Fagaloa Coastal Uses Map Book

American Samoa 2012

NOAA, ASDOC, DMWR, ASEPA

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Introduction

This map book contains cartographic products derived from the American Samoa Coastal Use Mapping project conducted in Pago Pago, American Samoa in July 2012. Data was obtained through a participatory GIS workshop designed to gather spatial data on human uses of the coastal and nearshore marine environment in the greater Pago Pago Harbor region known as Fagaloa. The project was intended to fill a critical information gap regarding the spatial distribution of human activities in the American Samoa Coral Reef Strategy priority site in order to better inform planning and management activities.

This effort was undertaken as a partnership between multiple agencies including NOAA Pacific Islands Regional Office (PIRO), NOAA Pacific Services Center (PSC), American Samoa Department of Commerce Coastal Management Program (ASCMP), the American Samoa Department of Marine and Wildlife Resources (DMWR) and American Samoa Environmental Protection Agency (ASEPA). Primary funding for the project is from NOAA's Coral Reef Conservation Program, with in kind support from NOAA Pacific Services Center.

A total of 47 workshop participants were involved during the three workshop days. Participants were selected based on their expertise in the various human uses and activities occurring in this region. They represented a wide range of backgrounds relating to marine resources: resource stewards, fishermen, tourism industry experts, natural resource managers, educators, cultural practitioners, scientists, village residents, and local business owners. Facilitated workshops were held in English and Samoan.

Targeted Uses

Twenty-three different coastal uses were mapped during the workshop, representing fishing and village based activities, recreation activities and industrial activities. Each coastal use is defined in detail on the maps on the following pages. The priority uses for mapping were determined and defined with assistance from local stakeholders and resource managers

Maps

Data compiled during the workshop were processed to create maps documenting the use patterns as drawn by the workshop participants. After initial data processing was completed, draft maps were presented back to workshop participants to review and provide feedback for final revisions. The following maps show the final patterns for each use mapped in the workshops as well as a compilation of the supplemental data provided by participants throughout the mapping process. The industrial uses were mapped together. These maps include landside and dock facilities related to all industrial uses.

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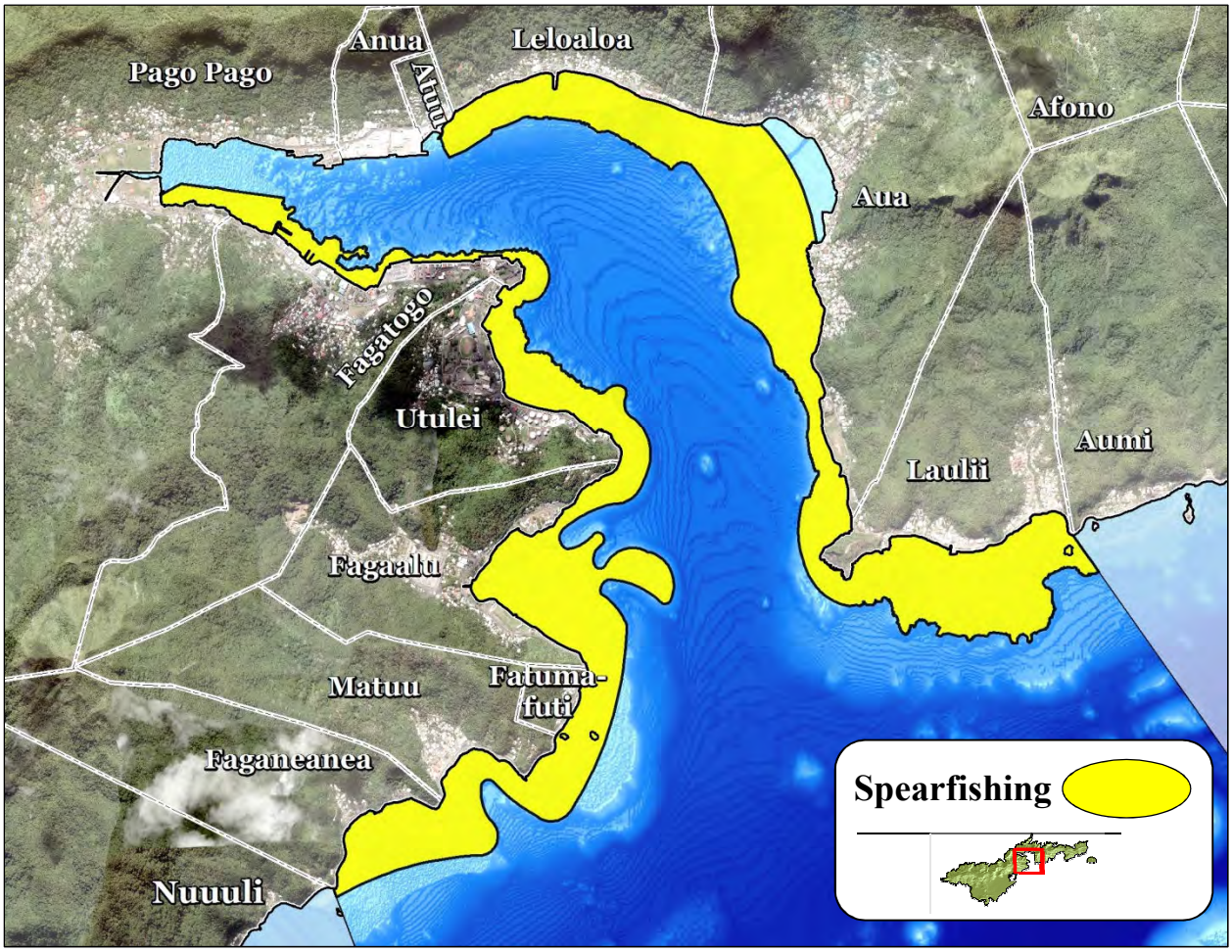

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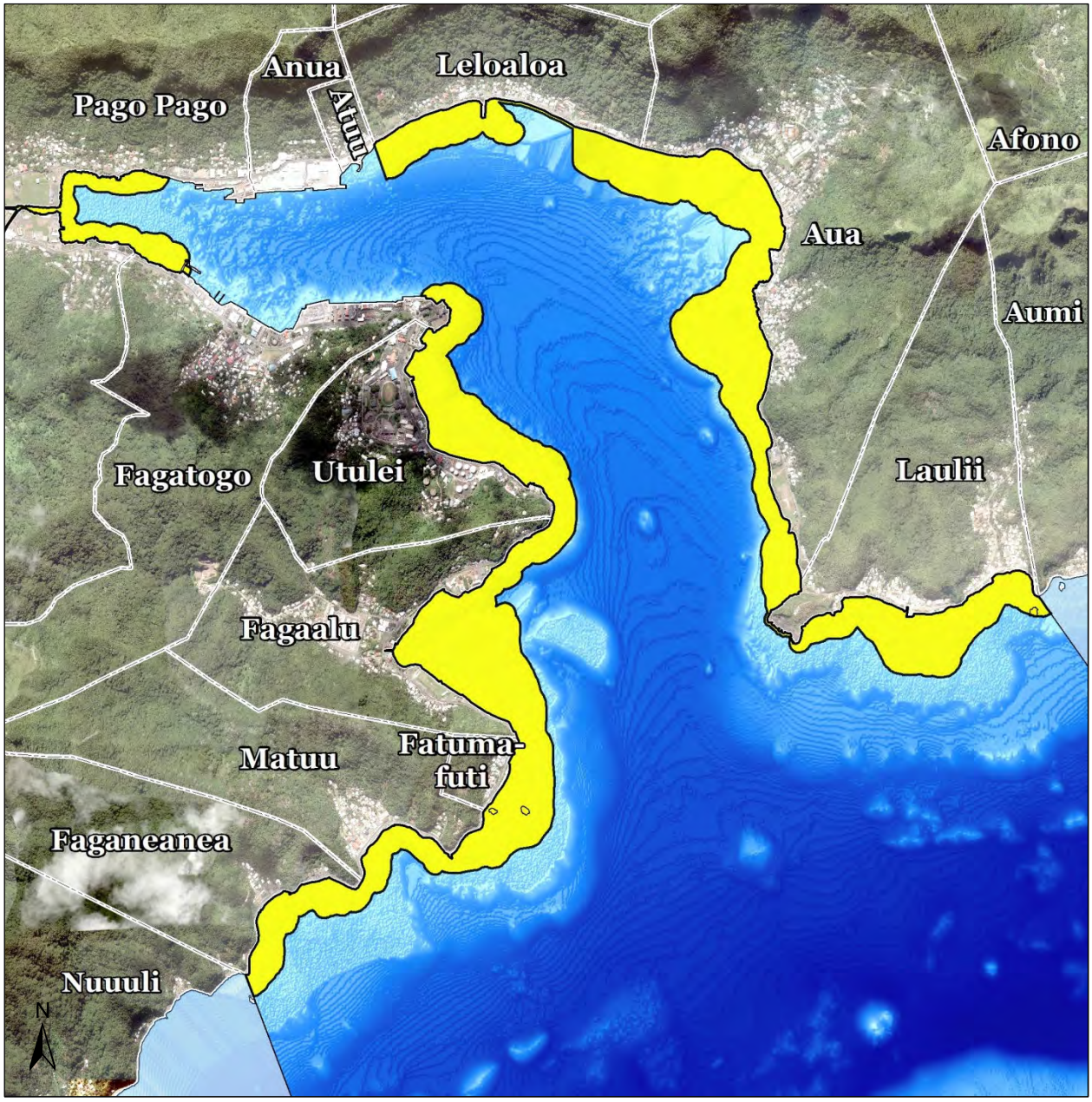
Miles

Imagery: USGS. Bathymetry: Roberts, 2007

Spearfishing

Spearfishing includes in water use of a spear (gun, 3-prong) for fish, crab, lobster, and octopus at depths greater than 5 feet. It includes commercial and non-commercial, as well as day and night activities. This category does not include shoreline gathering at depths less than 5 feet.

This activity is generally conducted at around 10-30 feet depth, but can occur from 5-60 feet (the deeper depth is only for specific species and only a few people – generally 5-10 people). Spearfishing is common at night as fish are sleeping and easier to catch at that time, however it depends on the tide. At high tide larger fish are closer to shore. When spearfishing, fishermen will work their way along the reef over the course of the whole night. Spearfishing takes place predominantly on reef slopes in most of the project region. Targeted species include: Cctopus, Lobster, Laea (Parrotfish), Alogo (Bluebanded surgeonfish), Ume (Unicorn), Pone (Brown surgeonfish), Malau (Squirrelfish). Many fishermen will avoid spearfishing in areas with an abundance of sharks. In the past scuba spear was used.

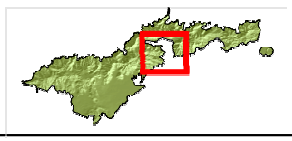


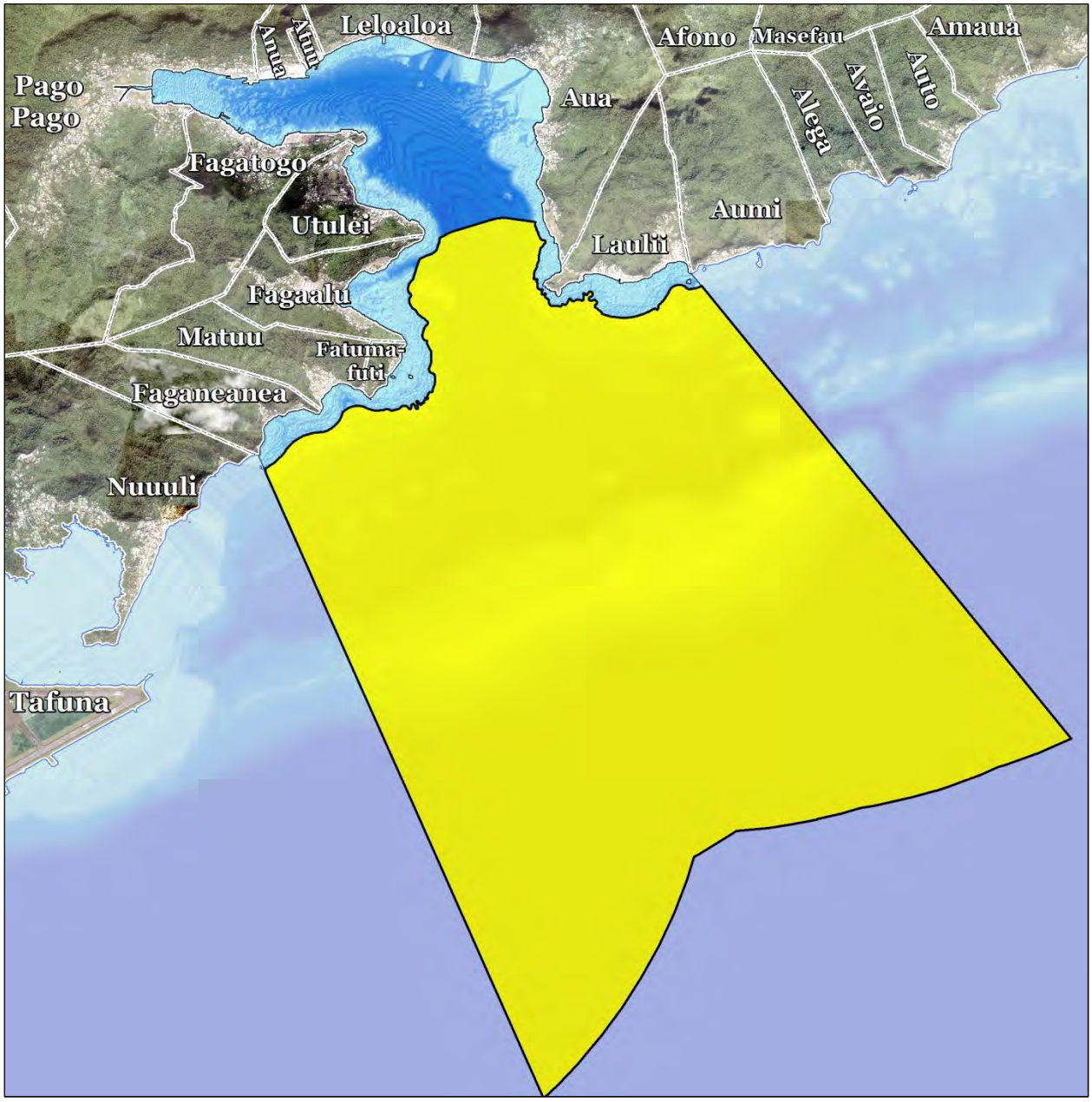
Imagery: USGS. Bathymetry: Roberts, 2007

Handlining / bamboo pole / rod and reel fishing from shore
This category includes Shore based fishing with handline, bamboo pole or rod/reel. Not included are trolling, boat-based fishing, or bottom fishing.

Rod and reel fishing can take place anywhere in the region that has shoreline access, out to the edge of the reef flat. There are no areas that would be considered "heavy use" for this activity, but it does not take place in the industrial areas of the harbor.

Rod and Reel Fishing

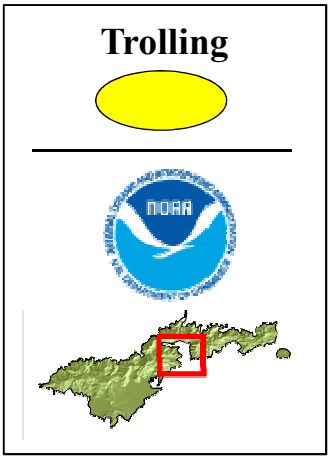


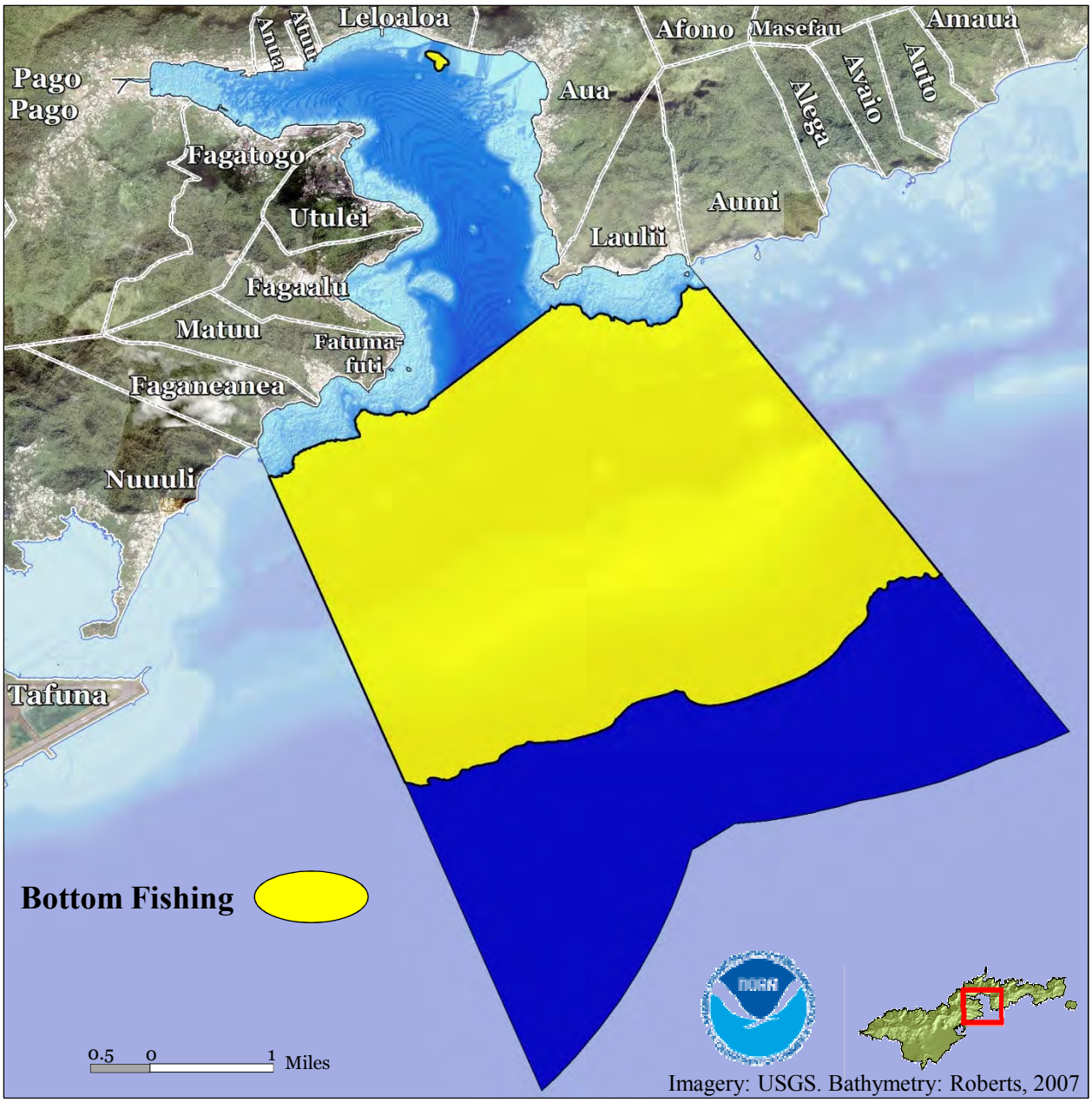


Imagery: USGS. Bathymetry: Roberts, 2007

Trolling *This category includes trolling with a pole and line (or handline) from a boat. It does not include shore-based fishing or bottom fishing.*

Local fishermen say they troll the whole Fagaloa area from the reef crest outwards, especially from a half mile out to 40 miles. Fishermen set lines at the red buoy and have caught marlin, wahoo, and barracuda. Trolling is not conducted on Taema banks, but fishermen may pick fish up as they zig-zag along the bank, and then "tease them up" as they go off of the bank. Trolling can be done almost anywhere, and sea birds are an indicator that it is a good spot to set a line for trolling.

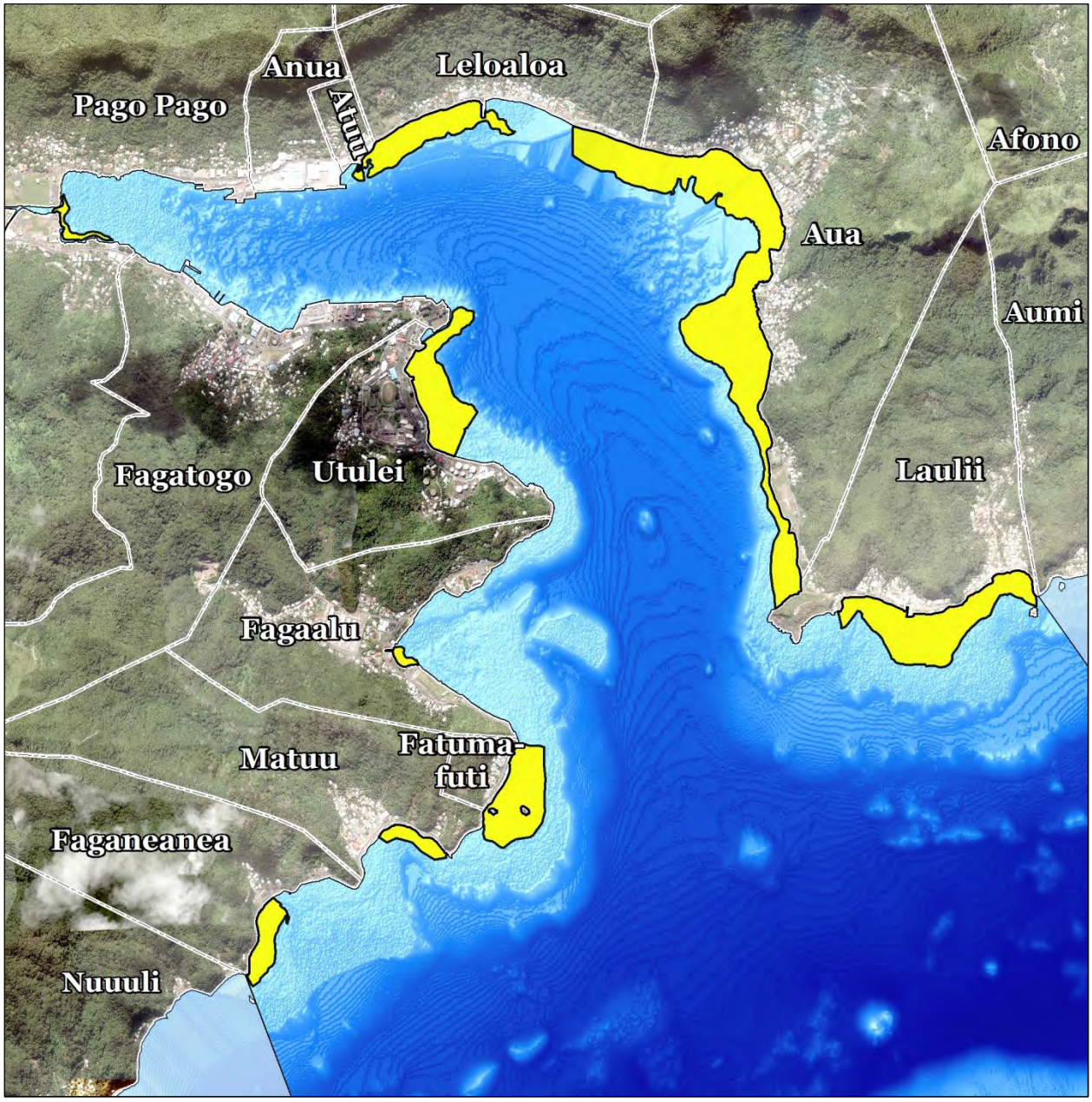




Bottom fishing

Bottom fishing includes fishing for bottom fish species from a boat. It does not include use of nets, spearfishing.

Bottom fishing is conducted starting at a depth of 100 feet. It takes place island-wide, wherever there are steep drop-offs, although most bottom fishing is done on the South side of the island. According to local fishermen, the fishing is generally pretty good so it is not necessary to seek out new locations for bottom fishing. The area along the edge of Taema banks is considered a good location for bottom fishing, although the top of the banks is too shallow.



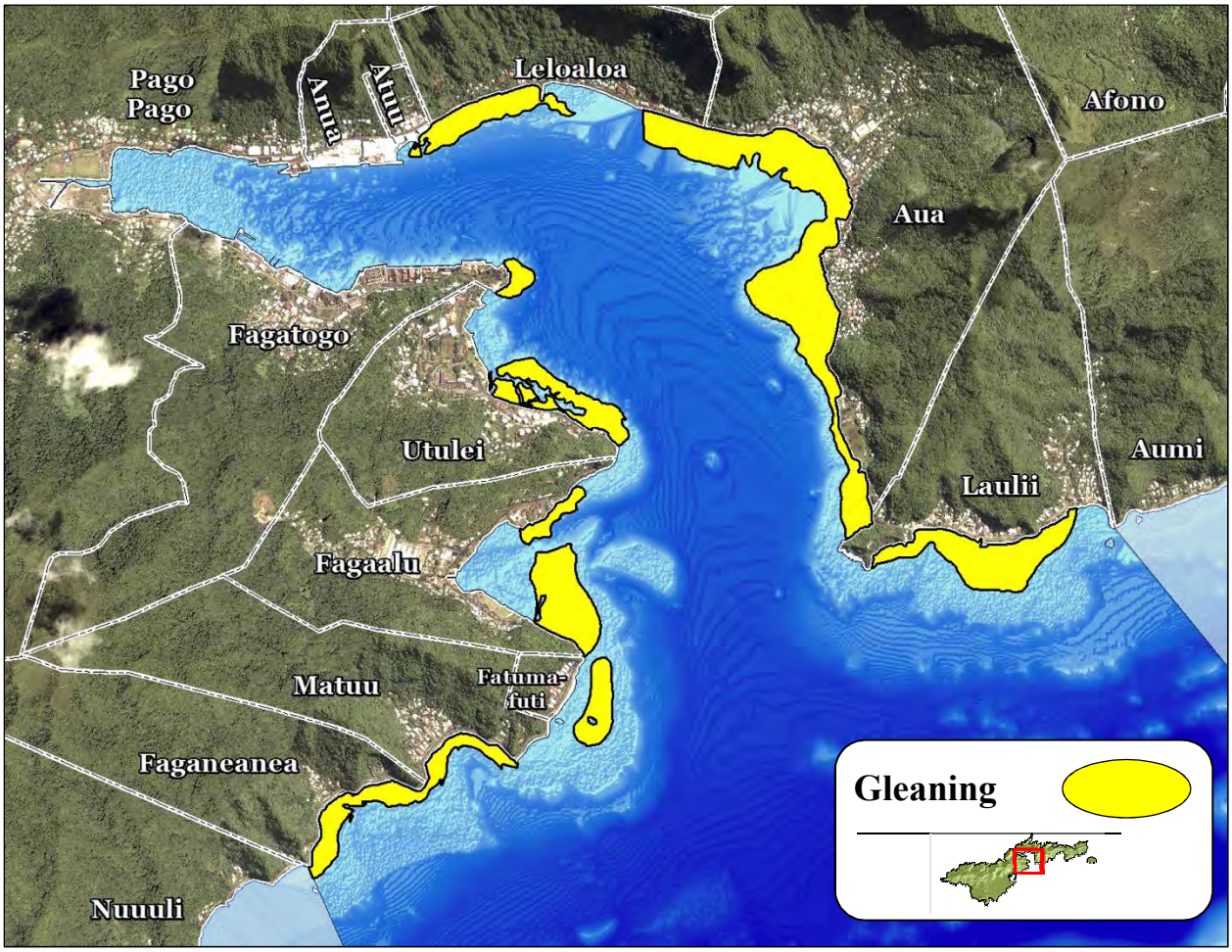
Imagery: USGS. Bathymetry: Roberts, 2007

Throw nets

This category includes the use of throw nets, but excludes the use of other net types.

To use a throw net, a fisherman must be in an area where it is possible to stand and throw from the shore or while standing on the reef flat, and the conditions for this activity are most manageable at low tide.

Throw Nets



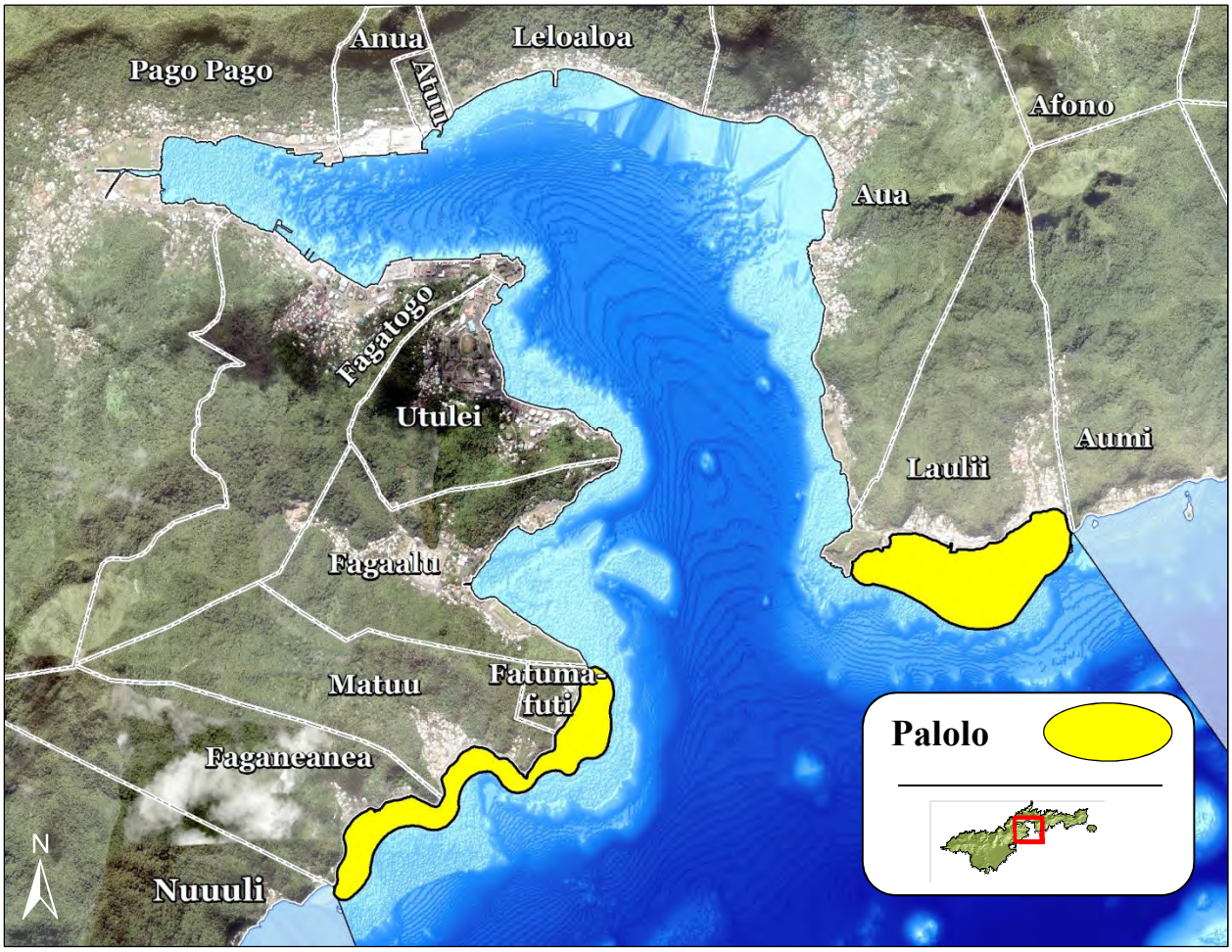
0.5 0 1
Miles

Imagery: USGS. Bathymetry: Roberts, 2007

Shoreline and nearshore gleaning and gathering

This activity takes place at a depth of less than five feet and includes intertidal and shallow water gathering of most invertebrates including shellfish, crab, sea cucumbers, octopus (from shore), and shallow seaweed. It does not include in-water diving for fish, lobster, octopus, and invertebrates at depths greater than 5 feet, or palolo gathering.

This activity can occur day and night, although night fishing is conducted by men and daytime fishing is generally conducted by women. This happens on reef flats off of most villages except where there are avas (deep breaks in the reef). Gleaning is not conducted on the reef near avas because of the extensive sediment on the reef. Gleaning is not conducted in Fagatogo and Pago Pago because they lack reefs. Usually gleaning is conducted during low tide. Where reefs connect to the shoreline gleaning occurs out to the reef flat edge. Species include; octopus, sea urchins, trochus, sea cucumbers, clams, turbo snails, moray eel, and black snail.



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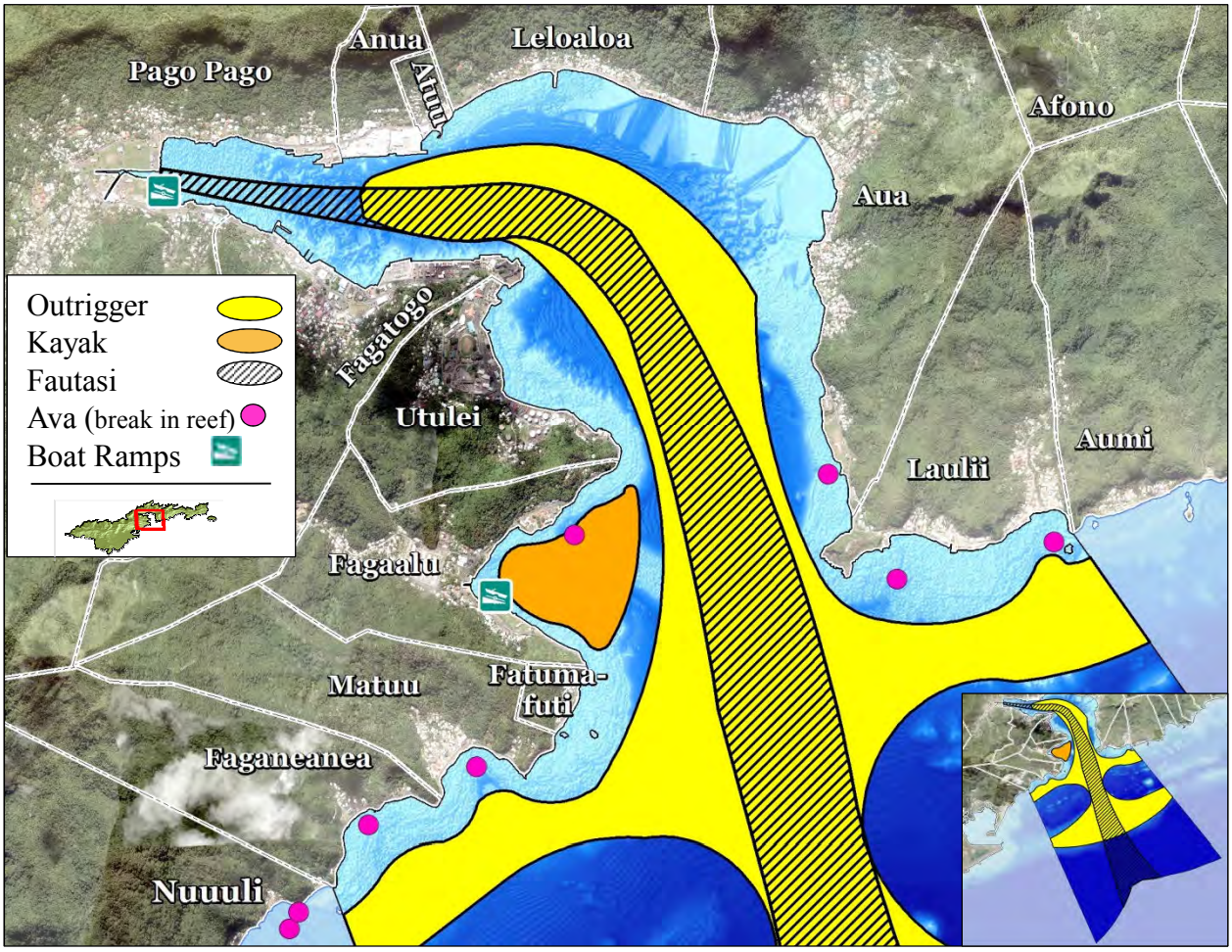
Imagery: USGS. Bathymetry: Roberts, 2007

Palolo

This category includes the annual harvest of palolo, a locally culturally significant species of marine worm.

Traditional fishing methods, while less common now than in the past, continue to take place in many villages throughout the Fagaloa region. The palolo harvest is a particularly unique event to the Samoa islands. This activity takes place yearly during the early part of the rainy season, one week after the first full moon in October or November, beginning sometime after midnight and lasting for several hours. It is generally done from shore using nets and buckets or floating coolers, although some fishermen will fish using nets from a boat offshore. Matu'u, Faganeanea, and Fatu ma Futi, and Lauli'i are popular coastal areas for palolo fishing each year, and people will use boats off of Matu'u about 50 yards from the reef, targeting the channel. The fishing event is tidally dependent – if it takes place at high tide, then people swim and fish on the reef crest, while if it is low tide people stay closer to shore.

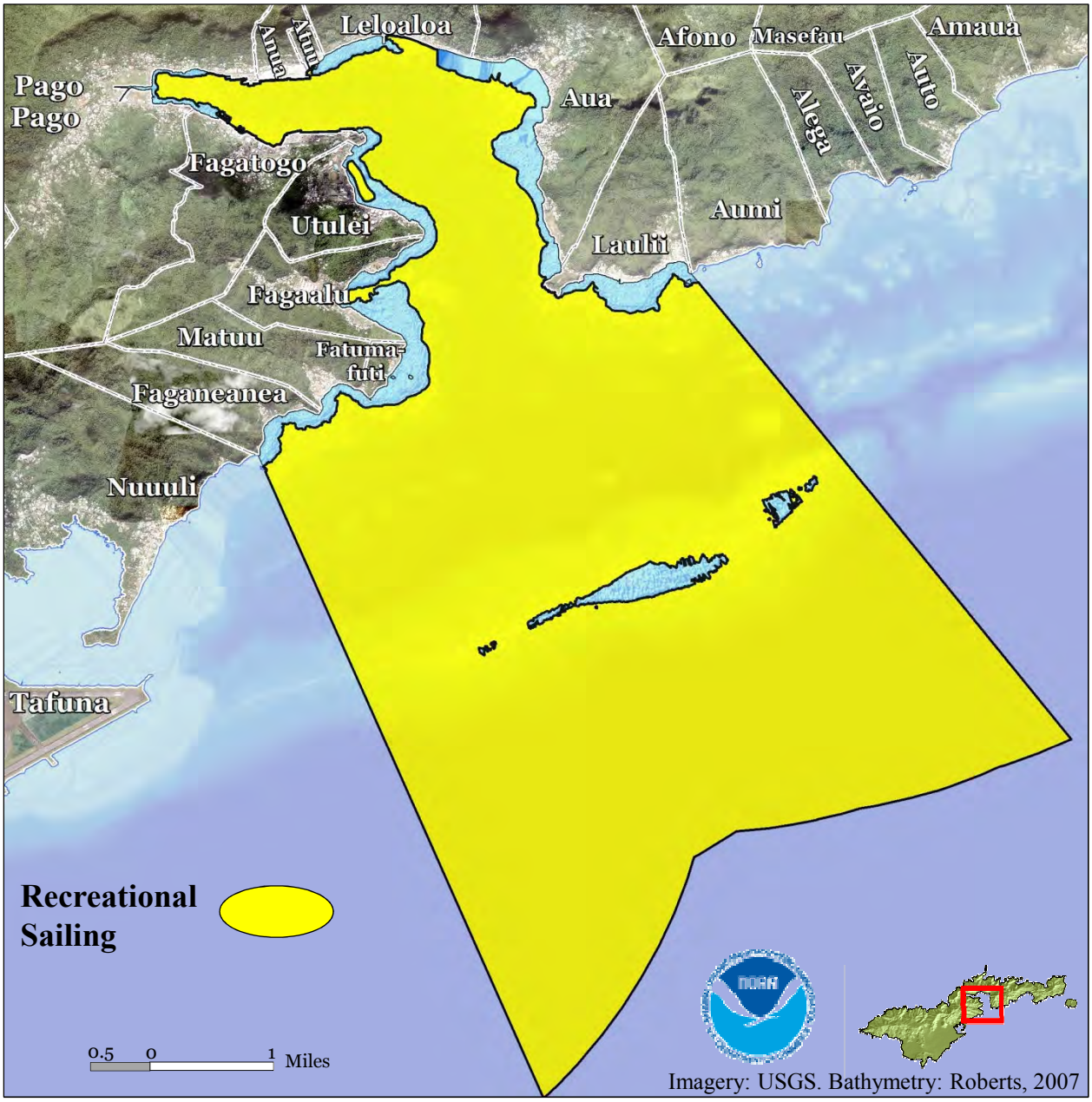


Imagery: USGS. Bathymetry: Roberts, 2007

Recreational paddling

This includes individual or group use of kayaks, outriggers, other paddle-powered vessels for fun or competition, and fautasi racing. Not included are motorized boating, use of a kayak or paddle-boat for fishing.

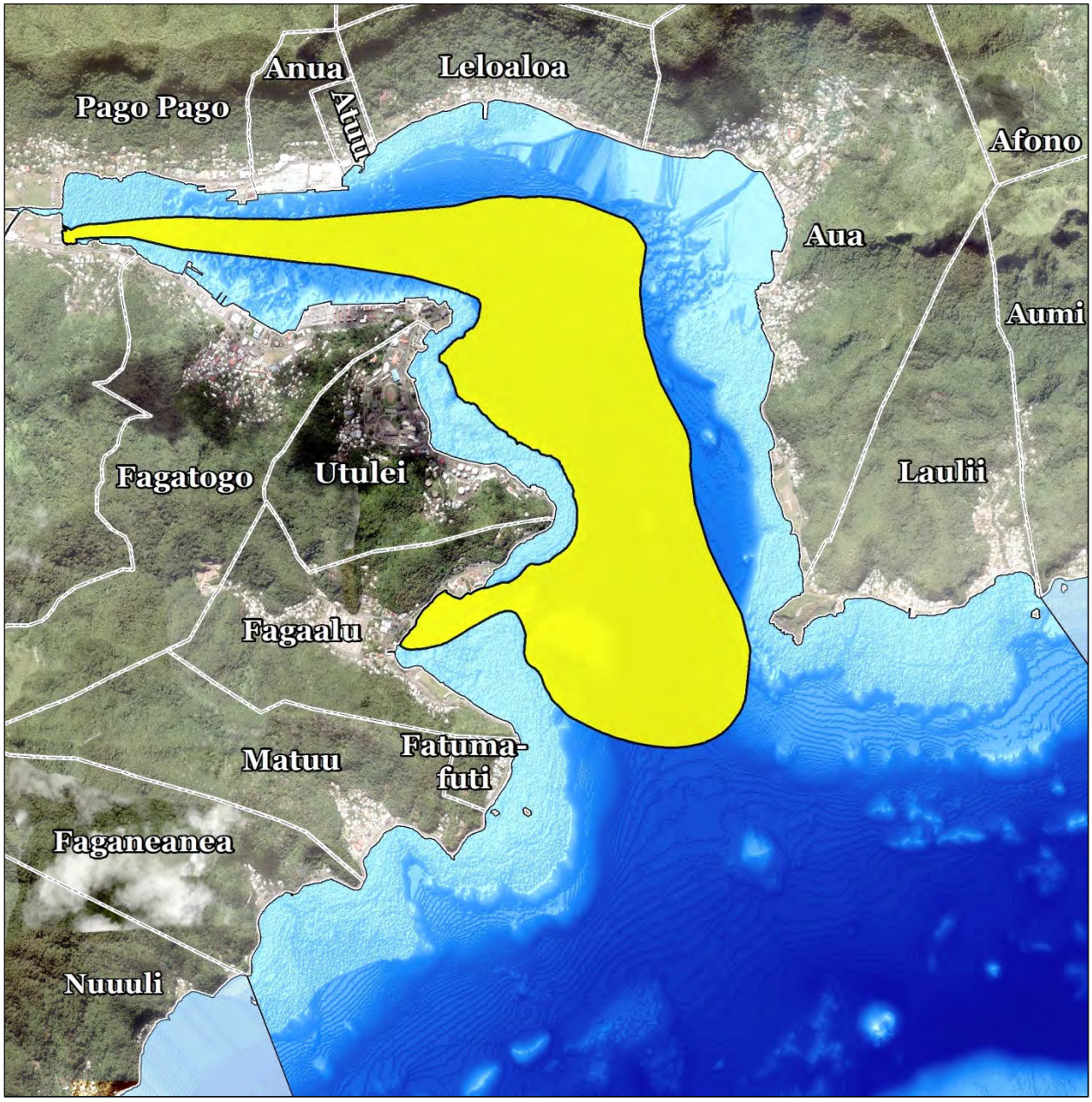
There are three main types of paddling: kayaking, outrigger canoe paddling, and fautasi (traditional longboat) races. Kayaking can take place anywhere with safe water access, but is most common in the Fagaloa region front of Sadies by the Sea where kayak rentals are available. Outrigger canoe paddling happens predominately on weekday evenings and during the weekends out of Utulei as a recreational activity. Typically there will be 2-4 boats paddling, with occasional outrigger canoe races. The fautasi boats start practicing in March and the race is in April in conjunction with Flag Day celebrations. Paddling races generally happen approximately three times per year and villages will practice every day for two months before the races. Races go 3-4 miles out of the harbor, but can go out as far as 7 miles. Launch locations include Faga'alu, Utulei, and Pago. They can also launch from temporary floating docks in the harbor.



Recreational sailing

Recreational sailing includes use of sailboat or yacht for recreation and transit purposes. It does not include use of sailboat or yacht for fishing.

There are two types of sailing activities: sailing yachts which follow navigation channels and stay clear of the reef (30 feet away from reef), and smaller recreational sailing boats with 1-2 feet draft which can sail in close by Utulei Beach. Utulei beach is a primary area for recreational sailing lessons. Taema Banks has perfect prevailing winds for hobie cat racing, and participants stated that it could potentially be used for world class racing with its winds and easy access (but is not really used in the present). Sailing yachts are mostly coming in to moor, check mail and buy previsions, but occasionally some yachts will go for day sails around the island. Sailboats stay at yacht moorings.

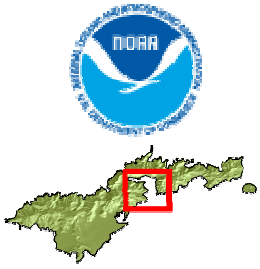


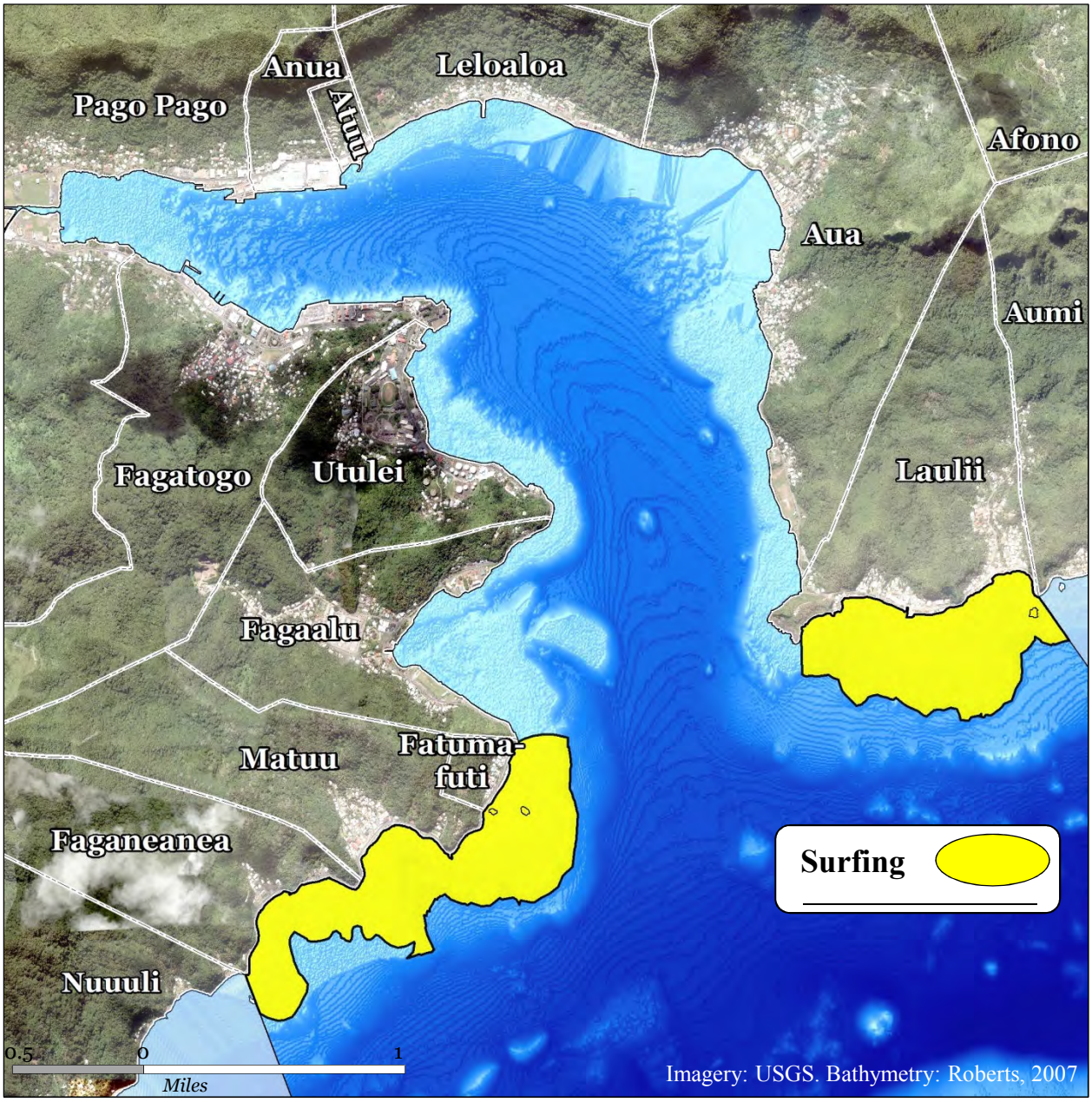
Imagery: USGS. Bathymetry: Roberts, 2007

Jet skis

There are very few jet skis in American Samoa: marine patrol has 3-5 jet skis that are used for enforcement on a daily basis. There are 2 additional jet-skis on island that are privately owned. The typical launching location for jet skis is at the private ramp in Faga'alu or the boat ramp at the end of Pago Harbor. Recreational users go out approximately twice a month for tow-in wave surfing at Fatu ma Futi or to watch the Fautasi races from Taema banks. Some villages, including Faga'alu, do not look favorably on jet skiing on Sundays.

Jet Skis

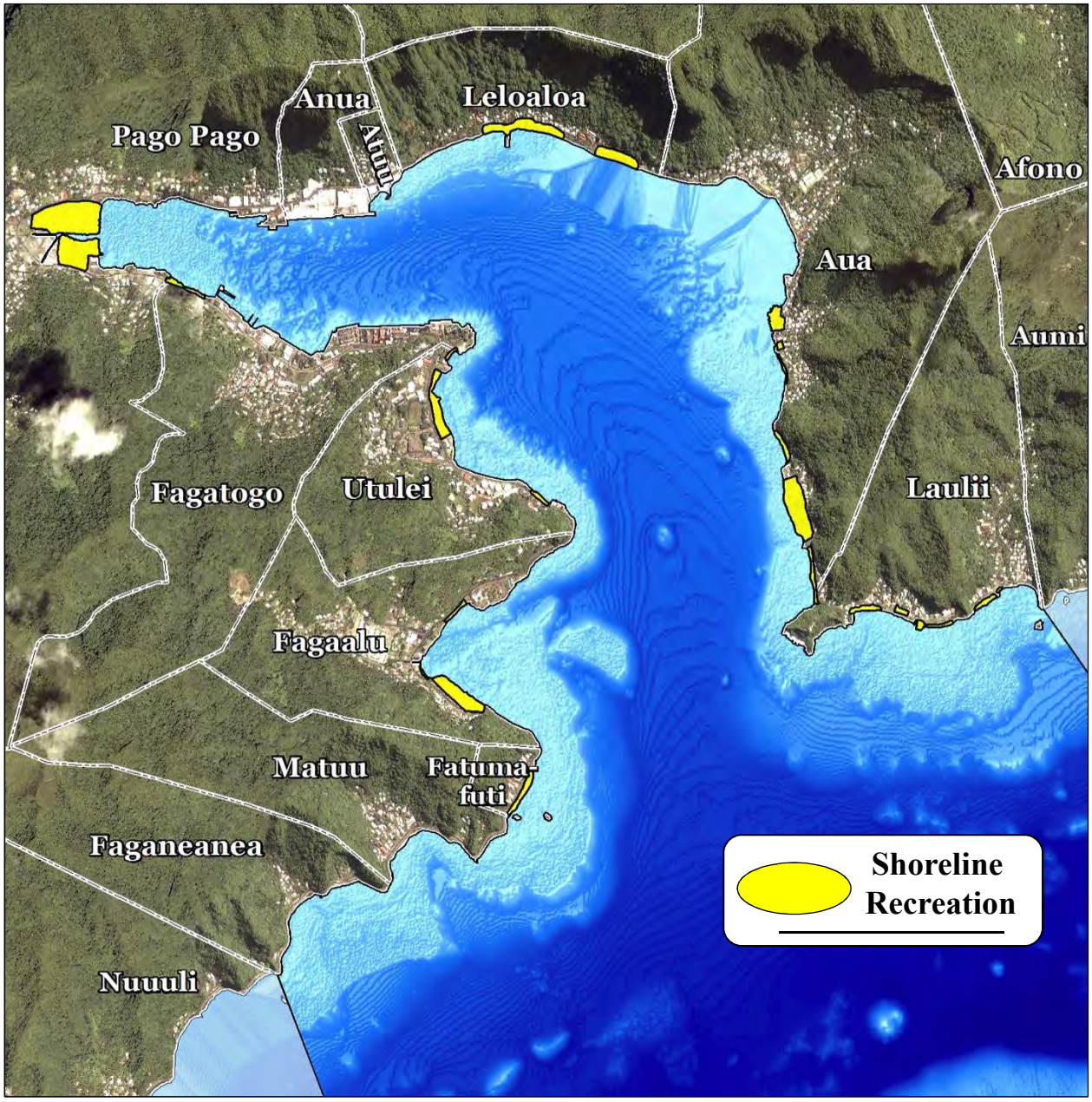




Surfing

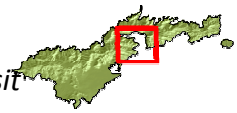
This category includes both surfing and boogie-boarding.

Surfing in American Samoa is highly dependent on tides, swells, and local conditions. Most surf spots are shallow reef areas that can be extremely hazardous and are recommended for experienced surfers only. Surfing is practiced by only a few people on Tutuila, but the island is considered to be an excellent surfing location for skilled surfers. Surfing occurs just outside the reef break, on the outer parts of the Fagaloa bay. There is no surfing inside the harbor.



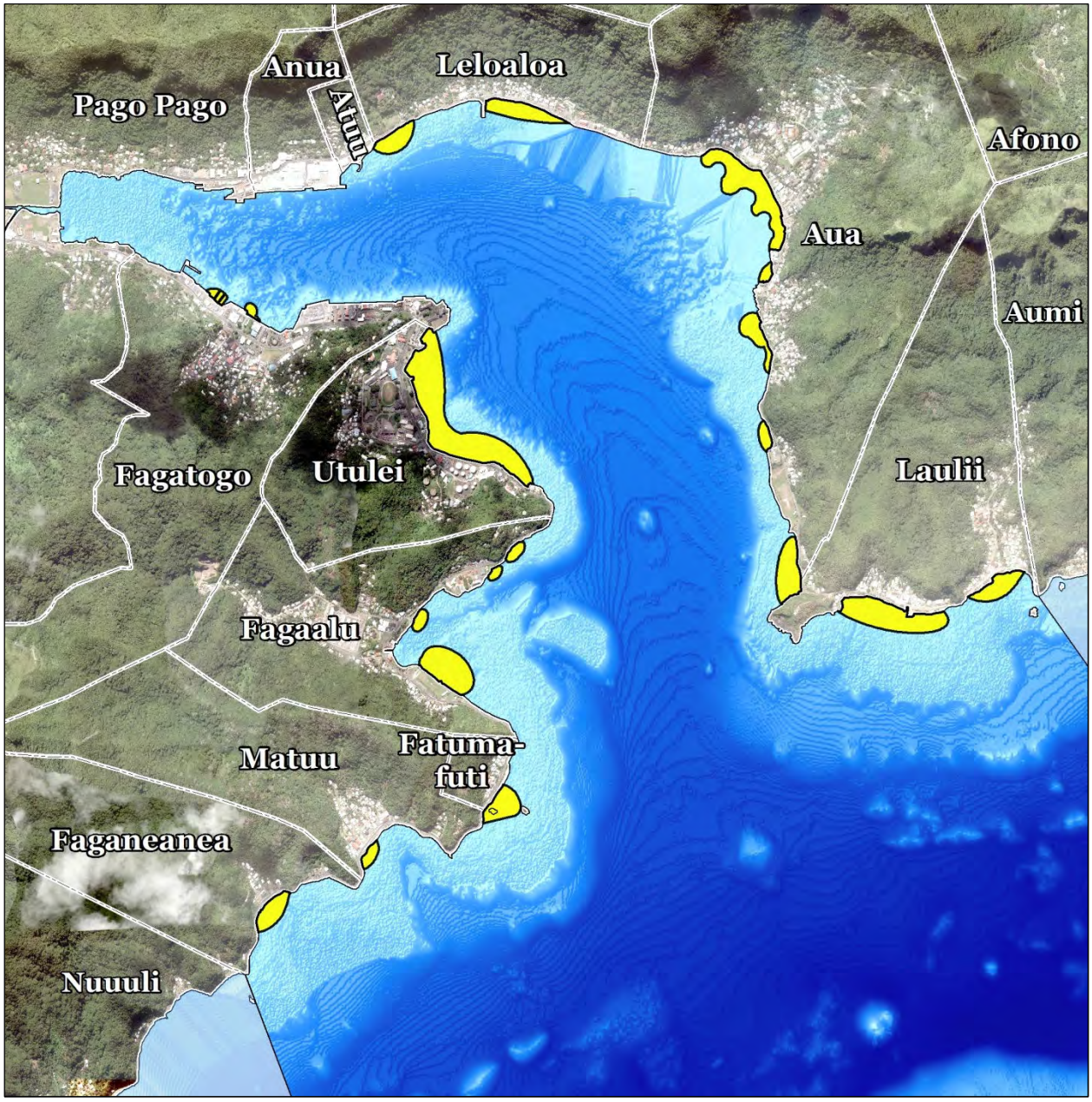
Imagery: USGS. Bathymetry: Roberts, 2007

Shoreline Recreation



Shoreline recreation includes picnicking, organized sports, recreational activities. It does not include commercial activities or use of shore as transit to use the marine area.

All public parks in Fagaloa are located on the ocean side of the coast road. Faga'alu Park and Utulei Beach Park are popular public recreation areas. Recreational activities in the Fagaloa area include a variety of sports such as volleyball, cricket, rugby, basketball, baseball, soccer, tennis. Families also use the area for BBQs, picnicking, and camping. Bingo is a popular activity in many coastal villages. Some recreational areas are open for use by all, and others require permission of the local village or family in charge of the area.



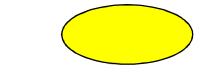
Imagery: USGS. Bathymetry: Roberts, 2007

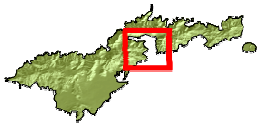
Swimming

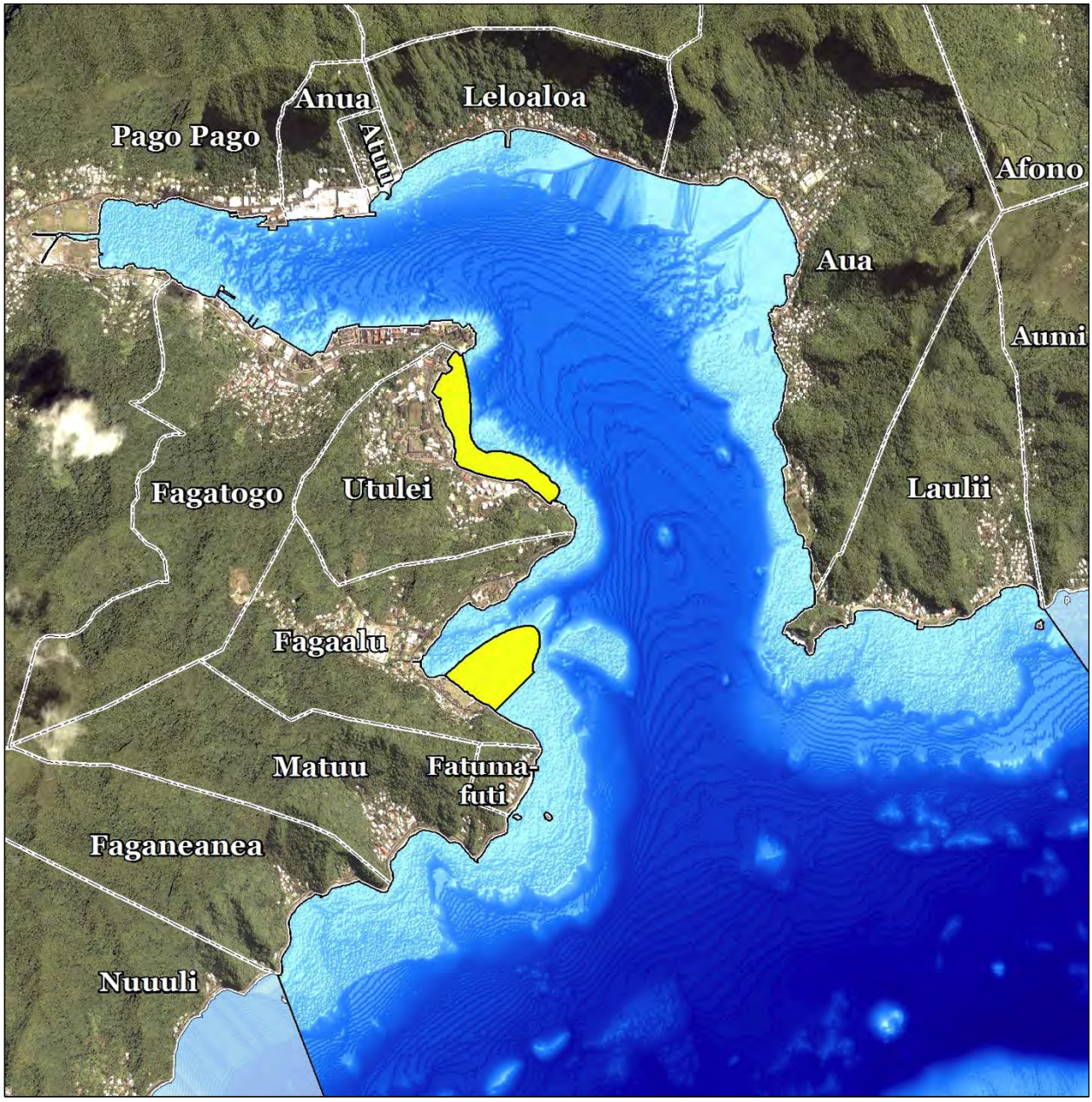
This category includes swimming done for recreation and exercise. It excludes free diving, snorkeling, wading in the water, or SCUBA.

Swimming occurs in most of the project region where ocean access is easily accessible, but is not allowed in village areas on Sundays. Utuilei beach park is used for swimming lessons and ocean education. Popular swimming locations are in front of Lee Auditorium and behind Sadie's by the Sea.

Swimming







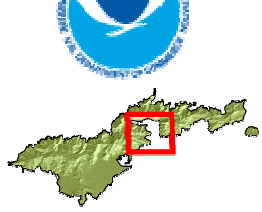
Imagery: USGS. Bathymetry: Roberts, 2007

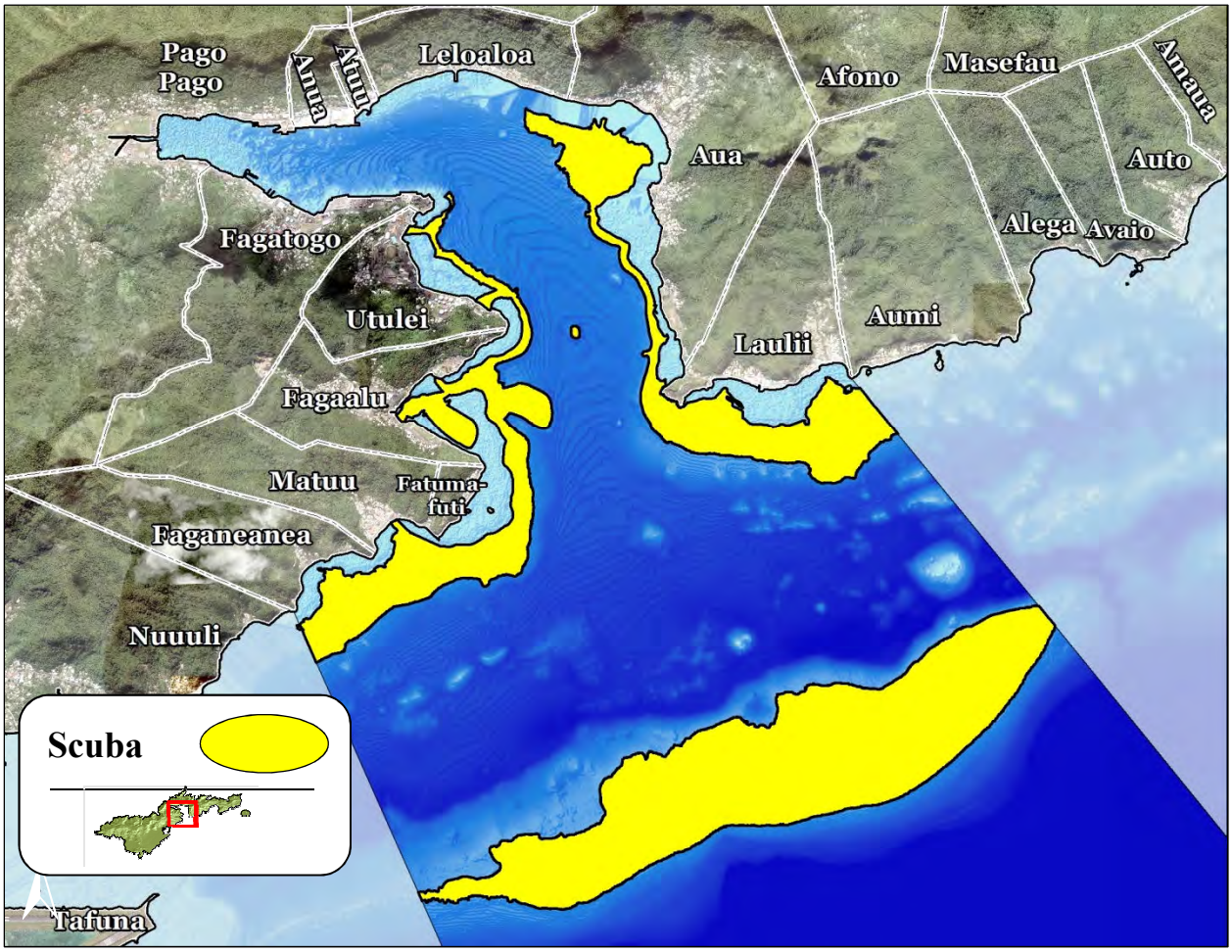
Recreational snorkeling

This category includes snorkeling, free-diving (not for the purpose of fishing or gathering), both shore-based and vessel-based. It does not include spearfishing and extractive activities, research activities, or snorkeling for professional reasons.

Recreational snorkeling is not a highly common activity in the Fagaloa region, but most frequently occurs off of Faga'alu and in Utulei near Sadie's by the Sea.

Snorkeling





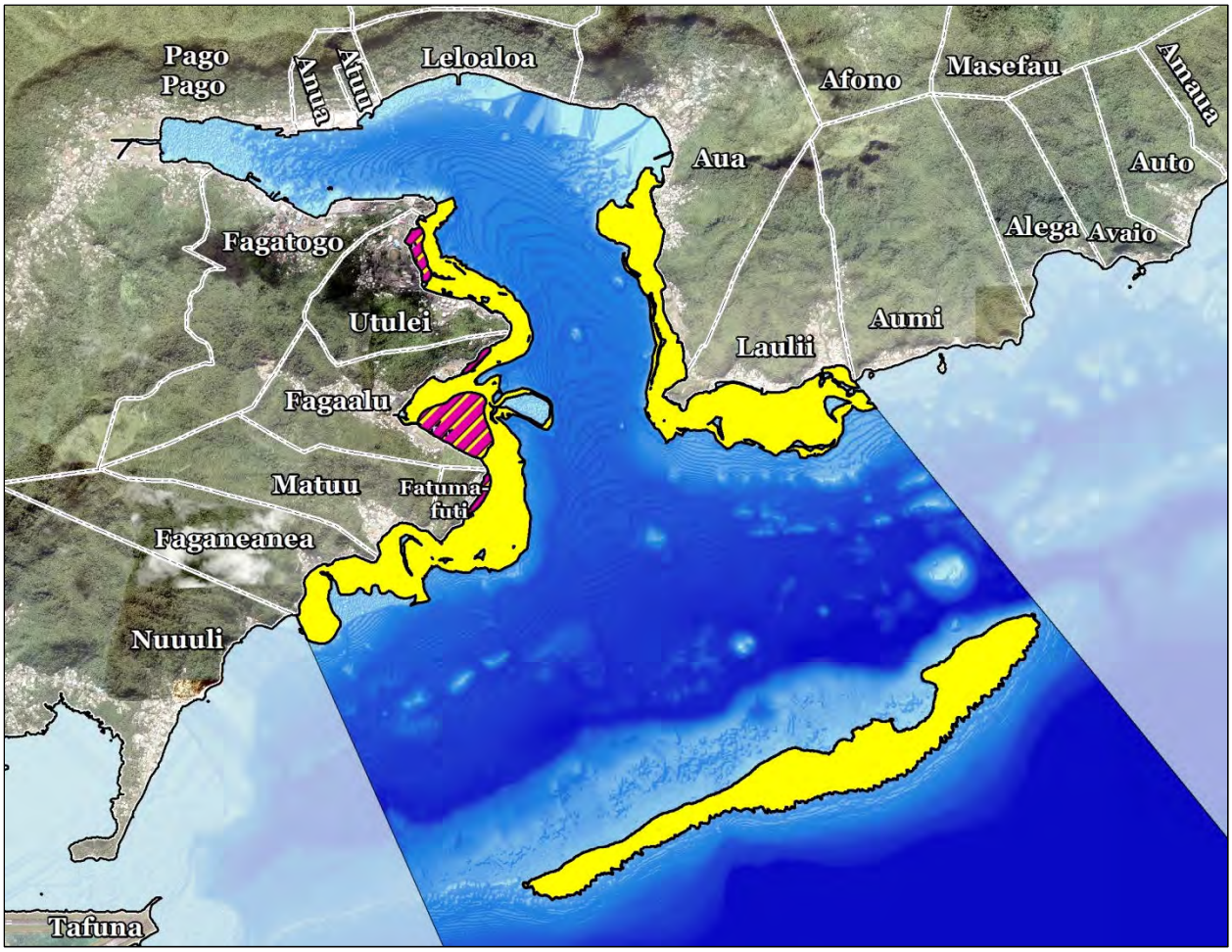
0.5 0 1 *Miles*

Imagery: USGS. Bathymetry: Roberts, 2007

Recreational diving

Recreational diving includes SCUBA diving (not for the purpose of fishing or gathering), both shore-based and vessel-based. It does not include research-oriented diving or diving for professional reasons.

Several recreational dive sites are found within Fagaloa, although equipment and capacity for recreational diving is very limited in American Samoa, with only a few certified dive masters/instructors on island. There are two areas to dive in the Faga'alu region off of Matefau elementary school, ranging from 25 – 90'. Goat Island Point (near Sadies by the Sea) can be accessed by boat or off of Utulei beach, and is a fairly degraded reef site which goes from 15-130'. The USS Chehalis is a technical wreck dive just north of the fuel dock in Utulei, which begins at 150'. Whale rock is a pinnacle next to the red buoy in Pago harbor, which is approximately 17 feet on top and goes down to 200 feet. Taema UXO is located in the middle of Taema banks at a depth of approximately 30-40 feet, and can only be accessed by boat. Scuba diving could occur in the entire Taema banks area, but the outer edge is used most often.

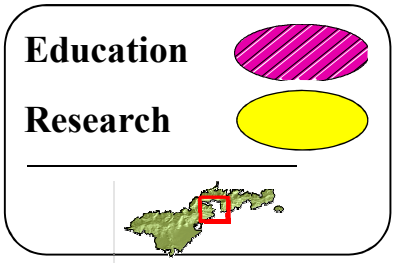


Imagery: USGS. Bathymetry: Roberts, 2007

Research activities

This category includes locations used for research and monitoring of natural resources on island. It does not include recreational diving and snorkeling.

The entire reef flat and Taema banks can be used for research; most of the more common research areas indicated on the map were identified by DMWR's Chief Fisheries Biologist. Research activities include coral reef and fish surveys, bleaching experiments, research on sedimentation, fish larvae surveys, and research training. Faga'alu is used extensively for research purposes and is a priority management site for NOAA CRCP. The DMWR office dock houses sensors for PACIOOS. A historic coral transect exists at Aua.



Educational activities

This category includes locations where education and outreach activities for school groups and the general public take place. It does not include university or agency research sites.

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