	117	103.5	7,182	37,155	19,265

Table 2: Boat-based Summary Data for the top five (5) methods for time period July 1, 2020 to December 31, 2020

The most common boat-based method encountered based on trips was trolling, followed by bottom fishing and spearing. During the time period, activity at the Agat Marina and the Agana Boat Basin were normal, with activity increasing during the weekends and decreasing on the weekdays and during periods of rough seas. Fishing activity at the Merizo boat ramp, however, continues to be significantly low, although an increase in fishing activity may have occurred due to people relying more on fish for sustenance and for local sale. Reef fish continues to be a sought-after commodity that is sold in local village stores. Charter trips significantly decreased almost to zero due to a lack of Asian tourists, although some charter boats adapted during the COVID period by advertising to military personnel and using social media to attract local residents. Regional COVID infection rates in Asia prevented tourists from visiting Guam and government policy requiring social distancing resulted in the cancellation of almost all charter trips. During the end of 2020, restrictions on military and local residents gathering were relaxed, and some charter fishing was observed.

Participation in the fishery is dependent on the availability of fish stocks and weather conditions. Trolling remains the method most boat-based fishers engaged in. With SCUBA spearing banned in March, only snorkel spearing was observed. On the rare event that SCUBA spearing was observed, fishers were informed that the method is illegal. Recreational and commercial bottom fishing and spearing continued during the time period.

Trolling made up 87% of boat-based fishing landing, 69% of all trips, 76% of all fishing hours, and 58% of all persons fishing in the time period. As a result, pelagic species comprised the top four (4) species harvested for the time period (see Table 3). Although yearly harvest levels of pelagic species show regular trends of increase and decrease, catch still depends on the availability of fish and weather conditions. During the time period, skipjack tuna continues to be the most caught fish due to a fleet of over a dozen commercial Micronesian two-man fishing boats that target, harvest, and sell large amounts of skipjack tuna and to lesser degree, yellowfin tuna. These highliners fish most days of the week and are observed to harvest significantly large numbers of skipjack and yellowfin tuna, significantly more than other trollers. Their large catches are due to their method of searching out schools by observing bird behaviour, then

trolling the school for the entire day. Their catch, therefore, is composed almost exclusively of mostly juvenile-sized skipjack and yellowfin tuna. Based on the 2019 stock assessment report for the region, these two tuna species are not overfished and overfishing is not occurring in the waters around Guam.

Species	Landings (metric tons)
<i>Katsuwonus pelamis</i>	75.3
<i>Thunnus albacares</i>	10.4
<i>Sphyraena barracuda</i>	2.3
<i>Coryphaena hippurus</i>	2.3
<i>Lethrinus rubrioperculatus</i>	1.4
<i>Etelis coruscans</i>	1.0

Table 3: Top six (6) species caught by boat-based fishers for time period July 1, 2020 to December 31, 2020. The top four fish species are caught by trolling, the next two species are caught by bottom fishing.

Yearly CPUE values depend on the availability of fish as well as intercepting as many fishers during boat-based creel surveys. While trolling and bottom fishing continue to be the methods most commonly intercepted, atulai-night jigging had the highest CPUE for the time period (Table 4). Atulai night-jigging trips intercepted during the time period had large catches, which is reflected in the high CPUE value. The relatively low CPUE's for bottom fishing and spearing could reflect decreasing reef and bottom fish stocks around Guam, with most fishermen intercepted for these methods often having low catches.

Boat-Based Method	CPUE (kg/gear-hr.)
Trolling	1.37
Bottom fishing	0.46
Atulai night-jigging	13.5
Spearing	0.11
Castnet	3.0

Table 4: CPUE for the top five (5) methods for time period July 1, 2020 to December 31, 2020.

The PCOR 1 designation did not appear to have significantly decreased boat-based fishing activity. Fishing activity appeared to be comparable to fishing activity observed the last three (3) years, with fishing activity during the beginning of the government shutdown in March remaining high.

BOATING ACCESS PROGRAM:

Talofofo Boat Ramp

The Guam Economic Development Authority (GEDA) is conducting a feasibility study for Talofofo Bay (Figures 1 and 2) as a potential boat ramp site. DAWR provided recommendations to GEDA regarding the boat ramp design. The initial cost of the study was \$260,000, which GEDA received through an U.S. Department of Interior grant. An additional \$57,000 is needed to proceed from 30% design to 100%. (\$33,000 for boring + \$24,000 for a boring permit). The study is expected to be completed this year. DAWR met with GEDA in March 2019 to discuss the feasibility study, funding a portion of the boring, and funding the construction of the ramp. DAWR agreed to fund approximately \$44,000 of the cost for the boring and permit.

Update: GEDA informed Agriculture on October 15, 2020 that the Memorandum of Understanding (MOU) and funding requested from DAWR for the soil borings test would not be needed anymore. GEDA is taking a different approach and is preparing a Design-Build request for Proposal (RFP) package, which is intended to be issued by the agency that would eventually construct the boat ramp. GEDA intends to call a meeting with the project stakeholders in the near future to discuss the progress.



Figure 1. Proposed Talofofo Bay Boat Access Site



Figure 2. Talofofo Channel Entrance

Replacement of Agat Marina's Dock B/Repair of the Boat Ramp Walkway Bumpers. Three of the four docks at the Agat marina were replaced by the Port Authority of Guam (PAG), with Dock B not repaired due to funding challenges with the Port. Agriculture has funded phase

1 of replacing Dock B, the demolition and removal of the damaged Dock B. The demolition was completed January 2019 with Agriculture funding 100% of the project in the amount of \$48,678. (Figure 3) As a result, the Port Authority has agreed to set aside Dock B solely for recreational boaters. This will increase available berths for local recreational boaters at the Agat Marina. Agriculture has agreed to fund up to 50% of the cost of replacing Dock B, up to a maximum of \$500,000.

The MOU and work requests for the project have been completed and signed by the Director of Agriculture (DOAG). DAWR staff delivered the MOU and work request on June 1, 2020 to the PAG General Manager for review and signature. Revisions were made to the MOU by PAG and DOAG, signed by the Bureau of Budget and Research, and delivered to the Guam Attorney General's office for review and signature on August 5, 2020.

Update: The MOU for the Dock B replacement project was returned to DOAG by the AG's office on September 14, 2020 for revisions. DAWR and PAG met to discuss the revisions, and PAG completed the revision on February 12, 2021. DAWR is currently reviewing the revised MOU and will be routing the MOU for signatures once it completes the review.

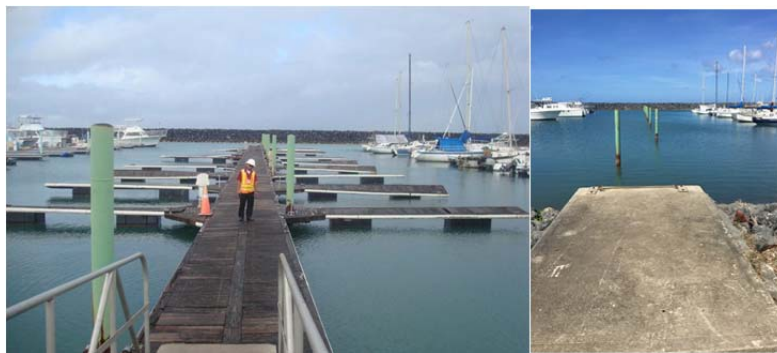


Figure 3. Photographs of Agat Marina's damaged Dock B before and after demolishing using funds from the Department of Agriculture Division of Aquatic and Wildlife Resources' (DAWR) Sport Fish Restoration Program.

Harbor of Refuge. Agriculture is assisting the Port Authority of Guam (PAG) with the repair of the Harbor of Refuge. The facility currently does not meet Coast Guard standards, with the moorings and concrete anchors needing replacement. Agriculture is using its Boating Infrastructure Grant Tier 1 funding to fund 75% of the repair work and provide a pumpout station. To qualify for BIG funding, 75% of the Harbor of Refuge's moorings will be set aside for transient vessels to use. DAWR has 4 current BIG sub-awards with the Port Authority of Guam (PAG). Total of all awards is about \$700,000.

The design, engineering, and environmental studies portion of the project has been completed (phase 1 and phase 2), with the construction phase on hold until the approved MOU is approved. The construction phase consists of replacing the damaged moorings and moorings lines and attaching the new moorings into the existing concrete anchors by re-drilling.

The MOU and work requests for the project have been completed and signed by the Director of Agriculture. DAWR staff delivered the MOU and work request on June 1, 2020 to the PAG General Manager for review and signature. Revisions were made to the MOU by PAG and DOAG, signed by the Bureau of Budget and Research, and delivered to the Guam Attorney General's office for review and signature on August 5, 2020.

Update: The AG's office completed its review of the Harbor of Refuge MOU on February 3, 2021 to repair the moorings and concrete anchors, and DOAG DAWR sent the MOU to the Governor for review and signature on February 19, 2021.

Merizo Pier and Boat Ramp Facility. Contractual work is being proposed to repair damage at the Merizo pier and boat ramp facility. These damages include replacing damaged planks on the pier, replacing three missing ladders on the pier, and repairing several light post on the pier. A Scope of Work has been finalized to repair these damages. However, a requirement that all contractual projects require a Memorandum of Understanding is currently being routed for approval before the repair work can be done. The most recent repair work was completed in FY2016 with the ramp's walkways, the ramp and pier bumpers, and the facility's lights repaired (Figures 4 and 5) at cost of \$160,000. The facility is owned by the Merizo Mayor's office, with that agency maintaining the rest rooms, removal of trash, grounds maintenance, and paying the electrical and water bills.

Agriculture is currently planning to have the Merizo pier assessed for structural integrity. Since the pier is over 25 years old and has been subjected to heavy use, category 5 storms, an 8.2 earthquake, and normal wear and tear from exposure to the marine environment, an assessment will be done to address concerns whether the pier may require an overhaul of the concrete pilings, the concrete crossbeams, and the wood decking. This assessment will ensure that the facility remains safe for use by recreational fishers and boaters.

The Memorandum of Agreement (MOA) with the Department of Public Works (DPW) was signed by the Governor of Guam on July 13, 2019. The work request was sent to DPW in June 2020, and DAWR sent a revised Scope of Work (SOW) on August 14, 2020 to DPW. Communications with DPW staff, however, assured DAWR staff that the projects are currently being worked on. The repair work will repair the decking, ladders, and lighting at the facility, while the structural assessment will determine whether the facility, which is over 25 years old, may need major repair work in the near future.

Update: Updated work requests and scopes of work to repair damages at the Merizo Pier and Boat Ramp Facility were signed by DPW on January 8, 2021. DOAG forwarded the work requests to BBMR and the Department of Administration (DOA) on January 13, 2021 and is following up on the status of the signed documents to provide to DPW to begin the repair work.



Figure 4. Photographs of Merizo Pier's damaged walkways and bumpers, and rusted walkway pilings.



Figure 5. Photographs of Merizo Pier's repaired walkway and bumpers, concrete support on the pier, and pier lights.

Regulations

Guam Fishing Licenses

- DAWR met with the Department of Agriculture (DOAG) Director and Deputy Director and reviewed and partially revised the proposed fishing licenses in February 2020. Public Law 33-144 still needs to be repealed to allow DOAG to move forward with the regulations. On May 18, 2020, DOAG reviewed and revised the proposed fishing license regulations after receiving initial comments from Council staff. The proposed license was provided to the Council's Advisory Panel for review and comments and shared with the Senator that oversees DOAG. Next step is for DOAG to go through the Administrative Adjudication Act.

CARES Act Funding

- Guam will be receiving 1 million dollars in fisheries assistance funding provided by Sec. 12005 of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) for fishery participants negatively affected by COVID-19.
- A proposed plan for the distribution of CARES Act funds for Guam's Fisheries was drafted that includes fishers registering with DOAG, cross checking all registered fishers, and establishing 3 tiers of fishers for direct payments. Video/teleconferences were held with DOAG, council staff, and fishers on May 13, 2020 and May 14, 2020 to discuss the proposed plan. A fisher registration form was created to be distributed to identify all fishers and fishing activity on Guam. Furthermore, a meeting was held with the Guam Fishermens Cooperative on May 28, 2020 about the proposed plan.

- Data collected from fisher registration forms determined 3 categories of fishers established by fisheries staff to allocate funds. Criteria for each category as follows:
 - Tier 1 Commercial Business
 - a. Must demonstrate revenue loss greater than 35% compared to the last five years' average
 - b. Businesses operating for more than one year but less than five years, the reference period for each year will be used to calculate the average for each year of operation
 - c. Must use the months of January 1 to June 30 as the average reference period across the five years
 - d. Must provide signed affidavit
 - e. Must provide documentation as needed
 - Tier 2 Commercial Fisher
 - a. Must provide signed affidavit
 - b. Must have at least one receipt indicating fish sales within the past five years
 - c. Must provide documentation as needed
 - Subsistence Fisherman
 - a. Must provide affidavit demonstrating fishing loss due to COVID-19
- Findings and distribution for Guam as follows: 811 total fishers registered with 27 total Tier 1 and Tier 2 commercial fishers and 784 sustenance fishers. Tier 1 fishers are divided into fishers with five-year documentary evidence for average revenue during the reference period and greater than 35% revenue loss in 2020 (Revenue lost totals \$162,442.57), and fishers with more than one year but less than five year documentary evidence for average revenue during the reference period and greater than 35% revenue loss in 2020 (Revenue lost totals \$64,270.89). Tier 2 fishers will be paid out at \$1200.00 each for a total of \$14,400.00. 784 sustenance fishers will receive \$953.68 each for a total of \$747,685.12.
- Director submitted Guam's Proposed Spending Plan for distribution of funds, to NOAA on August 5th, 12th, and 13th. Subsequent submissions on 12th and 13th due to revisions in spending plan.
- NOAA approved Guam's Spending Plan for distribution of funds and a press release was issued on 29 October 2020 for registered fishermen to continue with the final step of the application process. Only fishermen who registered during the first step of the application process are eligible to apply. Press release and application packet are available via hard-copy and digital (at DAWR office and DOAG website), Deadline: 30 November 2020. Spending plan may be adjusted if numbers change due to applications inadvertently left-out, or registered fishers who do not meet the deadline. Currently, only 112 registered fishers have completed the final step of the process and submitted applications to obtain funds through the CARES Act.
- **Update:** Deadline extension for applications is March 31, 2021
 182 Applications received as of February 1, 2021
 Outreach conducted at the end of January 2021 for application assistance and awareness at popular fishing sites.

Special permits still continue to be issued for the seasonal take of:

- Atulai (Big Eye Scads),
- *l'e'* (Juvenile Jacks)
- Ti'ao (Juvenile Goat Fish)
- Manahak (Juvenile Rabbitfish)

FADs

Currently, 5 FADs are confirmed online: Agat, Facpi 1, Umatac, #2 and Cocos (Table 5). #5 and #6 are unconfirmed. #2 was deployed in October 2019. The Memorandum of Agreement with the Guam Department of Public Works Agency (DPW) was signed by the Governor on July 13, 2019, and DPW signed the work request for the construction of the concrete anchors on July 24, 2020. Purchase orders for new FAD components and deployment will be obtained this new fiscal year.

Update: An updated work request and scope of work to construct FAD Anchors was signed by DPW on January 6, 2021. DOAG forwarded the work requests to BBMR and the Department of Administration (DOA) on January 8, 2021 and is following up on the status of the signed document to provide to DPW to construct the anchor. Requisitions for new FAD components and deployment is being reviewed by DAWR to submit to the General Services Agency (GSA).

Department of Agriculture
Division of Aquatic and Wildlife
163 Dairy Road, Mangilao, Guam
96913

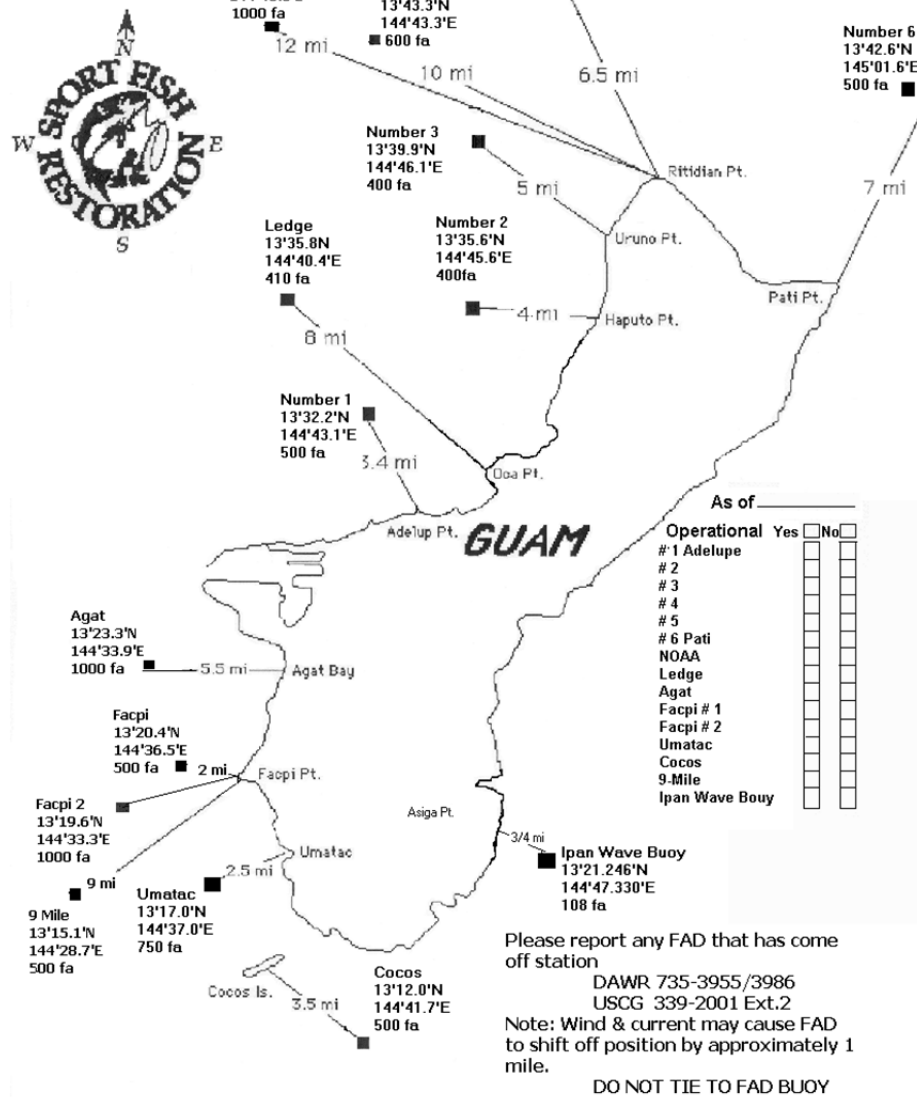


Figure 6. Guam FAD locations

ONLINE:	GPS Coordinates
Number 5 (Unconfirmed)	13°44.7N/144°48.4E
Number 6 (Unconfirmed) (Pati)	13°42.6N/144°01.6E
Facpi	13° 20.4 N/144°36.5E
Umatac	13°17.0N/144°37.0E
Cocos	13°12.0N/144°41.7E
Agat	13° 23.3 N/144° 33.9E
Number 2 (Haputo)	13° 35.6 N/144° 45.6E
OFFLINE:	GPS Coordinates
Number 1 (Adelup)	13°32.2N/144°43.1E
Number 3 (Urunao)	13°39.9N/144°46.1E
Number 4	13°43.3N/144°43.3E
Ledge	13°35.8N/144°40.4E
Facpi 2	13°19.6N/144°33.3E
9 Mile	13° 15.1N/144° 28.7E
Old NOAA	13° 43.5 N/144° 40.8E

Table 5. Current status of FADS online and offline while Figure 6 shows the FAD sites.

SWMs

SWM Systems – Plans to procure an additional 15 SWM components are in the progress.

SWM Deployments:

- 10 SWMS where redeployed in December of 2018. Out of 34 sites (Figure 7) only 31 are deployable with intact eyebolt anchors. Plans to secure a contract to perform the installation of new eyebolts for the 3 areas (14. Blue Hole: Anchor failure, 33. Gabgab # 1: Anchor unable to locate, and 34. Gabgab # 2: Anchor unable to locate) that do not have intact eyebolts will be done in FY20 as well as the remaining 14 deployable sites. Currently, 17 SWMS are online (Table 6).
- **Update:** A requisition to replace 15 SWMs is being reviewed by DAWR to submit to the General Services Agency (GSA). DAWR already has the components needed for the SWM's replacements.

Government of Guam Department of Agriculture
 Division of Aquatic & Wildlife Resources (DAWR)
 192 Dairy Road
 Mangilao, Guam 96923
 Ph: 735-3986 Fax: 734-8570

Vicinity Map of DAWR Shallow Water Mooring Sites

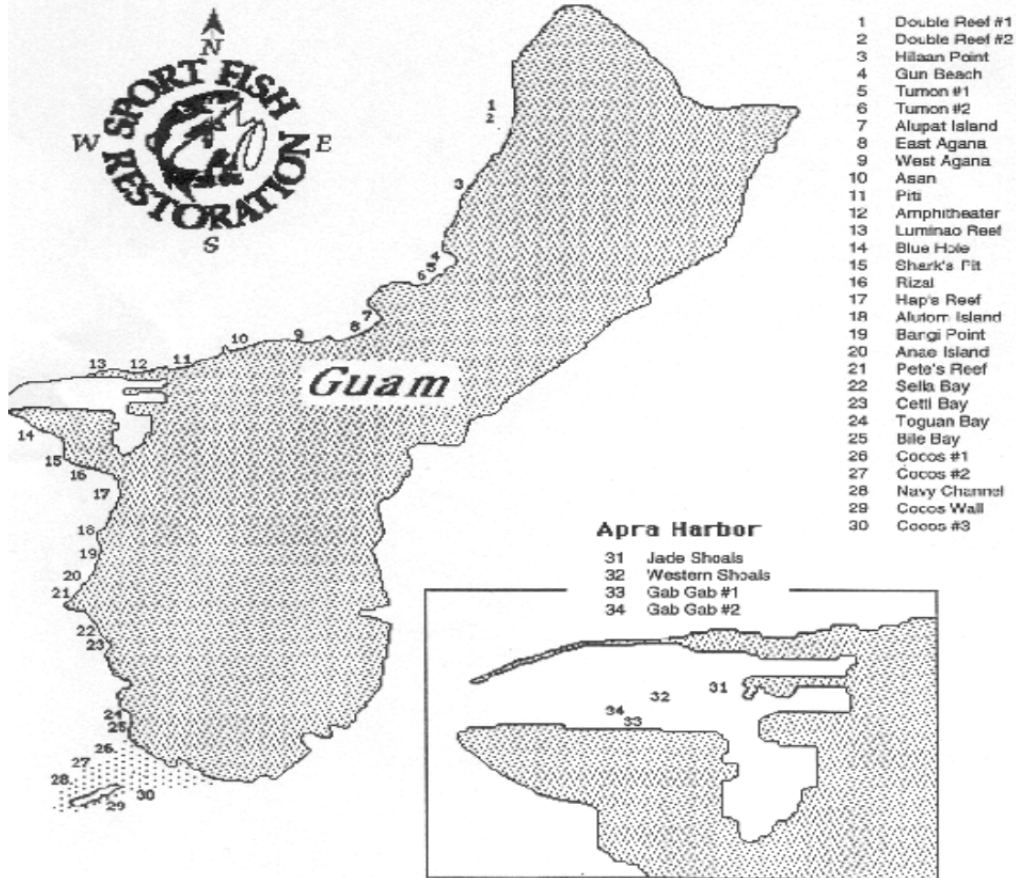


Figure 7. Guam SWM locations

No.	Site Name		Coordinates	Depth (ft)
1.	Double Reef #1		13°36.219N / 144°50.105E	33
2.	Double Reef #2		13°35.713N / 144°49.988E	39
3.	Hilaan	x	13°33.763N / 144°48.985E	45
4.	Gun Beach	x	13°31.470N / 144°48.068E	20
5.	Tumon #1		13°31.032N / 144°47.162E	30
6.	Tumon #2		13°30.641N / 144°47.162E	45
7.	Alupat Island		13°21.608N / 144°46.026E	47
8.	East Agana	x	13°29.337N / 144°45.873E	35
9.	West Agana	x	13°29.046N / 144°44.008E	48
10.	Asan		13°28.646N / 144°42.780E	49
11.	Piti		13°28.602N / 144°41.833E	49
12.	Amphitheater		13°27.914N / 144°40.549E	57
13.	Luminao Reef		13°28.070N / 144°39.366E	45
14.	Blue Hole	x	13°26.177N / 144°37.589E	50
15.	Sharks Pit	x	13°25.260N / 144°38.372E	56
16.	Rizal		13°24.666N / 144°38.953E	46
17.	Haps Reef		13°23.678N / 144°39.196E	50
18.	Alutom Island	x	13°23.072N / 144°38.763E	53
19.	Bangi Piont	x	13°22.373N / 144°38.528E	50
20.	Anae Island		13°21.380N / 144°38.240E	20
21.	Pete's Reef	x	13°20.652N / 144°38.265E	55
22.	Sella Bay	x	13°19.361N / 144°39.100E	16
23.	Cetti Bay		13°18.932N / 144°39.188E	35
24.	Tuguan Bay	x	13°17.003N / 144°39.665E	37
25.	Bile Bay		13°16.600N / 144°39.700E	48
26.	Cocos #1	x	13°15.900N / 144°39.258E	46
27.	Cocos #2	x	13°15.061N / 144°38.715E	36
28.	Navy Channel		13°14.485N / 144°38.375E	37
29.	Cocos Wall		13°14.250N / 144°39.552E	45
30.	Cocos #3	x	13°14.249N / 144°40.019E	55
31.	Jade Shoals		13°27.189N / 144°39.720E	45
32.	Western Shoals	x	13°27.020N / 144°29.230E	20
33.	Gabgab #1	x	13°26.694N / 144°38.729E	20
34.	Gabgab #2	x	13°26.706N / 144°38.655E	60

Table 6. Current status of SWMs online and offline.

Paseo (Hagatna), Ylig, Togcha 1, and Togcha 2 Fishing Platforms

A grant amendment was submitted to install solar lights to help enhance fishing opportunities at the fishing platforms. DAWR will be resubmitting the requisition to maintain the fishing platforms to the General Services Agency. Also, DAWR is reviewing the information needed to conduct a biological assessment for the solar lights, which is required by the U.S. Fish and Wildlife Service, prior to moving forward with the project.

Update: The Biological Assessment was completed by staff for the installation of lights at the Hagatna Fishing Platform and is currently being reviewed to submit to the US Fish and Wildlife Service. A requisition for hardware supplies to maintain the fishing platform and lights are also being reviewed to submit to GSA. Furthermore, DAWR is obtaining a quote to install “Fishermen Code of Conduct” signs on the fishing platforms and to contract a vendor to maintain the fishing platforms.

Sea Turtle

Stranding Info

Total of two sea turtles were stranded between November 14, 2020 and February 19, 2020 with one report of a live sea turtle Fibropapillomatosis (FP).

- November 28, 2020: A green sea turtle carcass was observed floating within Inner Apra Harbor by Navy personnel (**Figure 8**). The carcass was unable to be retrieved.
- December 30, 2020: A juvenile green sea turtle carcass washed ashore on Dadi Beach, Navy Base Guam (NBG) (**Figure 9 and Figure 10**). It was retrieved by NAVFAC Biologist AJ Reyes and brought to DAWR to be frozen until a necropsy can be completed.
- From the previous report, this turtle was confirmed by USGS Hawaii to have FP. October 22, 2020: DAWR received a report of a sea turtle in distress off of the coast of Piti, within the Piti Bomb Holes Marine Protected Area. When DAWR responded, it was discovered that the sea turtle was covered in tumors that match up with symptoms of turtle fibropapillomatosis (FP) (**Figures 11 and 12**). This turtle was then treated as the possible first documented case of FP in the Marianas. The turtle was euthanized on October 27, 2020 and necropsied the same day. Samples of the tumors as well as organ samples were collected and will be sent to Dr. Thierry Work at the U.S.G.S. National Wildlife Health Center Hawaii Field Station in Honolulu for confirmation. It is possible that there is another sea turtle in the Piti area with FP-like tumors. An education and outreach plan is being developed to inform the public and manage this issue before it becomes too large to control.
- February 18, 2020: DAWR was sent a video of a sea turtle in Piti with tumors on its soft tissue (**Figure 13**). A plan is in place to capture, euthanize, and necropsy the carcass. Samples of the tumors will be collected and sent to Dr. Thierry Work to confirm FP. If confirmed, it will be the second confirmed case in Guam’s waters within six months.



Figure 8. November 28, 2020, dead green sea turtle carcass floating in Inner Apra Harbor.



Figure 9. December 30, 2020 dead juvenile green sea turtle found on Dadi Beach, NBG.



Figure 10. December 30, 2020 dead juvenile green sea turtle found on Dadi Beach, NBG.

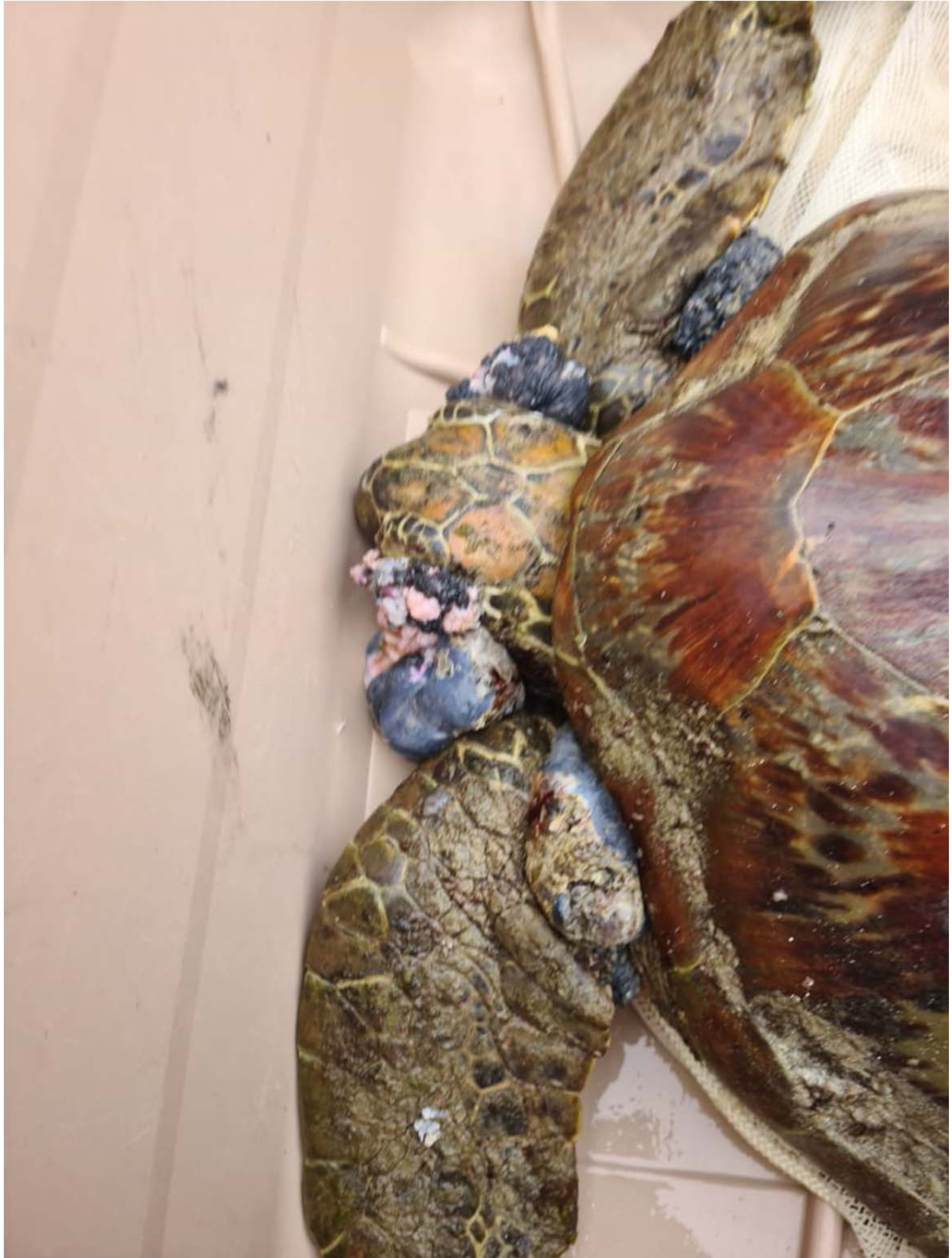


Figure 11. October 22, 2020 juvenile green sea turtle with confirmed FP.



Figure 12. October 22, 2020 juvenile green sea turtle with confirmed FP.



Figure 13. Screenshot of a video sent to DAWR on February 18, 2021 of a sea turtle with tumors observed in Piti Bomb Hole Marine Preserve.

Nesting Info

Active nesting

- Active nesting at Cocos Island (29 nests) between December 2020 and February 17, 2021.
- One false crawl occurred at Jinapsan Beach in February 2021.
- Performed nest inventories at Sea Plane Ramp (6 nests) between December 2020 and February 2021 (**Figure 14 and 15**). Hatching success varied between 4% and 74% and emergence success varied between 4% and 72%.



Figure 14. DAWR Biologist Jude Martinez with live hatchling found during February 3, 2021 nest inventory.



Figure 15. DAWR Biologist CJ Cayanan conducting February 3, 2021 nest inventory.

Cultural Signs

- There are 10 signs total with 9 signs currently being serviced.
- The Talofoto Bay sign (Off station) needs replacing.
- A hardware requisition for supplies to maintain the signs was submitted on 2/15/2021.
- Last survey and inspection for the signs was Wed 2/17/2021

Man-o-Wars and Box Jellyfish

Traditionally, the summer months are when the majority of jellyfish stings occur, with a peak in July. Man-o-Wars usually occur from November to February. DAWR received reports of large number of Man-o-War sightings on the eastside of Guam from Ritidian to Inarajan, however, no stings were reported to DAWR.

LAW ENFORCEMENT ISLAND REPORT

GUAM POLICE CASE NUMBER	NUMBER OF PERSONS ARRESTED	ETHNICITY	VIOLATION	ARREST LOCATION
2021-819	1 Male and 1 Female	FSM	Illegal Harvesting of Sea Cucumbers in MPA	Piti MPA
2021-3800	1 Male	FSM	Illegal Fishing in an MPA	Tumon MPA

***MPA**= Marine Protected Area