US Army Corps
of Engineers ®
Honolulu District

Appendix A

American Samoa Final Watershed Plan

Interagency Alignment

July 2022

Contents

1.1 Introduction

Partner involvement was a cornerstone for the development of the American Samoa Watershed Assessment. A wide breadth of partners were invited and encouraged to patriciate throughout all stages of the planning process and report development.

Most of the report development process coincided with the COVID-19 pandemic, which limited in-person meetings. As such, stakeholder engagement was conducted virtually, primarily over WebEx. Partners unable to join for plenary calls were invited to provide input through online forms.

This appendix documents the stakeholder meetings held as part of the American Samoa Post Disaster Watershed Assessment. Each entry documents the dates, attendees, and salient discussion points that informed this Watershed Assessment. Table 1 records all stakeholder meetings preceding the release of the Draft Watershed Assessment.

Table 1. Engagement Schedule

Meeting	Date	Goal
Meeting #1	July 2020	Input on problems and opportunities
Meeting #2	November 2020	Input on initial array of strategies + Shared Vision Milestone Prep
Think Tank #1	June 2021	Input on risk-based prioritization of Rainfall
Think Tank #2	June 2021	Input on risk-based prioritization of Coastal Systems
Think Tank #3	July 2021	Input on risk-based prioritization of Landslides & Tsunamis
Think Tank #4	July 2021	Input on risk-based prioritization of Water Quality & Supply
Meeting #3	September 2021	Input on draft recommendations + Risk Assessment results
Meeting #4	December 2021	Meeting with targeted group of partners to discuss final array of recommendations and implementation strategy.
One-on-one Calls	July 2020 – Oct 2021	Input on problems/solutions & relationship building

1.2 Partners

The USACE is working in collaboration with Federal and Territorial agencies, partners, and stakeholders to develop the Watershed Assessment, shown below in Table 2

Table 2. American Samoa Watershed Assessment partners

Organization	Focus Area			
	Rainfall	Coastal	Water Quality/Supply	Tsunami
Local Agencies				
Coral Reef Advisory Group (CRAG)	X	X	X	–
Office of Disaster and Petroleum Management (ODAPM)	X	X	–	X
American Samoa Environmental Protection Agency (ASEPA)	X	X	X	–
American Samoa Power Authority (ASPA)	X	X	X	–
American Samoa Department of Commerce (ASDOC)	X	X	–	X
American Samoa Department of Public Works (DPW)	X	X	–	–
American Samoa Historic Preservation Office (HPO)	X	X	–	X
American Samoa Department of Port Administration	–	X	–	–
American Samoa Department of Homeland Security (AS DHS)	–	X	–	X
American Samoa Community College	–	X	X	–
National Park of American Samoa	X	X	–	–
University of Hawaii (UH)	X	X	X	X
University of Hawaii Sea Grant College Program	–	X	X	–
Federal Agencies				
USACE	X	X	X	X
U.S. Environmental Protection Agency (EPA)*	X	X	X	–
U.S. Geological Survey (USGS)	X	X	X	X
Dept of Interior* (DOI) [USFWS/NPS/Office of Insular Affairs/U.S. Geological Survey/ Pacific Islands Climate Adaptation Science Center (PI-CASC)]	X	X	X	X
Dept of Agriculture* (NRCS)	X	X	X	–
Dept of Commerce* [National Oceanic and Atmospheric Administration (NOAA) NMFS/Office for Coastal Management/National Weather Service]	X	X	X	X

Organization	Focus Area			
	Rainfall	**Coastal**	**Water Quality/Supply**	**Tsunami**
Federal Emergency Management Agency (FEMA) (Region IX/Pacific Area Office)	**X**	**X**	–	**X**
Dept of Transportation (Federal Highways Admin.)	**X**	**X**	–	–
National Fish and Wildlife Foundation (NFWF)	**X**	**X**	**X**	–
National Aeronautics and Space Administration (NASA)	–	**X**	–	–

* Coordination required by Section 729 of the WRDA of 1986, as amended

1.3 Meeting #1 – July 2020

Purpose: USACE to kick off the watershed assessment and gain partner inputs on proposed problem statements, agencies to include, relevant studies, and shared goals.

Date: 9 July 2020

Location: Virtual, Webex

Attendees:

- ODAPM
- American Samoa DPW
- CRAG
- American Samoa EPA
- USFWS
- USACE

Discussion Points:

- USACE introduced the Watershed Assessment
    - Water resource focused, also includes ancillary considerations and local input interests
    - Project Management Plan by July 2020.
    - Shared Vision Milestone by January 2021.
    - 30 Month project timeline, $1.5 million funding.
    - Match funding sources to strategic plan to assist locals. Leverage this input with information and team experience.
- Problem Area Feedback:
    - Combination of heavy rainfall and erosion impact the outfalls often resulting in damages to road.
    - Would like to see inland work that addresses run off quantity/quality issues before they hit the coast. Village density and rainfall intensity create issues.
    - Storms that take out trees and vegetation add to loss of natural mitigation of nutrient uptake and run off. Therefore, leaking septic tanks get little to no filtration and end up in the lagoon.
- Conflicts lie within zoning coherence and Communal land ownership.
- Consolidate plethora of available studies by referencing them and simplifying the message.
- CRAG is rolling out Community Resiliency plans that will be grassroots driven and aimed at an integrated approach to address coral reef preservation and flooding. Working with eight prioritized villages.

- There are four local and three federal agencies/groups meeting now to coalesce a village-focused plan. They meet next month. Desired outcome is that Watershed Assessment can act as a guide to sustain efforts toward local mitigation, per resident (e.g., inspire green solutions, avoid diverting water, and help reduce runoff affects.)
- Explore a way to leverage Watershed Assessment, based on local input, to leverage permitting or government level mandates for future green construction methods.
- The Watershed Assessment can be a catalyst for alignment of multiple federal agencies' funding streams. It can also reference other plans that can further American Samoa's access to project funds that address watershed problems.
- Focus on how to cultivate the "local perception of value" of the Watershed Assessment effort.
- Watershed Assessment could provide mitigation recommendations for households/communities so that they may carry out citizen-based mitigation.

1.4 Meeting #2 – November 2020

Purpose: USACE to provide an update on Watershed Assessment progress and receive feedback on problems, opportunities, objectives, constraints, and the Shared Vision Statement. This meeting also served as team alignment leading up to the Shared Vision Milestone in January 2021.

Date: 18 November 2020

Location: Virtual, Webex

Attendees:

- ODAPM
- American Samoa EPA
- CRAGS
- NOAA OCM
- USFWS
- USACE

Discussion Points:

- The National Fish and Wildlife Foundation (NFWF) has a tool similar to the expected outputs for this study from LifeSim2.0, software used to predict life loss, economic damages, and possible evacuation scenarios from a flood event.
    - American Samoa Coastal Resilience Assessment effort is a partnership between NFWF, NOAA, University of North Carolina, and partners in American Samoa.
- Septic system inundation results from both riverine flooding and leaky pipes.
- CRAGS is working on Ridge to Reefs BMP demonstrations.
    - Some sensitivities exist related to BMPs and piggery management.
- ODAPM Priority: Collaborate with local and federal partners to incorporate mitigation strategies.
- Received partner concurrence on Shared Vision Statement.

1.5 Think Tank Charrette Series

The PDT conducted a series of four charrettes, referred to as "think tanks", during June and July 2021, focused on each of the identified problem areas. All watershed assessment partners were invited to participate. Each meeting was held virtually and utilized online polling websites to solicit interactive feedback.

Participants were asked to provide input on the problem statements, stressors, potential recommendations, and anticipated implementation roadblocks. Several questions were focused on assessing the likelihood and consequence of problem areas and specific effects. These inputs were used to inform the risk assessment. Additionally, participants curated an initial array of measures and recommendations to address stressors. Questions asked during the virtual WebEx charrettes were also provided to participants as a Google Form to allow for additional input from partners unable to join the calls.

The engagement approach was slightly modified between each meeting and evolved to fit the needs of those on the call.

1.5.1 Thank Tank #1 – Rainfall

Date: 22 June 2021

Location: Virtual, Webex

Attendees:

- NOAA OCM
- NASA
- USFWS
- CRAG
- National Park of American Samoa
- NRCS
- Department of Port Authority
- American Samoa DPW
- USACE

Discussion Points:

- Tend to mute flash flood warnings because they go off so frequently.
- Include terrestrial habitat degradation in rainfall effects.
- Subsidence coupled with SLR should be included in Shared Vision Statement.
    - Land sinking caused by 2009 earthquake, is exacerbating local SLR.

Septic System Inundation:

- Idea for village or multi-village-based wastewater treatment facility.
    - Eliminate septic systems.
    - Expensive.
- TNC (nature conservancy) putting on seminar of innovative wastewater solutions.
- Money and lack of knowledge holding up implementation of septic system solutions.
    - If maintenance is required from the household-level, it may not work/be popular.

Waste Transport in Waterways:

- Have more vegetation ground cover aka "urban vegetative planning."
    - Filter strip.
        - Veg plantings, usually grasses; have at certain width.
        - Trap sediment and excess nutrients.
        - Vetiver grasses.
- NRCS wants to work with ASPA for community composting options.

Habitat Degradation:

- Tree snails flushed out to ocean.

Property Damage:

- Need low impact development.
- Pollution should be stopped upstream, rather than downstream (with nets). ASG workers pick up downstream trash once a month.
- Public Notification Review System (PNRS) - land use permitting system that needs help with enforcement regarding its erosion control recommendations.

Landslides:

- Need stabilization projects.
- Some landslides caused by quarry activity.
- American Samoa Department of Commerce (DOC) director put a stop order after landslide event.

Other Notes:

- EPA director and CRAG director meeting to key up climate change solutions.
    - Watershed study should address climate change solutions.
    - Great to engage on larger scale.

Stressors Poll Results:

Question: When thinking about rainfall, what other key stressors currently impact communities in American Samoa?

- Landslides are more likely with heavy rainfall, especially in the steep topography of AS.
- Significant nearshore water quality impairment. Chocolate water that's detrimental to the habitat and people.
- Nutrient enrichment.

Risk Assessment:

Figure 1 below depicts the risk assessment which was the average of participants' responses.

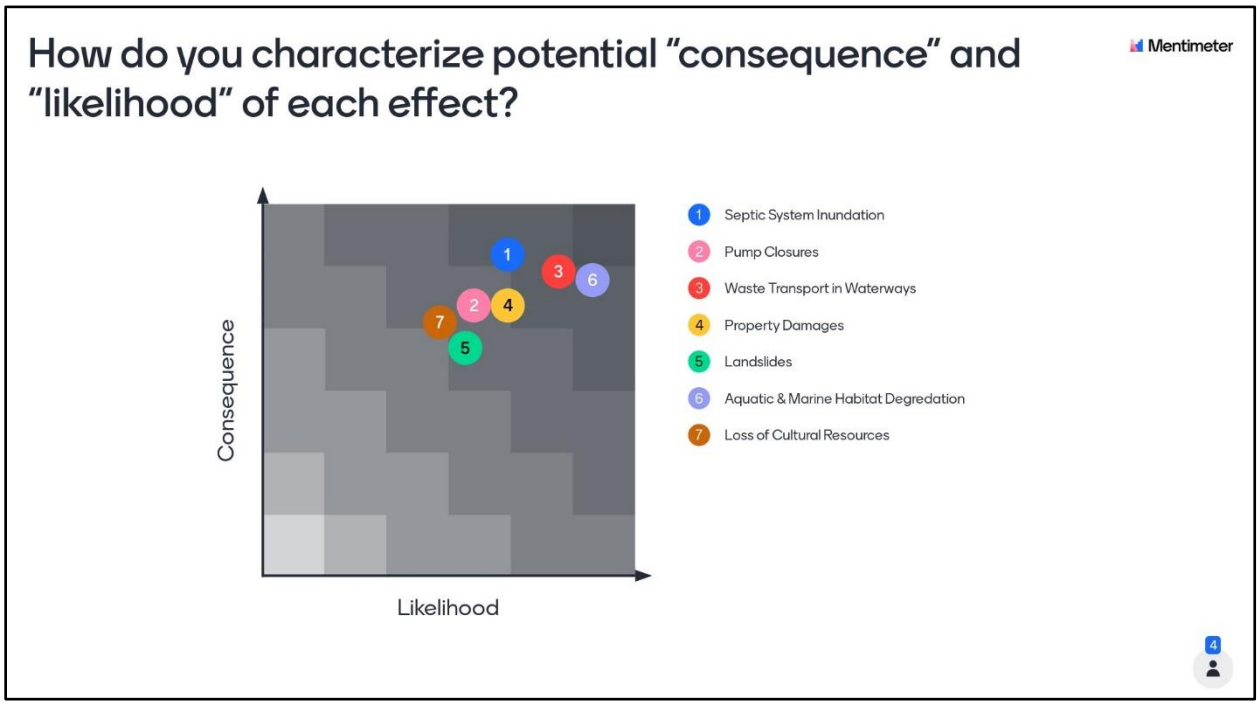

Figure 1. Rainfall Stressor Risk Assessment (via Mentimeter)

1.5.2 Think Tank #2 – Coastal Flooding & Erosion

Date: 29 June 2021

Location: Virtual, WebEx

Attendees:

- NOAA Office for Coastal Management
- NASA
- USFWS
- NRCS
- American Samoa EPA
- ODAPM
- American Samoa DPW
- National Park of American Samoa
- FEMA Region IX
- CRAG

Discussion Points:

- Makes sense that coastal flooding would be the highest concern--seeing a lot of coastal projects coming out with main highway. There is heavy rainfall, but people are building in a way that rainfall is affecting the road and vegetation more so than homes. Homes being inundated are likely older homes that haven't had opportunity to move.
- More projects coming in for coastal erosion and flooding, a few landslide projects (more coastal erosion than seen in previous years.)
- Study on SLR and effect on taro plantations/farming.
- Low-lying livestock farms.
- Loss of recreation/tourism:
    - Ability to access reefs.
    - Tourism hotspots:
        - Safely access beaches (in Leoni, heard it's hard to get down to the beach because it's so eroded, would like hardened shoreline.)
- Transportation impacts would be high on consequence/likelihood--have one airport and one main highway.
- Beneficial to have backup generators and power redundancies.

QUESTION: When thinking about coastal flooding/erosion, what other key stressors currently impact communities in American Samoa?

- Loss of coral reefs.
- Availability of land for eventual SLR retreat.
- Q: what's in the works to protect harbors/airport?
    - Airport application/proposal for runway protection project.

    - Redundancies with powerplants where if one generator fails, another will kick in.
    - Install standby generators at shelters for storms.
- Main road frequently becomes congested.
    - No plan to restrict number of vehicles (although currently cannot import cars older than 2003.)
    - Number of vehicles also creates issues with imported fuel supply.

Transportation:

- Traffic is worse when school is active.
- Need: traffic planning, decrease number of vehicles, different routes (being explored.)
    - Have not tried staggering school/government start times to alleviate traffic.

Habitat Degradation:

- ODAPM is coordinating a nature-based solutions workshop in AS.
- Q: Are there villages more open/prepared to pilot green solutions? Are there efforts to engage village chiefs?
    - Coastal villages most open to green solutions (areas impacted by coastal erosion and SLR.)
    - Some villages have reached out to ODAPM wanting to submit proposals for green projects.
- There is some turtle nesting on the main island of Tutuila (e.g., Alega/Tisa's), but sparse documentation.
    - In last 10-20 years beaches have narrowed, removing habitat.
    - Shoreline hardening also removed nesting habitat.
    - Lots of nesting occurs on the Rose Atoll.
    - Ofu airport also has lots of nesting activity.
    - Reports lack on species specification of nesting turtles.
- Mangroves – are there other areas that could support mangrove plantings?
    - School presentation discussing planting efforts near hospital.
    - Land Grant Forestry planting mangroves for Forest Week.
    - The potential habitat is moving inland (SLR), but the mangroves themselves aren't. Wetlands continue to be threatened by development.
    - Mangroves in Aunuu and Mauna.

Property Damage:

- Q: Interest in AS for land use planning/zoning?
    - ODAPM requested permitting and review board to have hazard mitigation presence.
    - Need to have accountability.
    - Ramping up outreach.
- IBC/IRC = international [building/residential] code.
    - Want to update 2018 codes.

Risk Assessment:

Figure 2 below depicts the qualitative risk assessment complied from averaging risk ratings from participants.

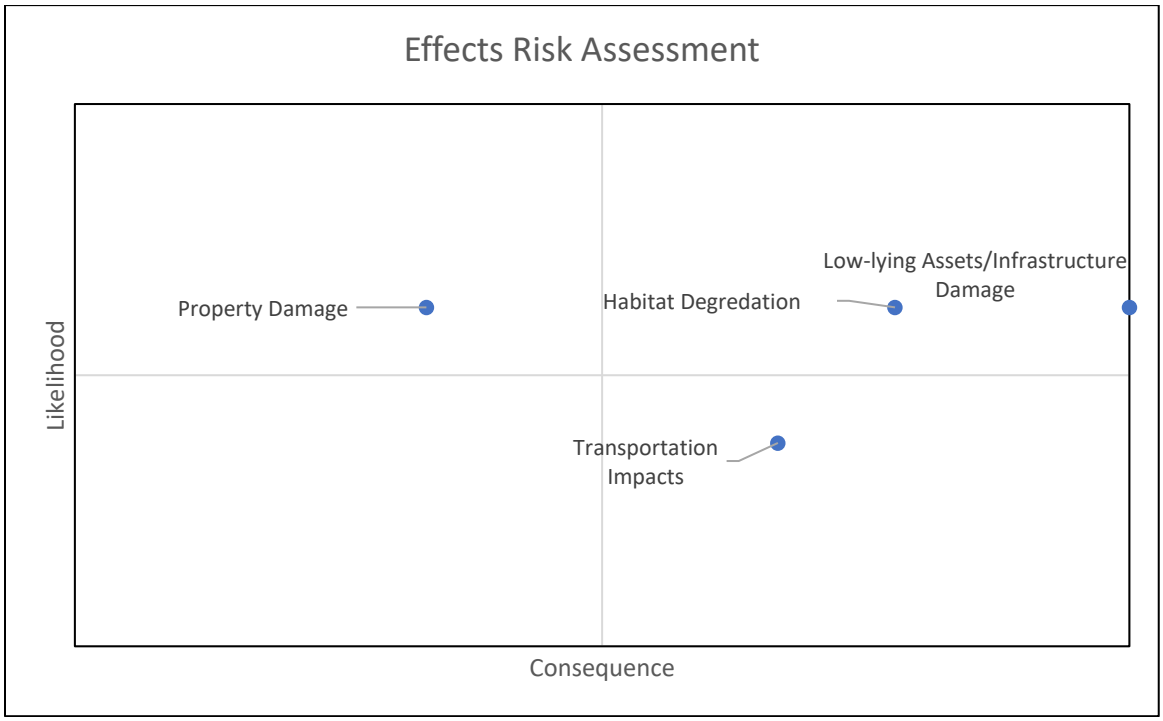

Figure 2. Coastal Hazards Qualitative Risk Assessment

Draft Recommendations:

- Modern Building codes (relocation not preferred)
- Land-use planning/zoning
- Build on stilts
- LID/ green infrastructure
- Vegetation
    - Ban "normal" vehicles and create alt modes and routes of transportation
- Awareness/enforcement of HWM in relation to building codes
    - Retention basins in undeveloped low-lying areas
    - Relocation of hospital
    - Updated building codes
- Living shorelines
- Backup generators
- Drainage management planning
- Green armoring

- Develop alt roads
- Control development on areas vulnerable to wave action (low lying and coastal zones)
- Zoning restrictions
- Build/move out of flood zones
- Building development codes
    - Don't build in AE or VE zones (or implement mitigation strategies)
    - Adoption of current IBC/IRC, followed with effective enforcement
- Education
- Control erosion by controlling recession of the shoreline using natural or engineered shoreline
- Control waste discharge to waterways by installing a sediment and trash collection
- Community level planning
- Plan for mangrove migration inland
- Plant mangroves
- Natural shoreline protection
    - Control waste discharge to waterways by installing sediment and trash collection area
- Redirect storm waters to feed aquifers
- Alternate transportation modes
    - Traffic planning
    - Raised roadway over Pala Lagoon
    - Better roadway drainage
    - Elevate coastal roadways
- Special lane for alt vehicles
    - Alternative traffic lane for rush hour
    - Bike friendly routes
    - Stagger start/end times for school and govt

1.5.3 Think Tank #3 – Landslides & Tsunamis

Date: 13 July 2021

Location: Virtual, WebEx

Attendees:

- CRAG
- FEMA Region IX
- USFWS
- American Samoa EPA
- NASA
- American Samoa Coastal Management Program

Discussion Points:

Landslides:

- 1990 landslide mitigation study by Charles Stern--landslides occur but aren't well documented.
- Would be helpful to have documentation of landslides, maps.
- Landslides affect hospital safety, transportation routes.
    - Active quarry upslope of LBJ Hospital:
        - Quarry is getting larger every year, doesn't seem to have bounds for expansion.
        - Concerns of if the quarry would exacerbate landslides and affect the only hospital on AS.
- Recommend the quarry get a PNRS permit with strict BMPs.
- LNJ Hospital Building at 2012 standards.
    - Called to be raised on piers (like Bank of Samoa building.)
    - Could be classified as a tsunami shelter.
    - Redesigned, dropped first floor elevation considerably, putting it in danger.
- Plans to move LBJ were in the newspaper.
    - The proposed location in the paper for LBJ is where the correctional facility currently is, by Lions Park/Pala Lagoon.
    - 2019 report form USACE that doesn't support relocation of LBJ because moving it would impede ability to serve all parts of the island.
    - Landslide/quarry info would be good to add to the report, might want to revisit the assessment.
- Life loss from landslides would be a huge consequence, but rare.
- Challenge AS faces is that steep slopes are most of the island, particularly with coastal flooding causing people to look upslope--we can't completely remove people, so we need designs and plans to use these areas as safely as possible.
    - Restabilize slopes.

    - Vetiver grass has been used here successfully.
    - Need technical expertise in new/better building designs (within DPW.)
        - DPW provided most building plans, issues building permits.
- Roadblocks:
    - Adoption and implementation based on Matai approval.
    - Politics.
    - Funding, social acceptance, political will, and technical capacity.
    - Would need champion in administration to get it passed in legislation.

Tsunamis:

- Updated tsunami maps that include future conditions.
    - Nate Woods with USGS.
    - Inundation model for a worst-case tsunami created by Fai Cheung.
- Have non-functional tsunami warnings--didn't realize they didn't work for months.
- Had tsunami warning, but no sirens.
    - Radio and TV stations involved (well into the warning.)
    - Got texts after warning was lifted.
    - Traffic came to a standstill.
    - Many would have died if tsunami was significant.
    - Schools did well.
- 39 lives lost in 2009 tsunami/earthquake.
- AS ineligible for FEMA grant (due to per capita population.)
    - HAZUS often unfair to poorer communities in general.
    - Could USACE help fill data gap to improve HAZUS analysis.
    - If competing with CA or WA, will never show the same magnitude of damages because of how expensive infrastructure is in CA.

Risk Assessment:

Qualitative risk assessments for tsunami and landslides are shown below in Figure 3 and Figure 4, respectively. These risk assessments are the average risk ratings from participants.

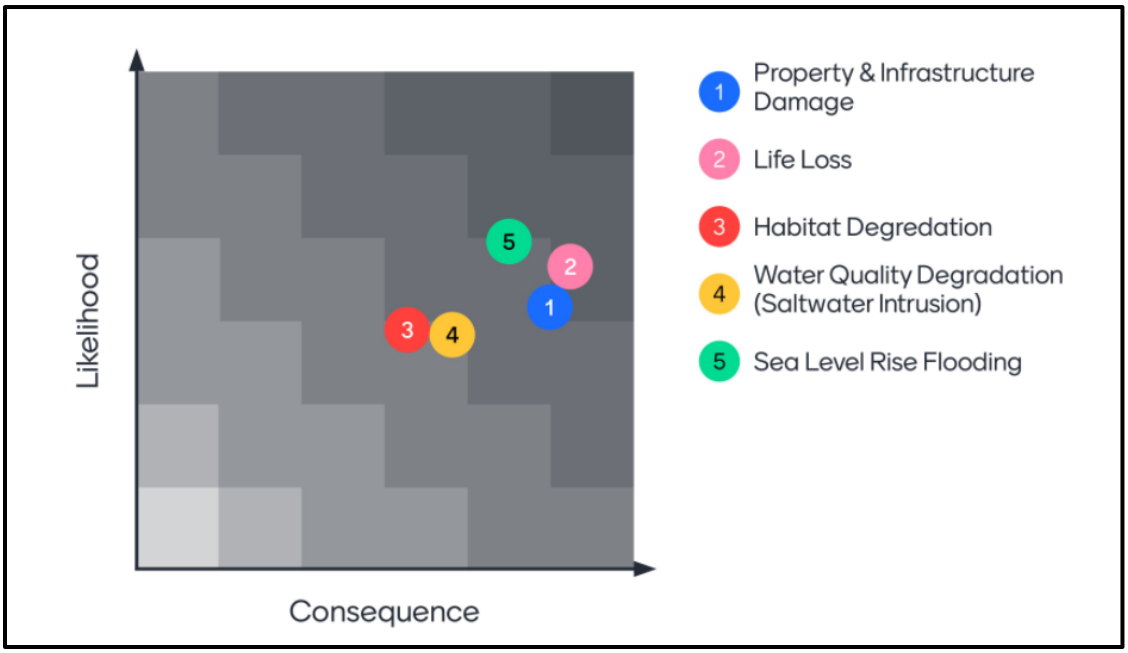

Figure 3. Tsunami Qualitative Risk Assessment (via Mentimeter)

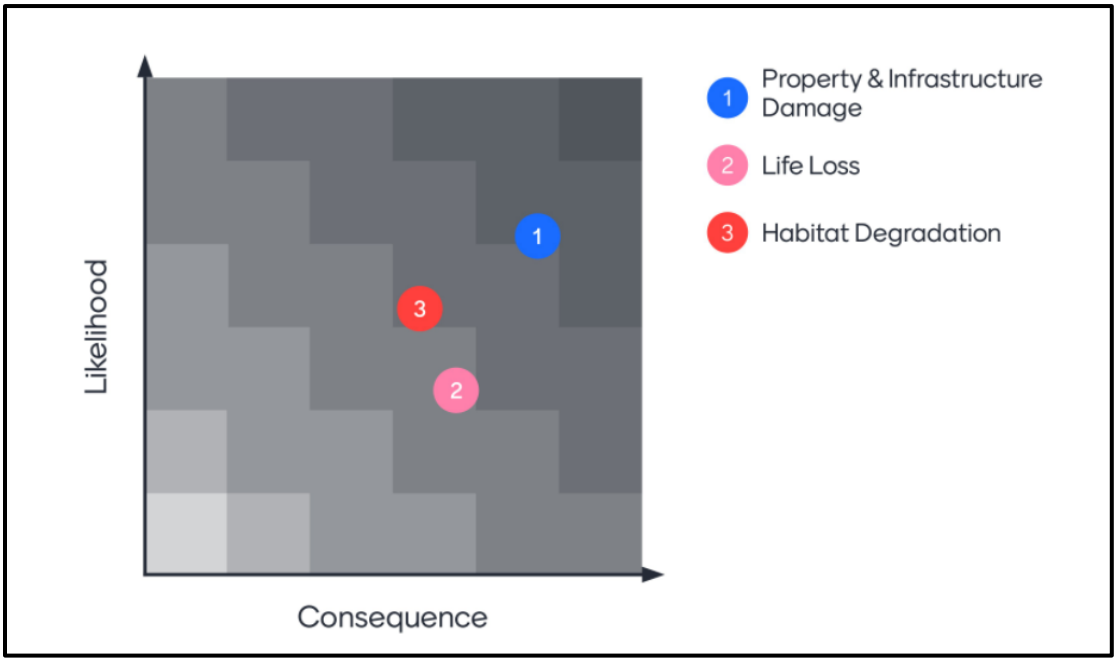

Figure 4. Landslide Qualitative Risk Assessment (via Mentimeter)

Draft Recommendations:

Landslides:

- Education and outreach
- Enable PNRS board to regulate development on slopes
- Resilient coastal infrastructure
- Shoreline protection
- Building code implementation and enforcement
- Ecosystem restoration

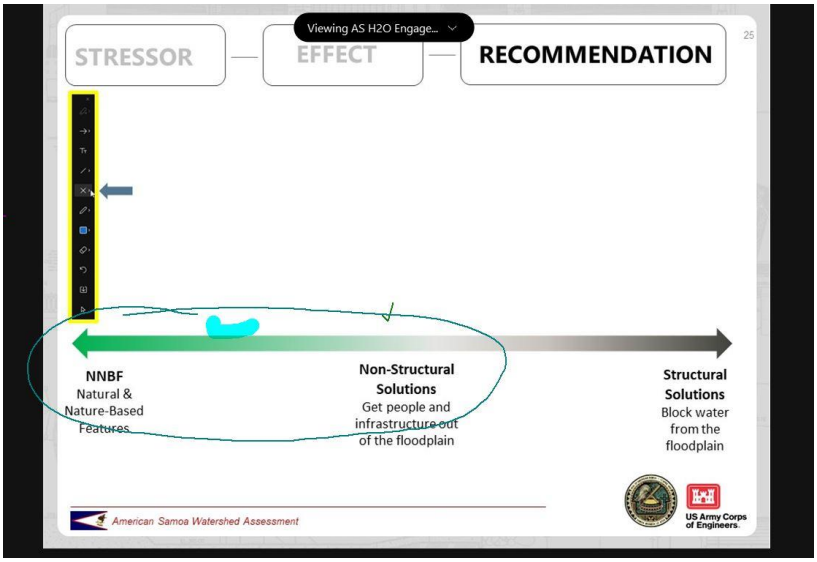

Figure 5. Landslide Recommendations Preferences

Tsunamis:

- Education and outreach
- Green/grey shoreline protection
- Vegetative buffers
- Wetland protection and restoration
- Pre-warning system
- Have clear routes to evacuate upland
- Building code modernization
- Increase coastal vegetation, like mangroves
- Inventory of current habitat
- Raise infrastructure
- Desalination plants

1.5.4 Think Tank #4 – Water Quality & Supply

Date: 20 July 2021

Location: Virtual, WebEx

Attendees:

- ODAPM
- University of Hawaii
- NOAA Office for Coastal Management
- Jamie Caplan Consulting
- NASA
- American Samoa EPA
- USFWS

Discussion Points:

- Uncertainty around rainfall impacts the likelihood and impacts to other aspects to different resources. Whereas water quality and supply is something we're already seeing challenges with on Aunu'u where the freshwater lens is being impacted. Taro plantations and freshwater on Aunu'u is being impacted currently.
- Rainfall is a proxy for riverine flooding, and flooding does a lot of damage. River and coastal. American Samoa already gets a lot of flooding during heavy rainfall, so it is a good proxy.
- A lot of problems are associated with drought, such as salinity increases in wells and water supply in general
- Coastal Erosion is a definite concern and something that has been discussed in the past two Hazard Mitigation Meetings
- The level of porousness on the island also really impacts the water supply.
- Threats from pesticides and NPS pollution can end up in the freshwater supply.
- The soils have a lot of bacteria and surface water is highly contaminated with bacteria.
- Possibly worth looking into any connections between the high rate of septicemia and the high loads of bacteria in the freshwater/surface water.
- Since groundwater supplies drinking water and cannery operations, saltwater intrusion would be a problem
- Pump closures are not very common
- Pump closures occurred in Taulauta District with heavy rainfall
- Record from ASPA of 8 or 9 well closures due to cleaning. Closures were paired with a boil water notice
- Most people in American Samoa are under a boil water notice
    - Those that can afford it, rely on bottled water

- ASPA installing a filtration system on contaminated wells
- Potential implementation roadblocks:
    - Community support
    - Funding

Risk Assessment:

The qualitative risk assessment for water quality and supply is shown below in Figure 6. These ratings depict the average risk ratings provided by participants.

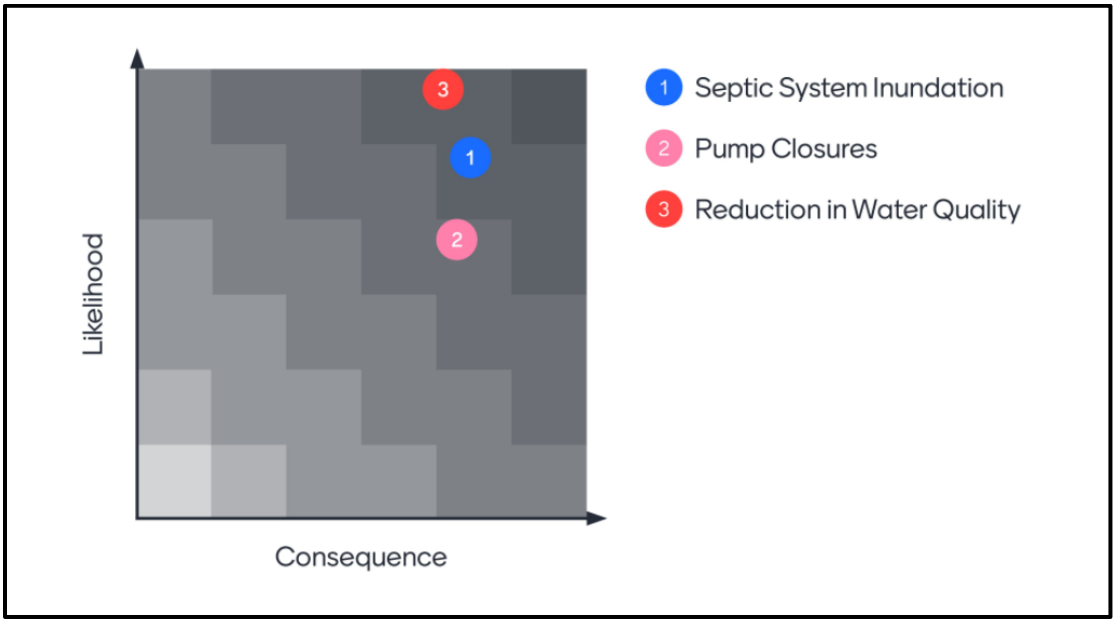

Figure 6. Water Quality and Supply Qualitative Risk Assessment (via Mentimeter)

Draft Recommendations:

- Well inspections
- Planning and zoning regulations
- Small-scale, multi-village treatment systems
- Upgrade water supply infrastructure
- Vegetation around septic systems
- Fewer impervious surfaces
- Pumping effluent
- Identify and protect recharge fields
- Vegetative filters and buffers
- Desalinization
- Cistern collection

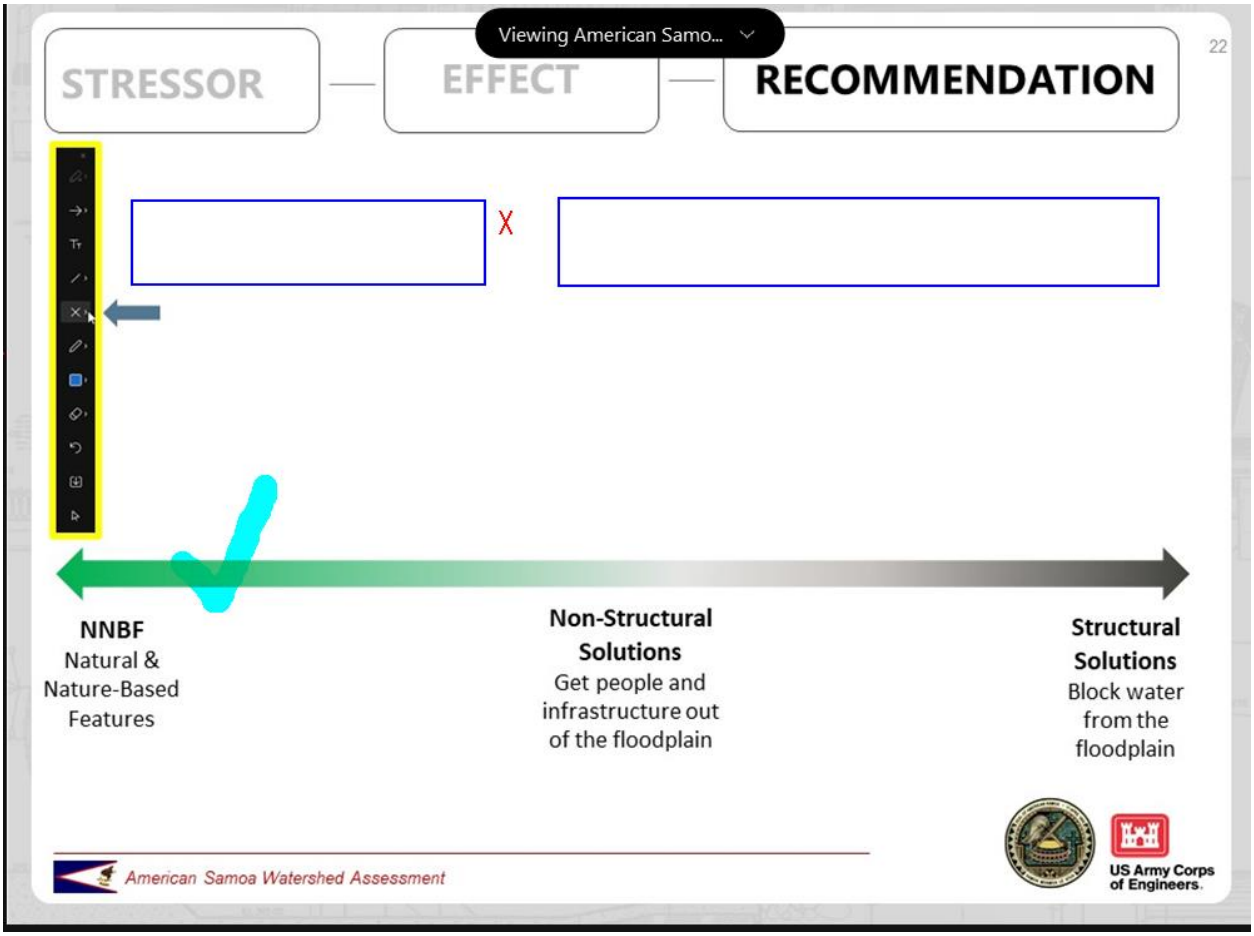

Figure 7. Water Quality and Supply Recommendation Preferences

1.5.5 Think Tank Summary and Discussion

The think tanks provided valuable insights and feedback which informed risk assessment ratings. Partners were asked to qualitatively assess the overall problem statements for both consequence and likelihood as well as importance to address. Landslides were originally considered as a problem statement but were later captured under the rainfall and storms problem category.

Partner input on the initial risk assessment was imperative to inform the inputs for the USACE risk assessment. However, the final results do not directly line up with partner results. The USACE team accounted for additional details not originally included in the think tank calls. Additionally, partners who responded were only a fraction of all those that were invited to participate in the watershed assessment; so, the results do not capture the voice of all agencies. Feedback largely was solicited on-the-spot in calls, whereas the USACE team took a methodical and long-form approach to fully assess risk of identified stressors. Results from the USACE risk assessment were later vetted through partners for concurrence and approval. Figure 8 and Figure 9 below show the results from the initial partner risk assessment.

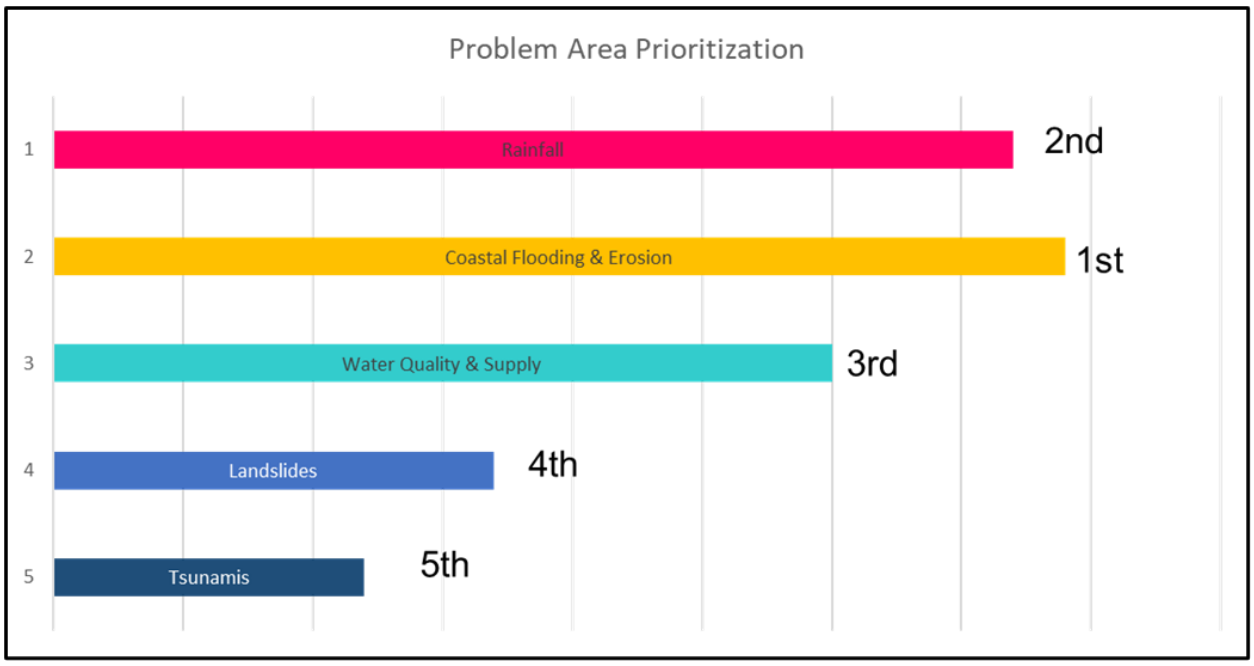

Figure 8. Problem Area Prioritization

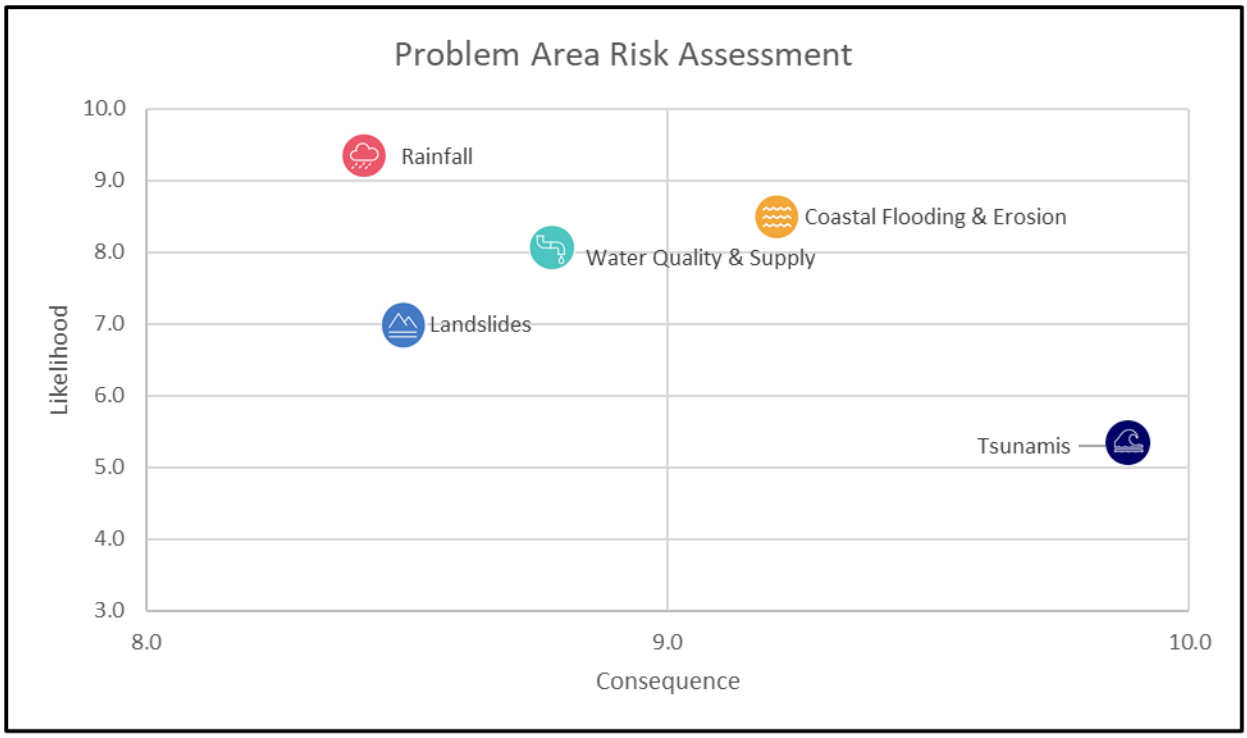

Figure 9. Preliminary Partner Risk Assessment

1.6 Meeting #3 – September 2021

Purpose: Discuss findings of USACE risk assessment and draft recommendations and prepare for the Recommendation Milestone in October 2021.

Date: 03 September 2021

Location: Virtual, WebEx

Attendees:

- FEMA
- NASA
- Jamie Caplan Consulting
- American Samoa Nation Park Service
- USFWS
- CRAG
- NOAA OCM
- ODAPM
- American Samoa EPA

Discussion Points:

- Risk assessment is complementary to 2020 Hazard Mitigation Plan (HMP).
- USACE and Jamie Caplan Consulting (authors of 2020 HMP) to collaborate moving forward--complimenting each other's documents.
- Recommend focusing on recommendations that will be easy to achieve, with low political polarization.
- Could use Watershed Assessment to further conversation about land use.
- Recommend USACE include explanation of how different recommendations relate or build off one another.

1.7 Meeting #4 – December 2021

Purpose: Meeting with targeted group of partners to discuss final array of recommendations and implementation strategy.

Date: 07 December 2021

Location: Virtual, WebEx

Attendees:

- ODAPM
- FEMA
- NOAA OCM
- Jamie Caplan Consulting
- USACE

Discussion Points:

- Could consider updating tsunami warning systems since they were installed over ten years ago and no longer function
- Previous warning systems were funded with a Department of Homeland Security (DHS) grant
- After 2009 tsunami there were issues with power and communication systems. For example, phone lines were over inundated, and people were unable to make calls.
- Government required emergency action plans (EAPs) at public facilities like schools, however private industry has no such requirement. Could identify EAP gaps at major commerce centers
- Green infrastructure has interest in certain villages and off-island interest, however, there needs to be buy-in from local government
    - Need to understand what the benefits of nature-based solutions are, especially from a human health standpoint
    - Visuals are a powerful communication tool
- There is a lack of shared information at a grassroots or layperson level (for example about subsidence rates)
- Focus less on seawall specifically and instead tailor recs to consider green and grey solutions to provide enhanced beach access, flood protection, and ecosystem services.
- PRNS needs greater accountability. System issues result in permitting in unsafe areas. FEMA may provide community assistance visits.
- American Samoa has issues with datum in GIS files, reporting incorrect mean sea level.
- Desire for LiDAR to assistance with subsidence monitoring

- Robust education and outreach program exists for tsunamis through DHS grant. High school education program, STEAM, teaches high school students about mitigation.

1.8 Public Review

Two federal partners coordination calls were held on February 15 and 17th. Federal partners across the American Samoa, Guam, and Commonwealth of the Marianas Islands Watershed Assessment teams were invited to participate in the calls. The presentations provided a brief overview of the studies and encouraged partners to review and comment during the public review period.

The Draft Watershed Plan was released for public review on March 1, 2022. The report was available on the USACE Honolulu District and ODAPM websites. The public review period was open for 30 days and concluded on March 31, 2022. No public review comments were received.

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Appendix A – Attachment 1

American Samoa Final Watershed Plan

Agency Coordination Letters

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

January 14, 2021

Civil and Public Works Branch
Programs and Project Management Division

Ms. Rita Chong-Dela Cruz
Saipan Historic Preservation Officer
Division of Historic Preservation
Department of Community and Cultural Affairs
Caller Box 10007
Saipan, MP 96950, USA

Dear Ms. Chong-Dela Cruz:

The Honolulu District, U.S. Army Corps of Engineers (Corps) is conducting Post-Disaster Watershed Assessments (assessments) for the Territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), (see Enclosure). The assessments are being conducted pursuant to Section 729 of the Water Resources Development Act of 1986, as amended, and funded under the Additional Supplemental Appropriations for Disaster Relief Act of 2019 (Public Law 116-20), enacted on June 6, 2019. As authorized, these assessments will address identified water resources needs, provide a shared vision of a desired end state, and provide recommendations for potential future involvement by the Corps, other federal agencies, or non-federal interests. In response to typhoons and tropical cyclones striking the territories in 2018, the Corps received disaster relief funds in January 2020. The assessments are fully federally funded and expected to be complete by 2022.

Pursuant to Planning Bulletin 2019-01 Watershed Studies, we are consulting our agency partners to gather data necessary to develop the Shared Vision among stakeholders. One of our goals at this time is to determine the baseline conditions and existing environment within the study area to assist in the development of recommendations to be described in the assessment. We invite you and other federal and state agencies, cultural organizations, local agencies, interested parties, and individuals interested in providing comments and identifying any issues or concerns to participate in this collaborative effort.

We recognize that the Saipan Historic Preservation Officer's responsibilities and expertise in preserving the places that matter will be beneficial towards addressing cultural resources within our Watershed Assessments. Your agency's technical expertise on identifying any natural or cultural resources, as well as resources considered to be of traditional, cultural, or religious importance to the citizens and communities of Saipan would help create a holistic Shared Vision that can properly

address cultural resources. We understand many culturally sensitive sites, including areas of ceremonial significance, exist throughout the three territories. Any comments and information received by your agency will be fully considered in a confidential and respectful manner pursuant to 36 CFR § 800.11(c) throughout the development of the final Watershed Assessment. Additional study background information is below:

Problems by U.S. Territory

American Samoa has a history of chronic riverine and coastal flooding from convective storms, cyclones and tsunamis. Problems associated with these floods include damages resulting from run off and ponding of water, shoreline erosion, water quality and water supply contamination, and landslides. These problems pose a threat to public health and safety and the health of the environment.

Guam has two distinct geographic landscapes; Northern Guam is comprised of limestone plateau while Southern Guam contains ridgelines from volcanic rises. Problems identified in Northern Guam include threats to the Northern Lens Aquifer (main source of drinking water) from exposure to nitrates from septic tanks and land use practices, poor storm water management and infrastructure allowing point-source pollution to flow into the near shore waters. Problems identified in Southern Guam include heavy conveyance of water that carries sediments and pollutants to the river deltas, resulting in algal blooms and coral reef decline, severe riverbank erosion resulting in loss of property and exacerbating water quality issues, lack of forested lands due to prescribed fires for development, and reforestation plans that are missing diversity of native species to reduce erosion and promote biodiversity.

The CNMI is comprised of 14 islands, of which, five are inhabited. The assessment is focused on the villages on the islands of Saipan, Tinian, and Rota. The following problems were identified through prior studies and input from CNMI stakeholders/agencies: Frequent intense rainfall events trigger flooding along watercourses and in low lying areas, causing life safety risks and economic damages, including effects to critical infrastructure (Saipan). Storms and high wave events contribute to coastal erosion, endangering critical infrastructure (Saipan and Rota). Flooding reduces water quality and water supply, leading to contaminated drinking water (Saipan, Tinian, and Rota). Wildfires exacerbated by drought and invasive species threaten the ecology (Tinian and Rota).

Stakeholder meetings were held virtually in July 2020. The team will continue to collaborate with stakeholders and review existing resiliency projects to identify the problems and develop community-based mitigation strategies for flood risk. The assessments are still in the early data gathering phase; no specific decisions have been made. The next major milestone is the Shared Vision Milestone, scheduled for January 2021.

We appreciate your cooperation on this matter and respectfully request a response within 30 days. We will continue to coordinate this effort with you as the study progresses and the assessment is developed. Should you have any questions, comments, or wish to request either an extension for response or a meeting to discuss this request, please contact Ms. Jessie K. Paahana, Environmental Coordinator, Civil and Public Works Branch, Honolulu District at (808) 835-4042 or e-mail: jessie.k.paahana@usace.army.mil.

Sincerely,

Florence M. Ching

Florence M. Ching, P.E.
Acting Deputy District Engineer
Programs and Project Management

Enclosure

USACE FY 19 Emergency Supplemental
Watershed Study Area Maps

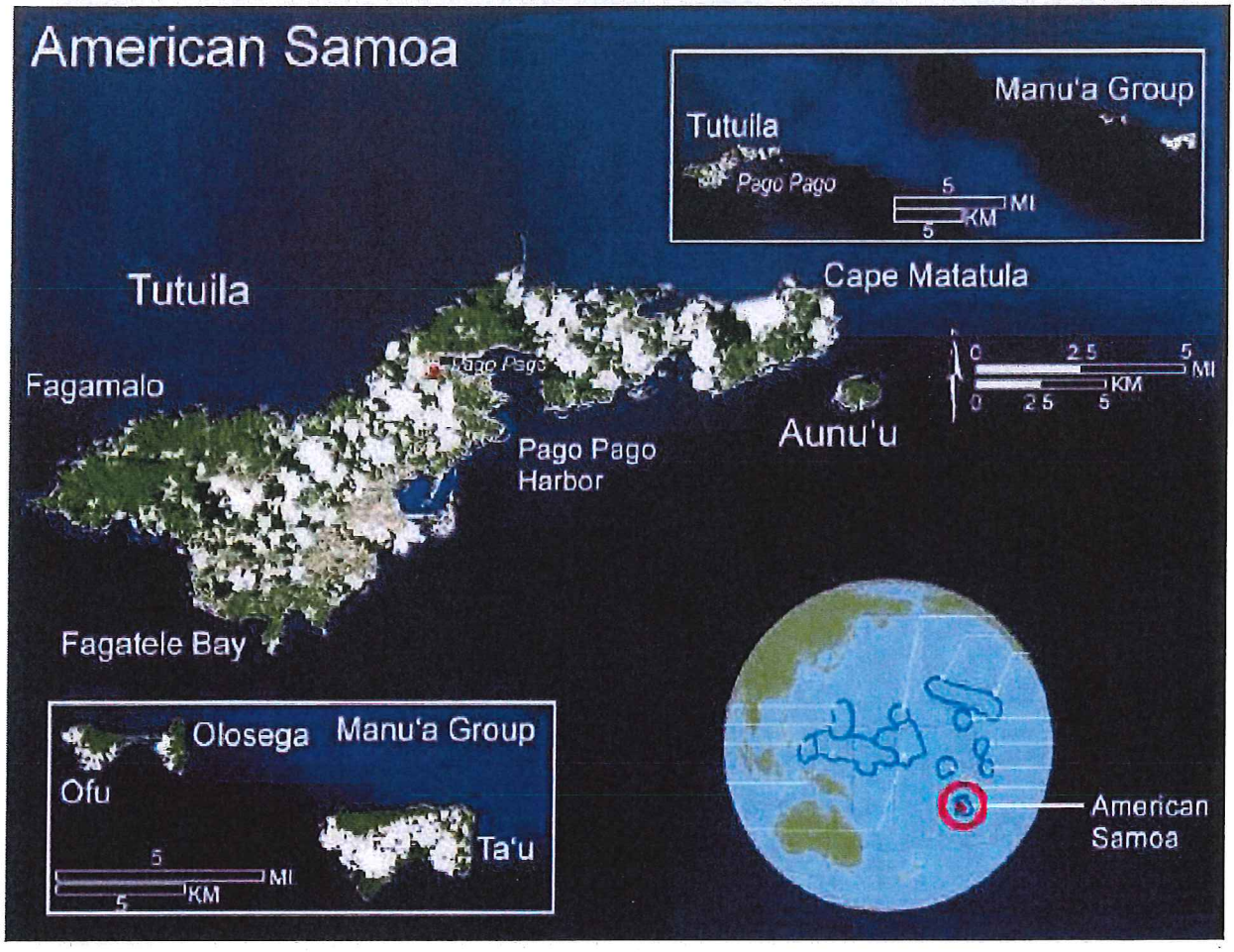


Figure 1. American Samoa Study Area

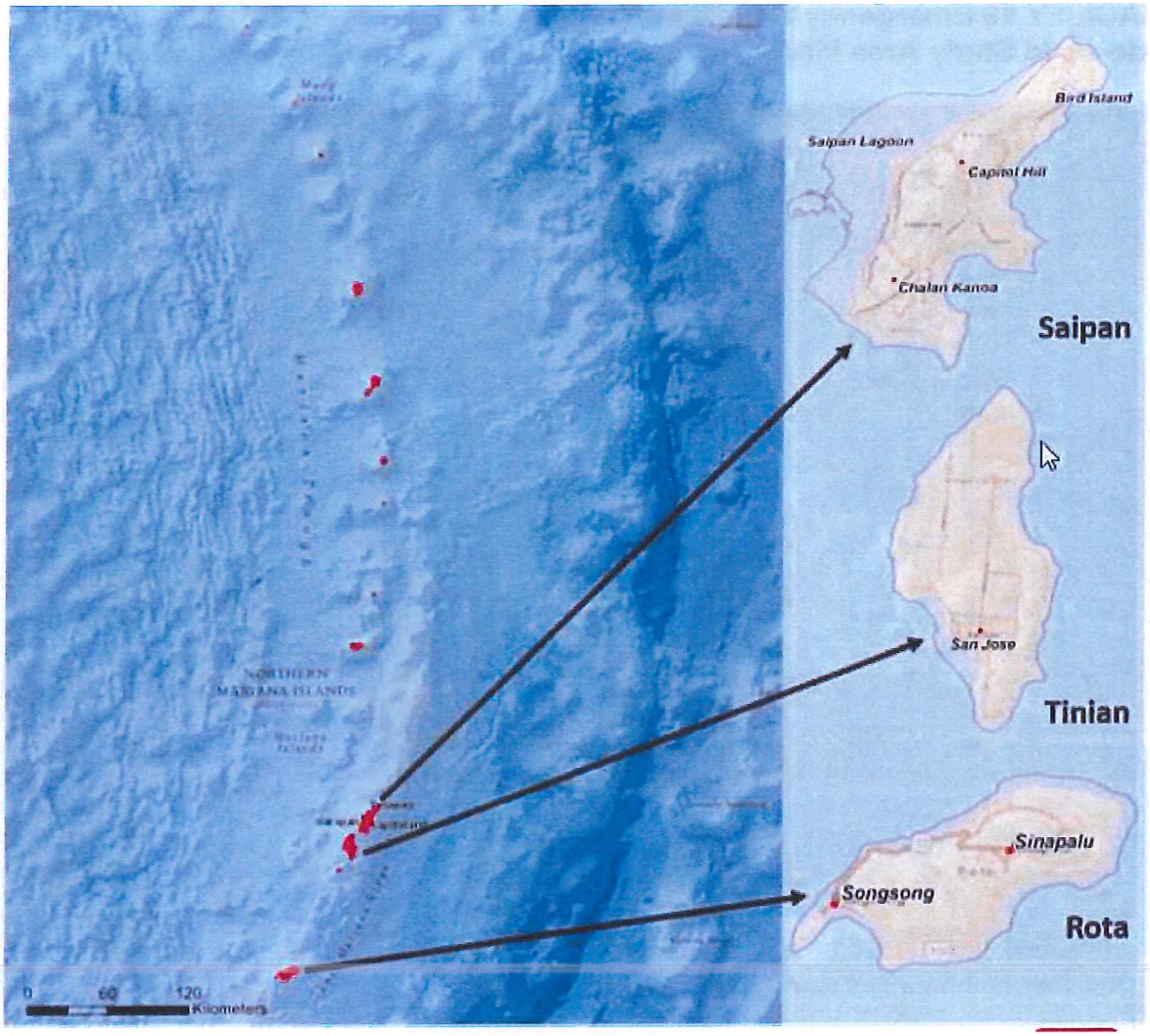
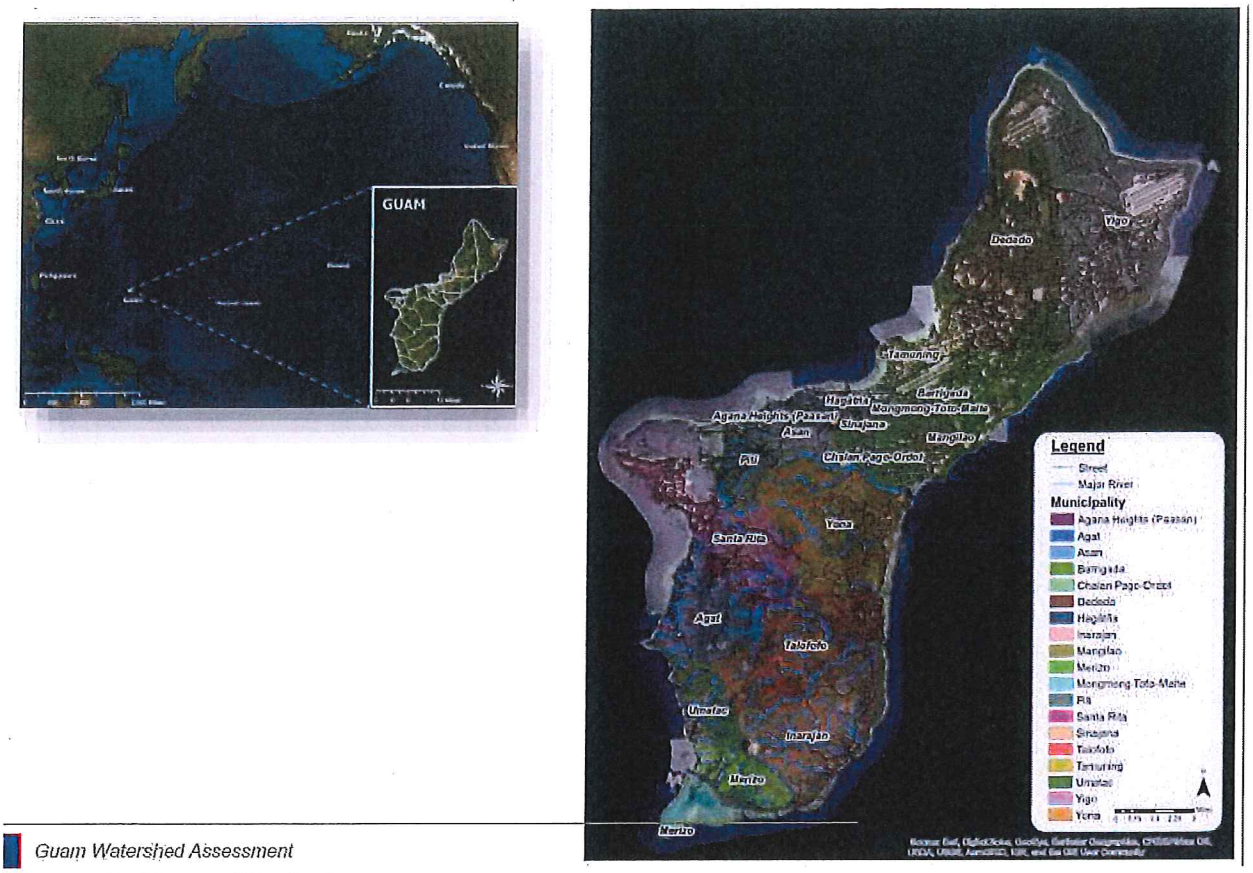


Figure 2. Commonwealth of the Northern Mariana Islands Study Area



Guam Watershed Assessment

Figure 3. Guam Study Area

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

January 14, 2021

Civil and Public Works Branch
Programs and Project Management Division

Dr. Eric Brown, National Park Service
Kalaupapa National Historic Park
National Park Service
PO Box 2222
Kalaupapa, HI 96742

Dear Dr. Brown:

The Honolulu District, U.S. Army Corps of Engineers (Corps) is conducting Post-Disaster Watershed Assessments (assessments) for the Territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), (see Enclosure). The assessments are being conducted pursuant to Section 729 of the Water Resources Development Act of 1986, as amended, and funded under the Additional Supplemental Appropriations for Disaster Relief Act of 2019 (Public Law 116-20), enacted on June 6, 2019. As authorized, these assessments will address identified water resources needs, provide a shared vision of a desired end state, and provide recommendations for potential future involvement by the Corps, other federal agencies, or non-federal interests. In response to typhoons and tropical cyclones striking the territories in 2018, the Corps received disaster relief funds in January 2020. The assessments are fully federally funded and expected to be complete by 2022.

Pursuant to Planning Bulletin 2019-01 Watershed Studies, we are consulting our agency partners to gather data necessary to develop the Shared Vision among stakeholders. One of our goals at this time is to determine the baseline conditions and existing environment within the study area to assist in the development of recommendations to be described in the assessment. We invite the National Park Service (NPS) and other federal and state agencies, cultural organizations, local agencies, interested parties, and individuals interested in providing comments and identifying any issues or concerns to participate in this collaborative effort. We request your technical assistance in identifying any natural resources or other resources of concern subject to the NPS purview occurring within the study area. Any comments received will be fully considered in the development of the final Watershed Assessment. Additional study background information is provided below:

Problems by U.S. Territory

American Samoa has a history of chronic riverine and coastal flooding from convective storms, cyclones and tsunamis. Problems associated with these floods include damages resulting from run off and ponding of water, shoreline erosion, water quality and water supply contamination, and landslides. These problems pose a threat to public health and safety and the health of the environment.

Guam has two distinct geographic landscapes; Northern Guam is comprised of limestone plateau while Southern Guam contains ridgelines from volcanic rises. Problems identified in Northern Guam include threats to the Northern Lens Aquifer (main source of drinking water) from exposure to nitrates from septic tanks and land use practices, poor storm water management and infrastructure allowing point-source pollution to flow into the near shore waters. Problems identified in Southern Guam include heavy conveyance of water that carries sediment and pollutants to the river deltas, resulting in algal blooms and coral reef decline, severe riverbank erosion resulting in loss of property and exacerbating water quality issues, lack of forested lands due to prescribed fires for development, and reforestation plans that are missing diversity of native species to reduce erosion and promote biodiversity.

The CNMI is comprised of 14 islands, of which, five are inhabited. The assessment is focused on the villages on the islands of Saipan, Tinian, and Rota. The following problems were identified through prior studies and input from CNMI stakeholders/agencies: Frequent intense rainfall events trigger flooding along watercourses and in low lying areas, causing life safety risks and economic damages, including effects to critical infrastructure (Saipan). Storms and high wave events contribute to coastal erosion, endangering critical infrastructure (Saipan and Rota). Flooding reduces water quality and water supply, leading to contaminated drinking water (Saipan, Tinian, and Rota). Wildfires exacerbated by drought and invasive species threaten the ecology (Tinian and Rota).

Stakeholder meetings were held virtually in July and November 2020. The team will continue to collaborate with stakeholders and review existing resiliency projects to identify the problems and develop community-based mitigation strategies for flood risk. The assessments are still in the early data gathering phase; no specific decisions have been made. The next major milestone is the Shared Vision Milestone, scheduled for January 2021.

We appreciate your cooperation on this matter and respectfully request a response within 30 days. We will continue to coordinate this effort with you as the study progresses and the assessment is developed. Should you have any questions, comments, or wish to request either an extension for response or a meeting to discuss this request, please contact Ms. Jessie K. Paahana, Environmental Coordinator, Civil and Public Works Branch, Honolulu District at (808) 835-4042 or e-mail: jessie.k.paahana@usace.army.mil.

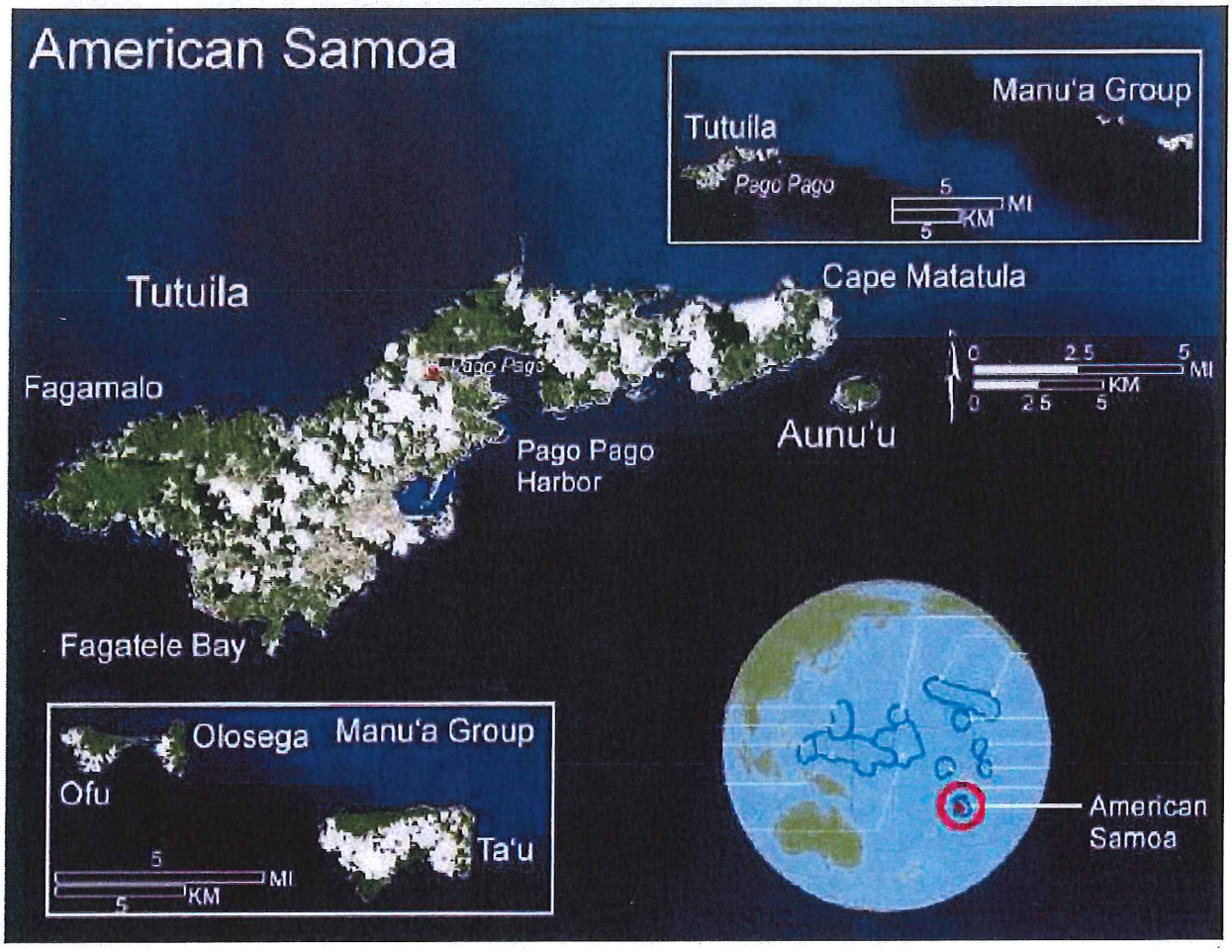
Sincerely,

Florence M. Ching

Florence Ching, P.E.
Acting Deputy District Engineer
Programs and Project Management

Enclosure

USACE FY 19 Emergency Supplemental
Watershed Study Area Maps



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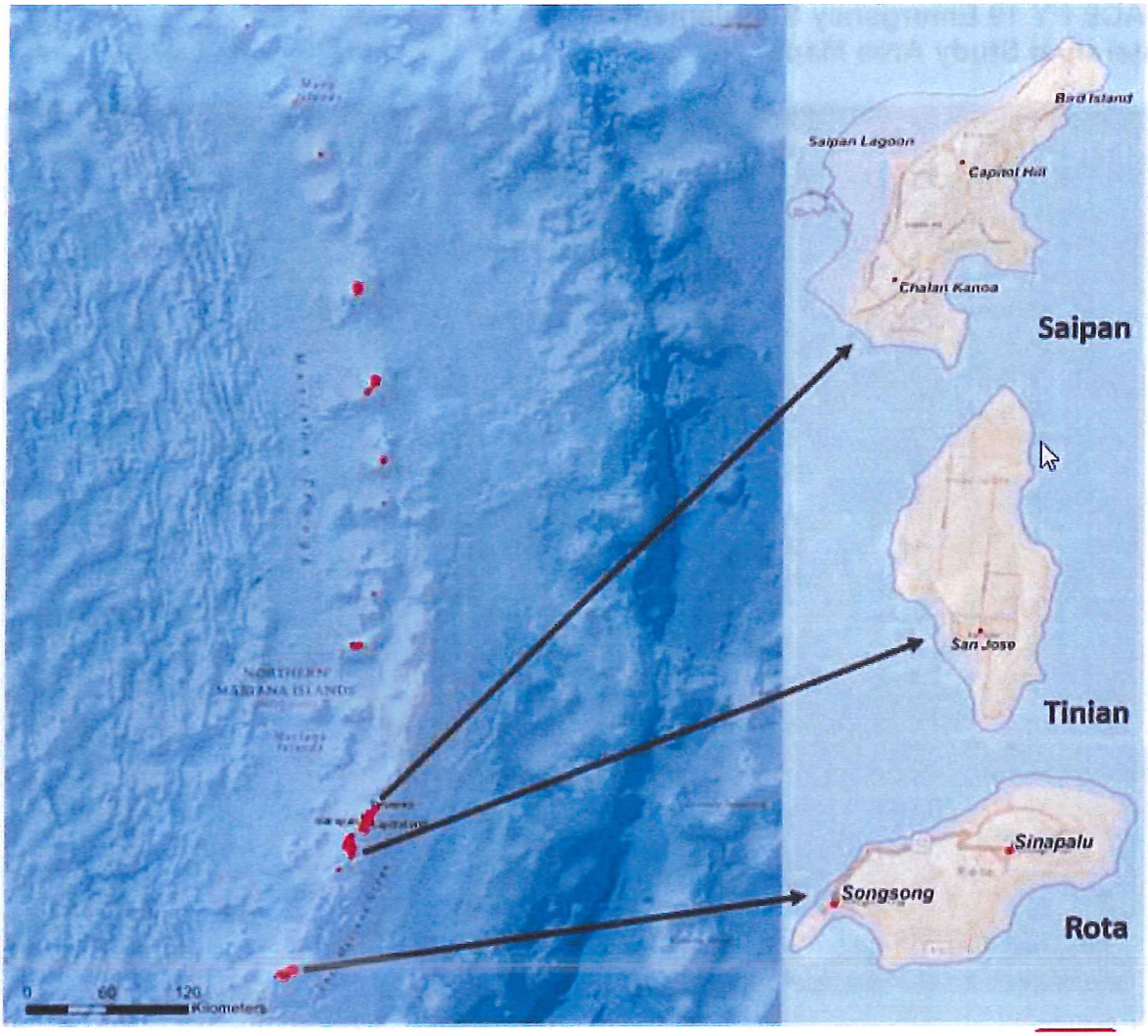
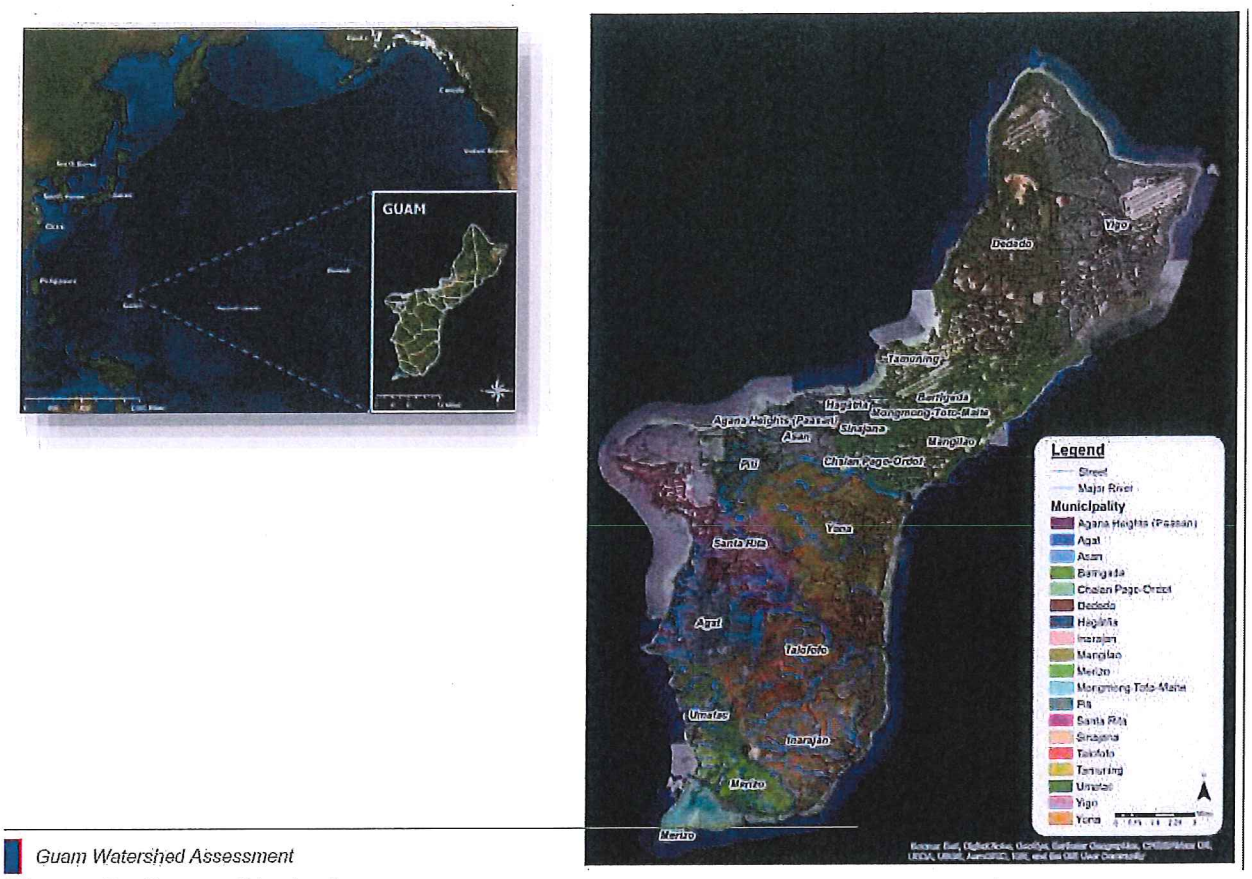


Figure 2. Commonwealth of the Northern Mariana Islands Study Area



Guam Watershed Assessment

Figure 3. Guam Study Area

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

January 14, 2021

Civil and Public Works Branch
Programs and Project Management Division

Patrick Lujan, Historic Preservation Officer
Historic Resources Division
Department of Parks & Recreation, Government of Guam
490 Chalan Palasyo
Agana Heights, Guam 96910, USA

Dear Mr. Lujan:

The Honolulu District, U.S. Army Corps of Engineers (Corps) is conducting Post-Disaster Watershed Assessments (assessments) for the Territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), (see Enclosure). The assessments are being conducted pursuant to Section 729 of the Water Resources Development Act of 1986, as amended, and funded under the Additional Supplemental Appropriations for Disaster Relief Act of 2019 (Public Law 116-20), enacted on June 6, 2019. As authorized, these assessments will address identified water resources needs, provide a shared vision of a desired end state, and provide recommendations for potential involvement by the Corps, other federal agencies, or non-federal interests. In response to typhoons and tropical cyclones striking the territories in 2018, the Corps received disaster relief funds in January 2020. The assessments are fully federally funded and expected to be complete by 2022.

Pursuant to Planning Bulletin 2019-01 Watershed Studies, we are consulting our agency partners to gather data necessary to develop the Shared Vision among stakeholders. One of our goals at this time is to determine the baseline conditions and existing environment within the study area to assist in the development of recommendations to be described in the assessment. We invite you and other federal and state agencies, cultural organizations, local agencies, interested parties, and individuals interested in providing comments and identifying any issues or concerns to participate in this collaborative effort.

We recognize that the Guam Historic Preservation Officer's responsibilities and expertise in preserving the places that matter will be beneficial towards addressing cultural resources within our Watershed Assessments. Your agency's technical expertise on identifying any natural or cultural resources, as well as resources considered to be of traditional, cultural, or religious importance to the citizens and communities of Guam would help create a holistic Shared Vision that can properly address cultural resources. We understand many culturally sensitive sites, including

areas of ceremonial significance, exist throughout the three territories. Any comments and information received by your agency will be fully considered in a confidential and respectful manner pursuant to 36 CFR § 800.11(c) throughout the development of the final Watershed Assessment. Additional study background information is below:

Problems by U.S. Territory

American Samoa has a history of chronic riverine and coastal flooding from convective storms, cyclones and tsunamis. Problems associated with these floods include damages resulting from run off and ponding of water, shoreline erosion, water quality and water supply contamination, and landslides. These problems pose a threat to public health and safety and the health of the environment.

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Stakeholder meetings were held virtually in July and November 2020. The team will continue to collaborate with stakeholders and review existing resiliency projects to identify the problems and develop community-based mitigation strategies for flood risk. The assessments are still in the early data gathering phase; no specific decisions have been made. The next major milestone is the Shared Vision Milestone, scheduled for January 2021.

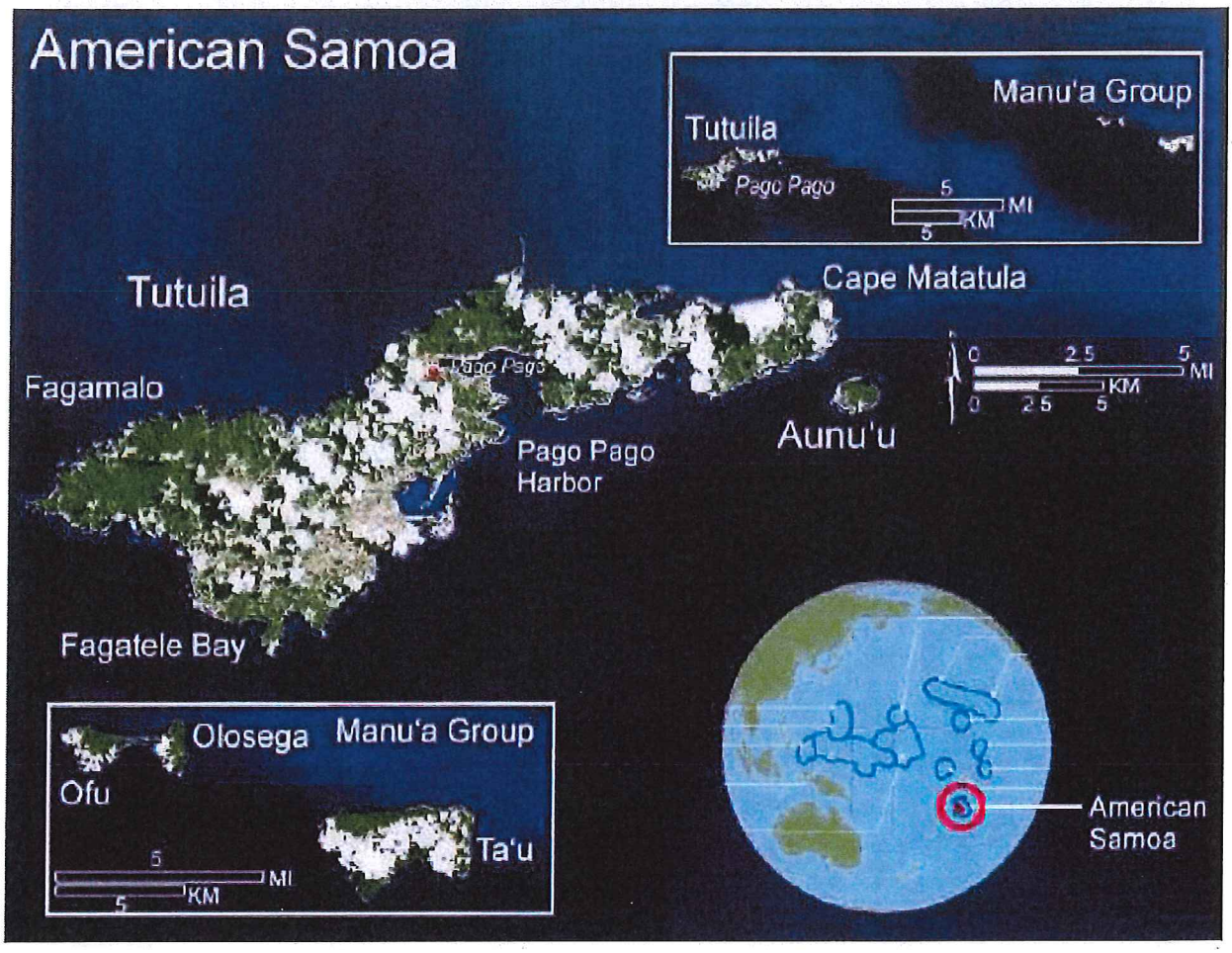
We appreciate your cooperation on this matter and respectfully request a response within 30 days. We will continue to coordinate this effort with you as the study progresses and the assessment is developed. Should you have any questions, comments, or wish to request either an extension for response or a meeting to discuss this request, please contact Ms. Jessie K. Paahana, Environmental Coordinator, Civil and Public Works Branch, Honolulu District at (808) 835-4042 or e-mail: jessie.k.paahana@usace.army.mil.

Sincerely,

Florence Ching, P.E.
Acting Deputy District Engineer
Programs and Project Management

Enclosure

USACE FY 19 Emergency Supplemental
Watershed Study Area Maps



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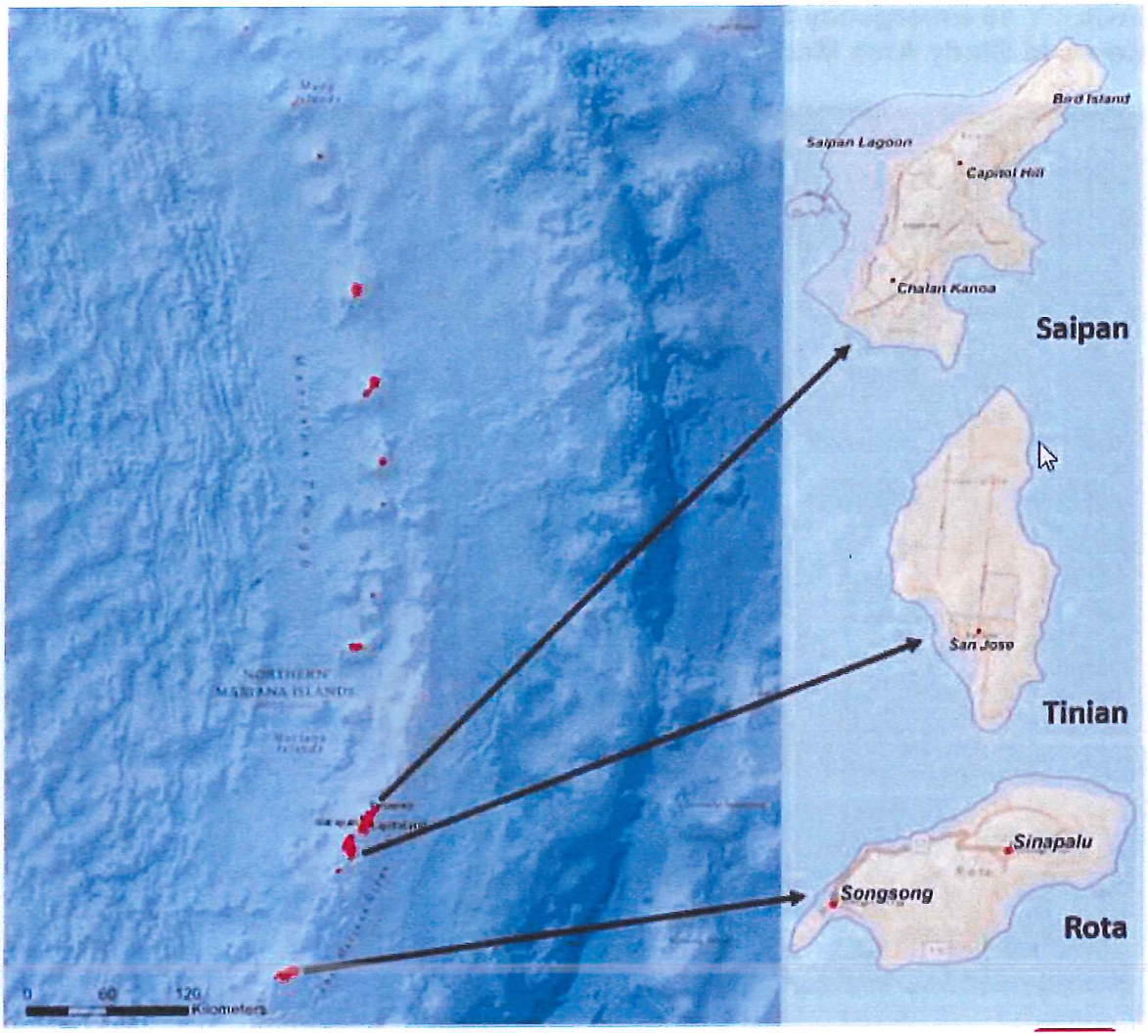

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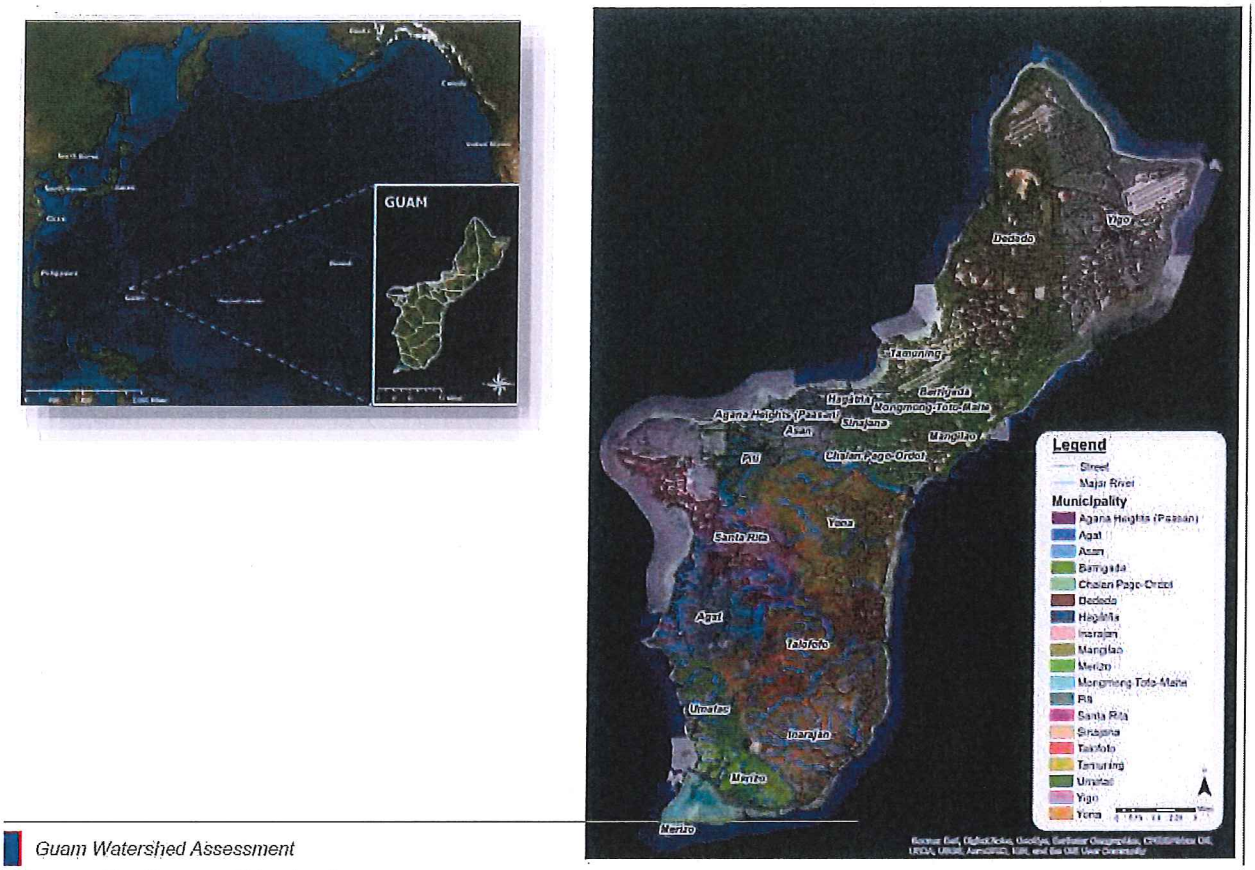

Figure 3. Guam Study Area

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

January 14, 2021

Civil and Public Works Branch
Programs and Project Management Division

Ms. Tish Folau
Ms. Letitia Peau
Executive Offices of the Governor
American Samoa Government
Historic Preservation Office
Pago Pago, American Samoa 96799

Dear Ms. Folau and Ms. Peau:

The Honolulu District, U.S. Army Corps of Engineers (Corps) is conducting Post-Disaster Watershed Assessments (assessments) for the Territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), (see Enclosure). The assessments are being conducted pursuant to Section 729 of the Water Resources Development Act of 1986, as amended, and funded under the Additional Supplemental Appropriations for Disaster Relief Act of 2019 (Public Law 116-20), enacted on June 6, 2019. As authorized, these assessments will address identified water resources needs, provide a shared vision of a desired end state, and provide recommendations for potential involvement by the Corps, other federal agencies, or non-federal interests. In response to typhoons and tropical cyclones striking the territories in 2018, the Corps received disaster relief funds in January 2020. The assessments are fully federally funded and expected to be complete by 2022.

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We recognize that the American Samoa State Historic Preservation Officer's responsibilities and expertise in preserving the places that matter will be beneficial towards addressing cultural resources within our Watershed Assessments. Your agency's technical expertise on identifying any natural or cultural resources, as well as resources considered to be of traditional, cultural, or religious importance to the citizens and communities of the American Samoa would help create a holistic Shared Vision

that can properly address cultural resources. We understand many culturally sensitive sites, including areas of ceremonial significance, exist throughout the three territories. Any comments and information received by your agency will be fully considered in a confidential and respectful manner pursuant to 36 CFR § 800.11(c) throughout the development of the final Watershed Assessment. Additional study background information is below:

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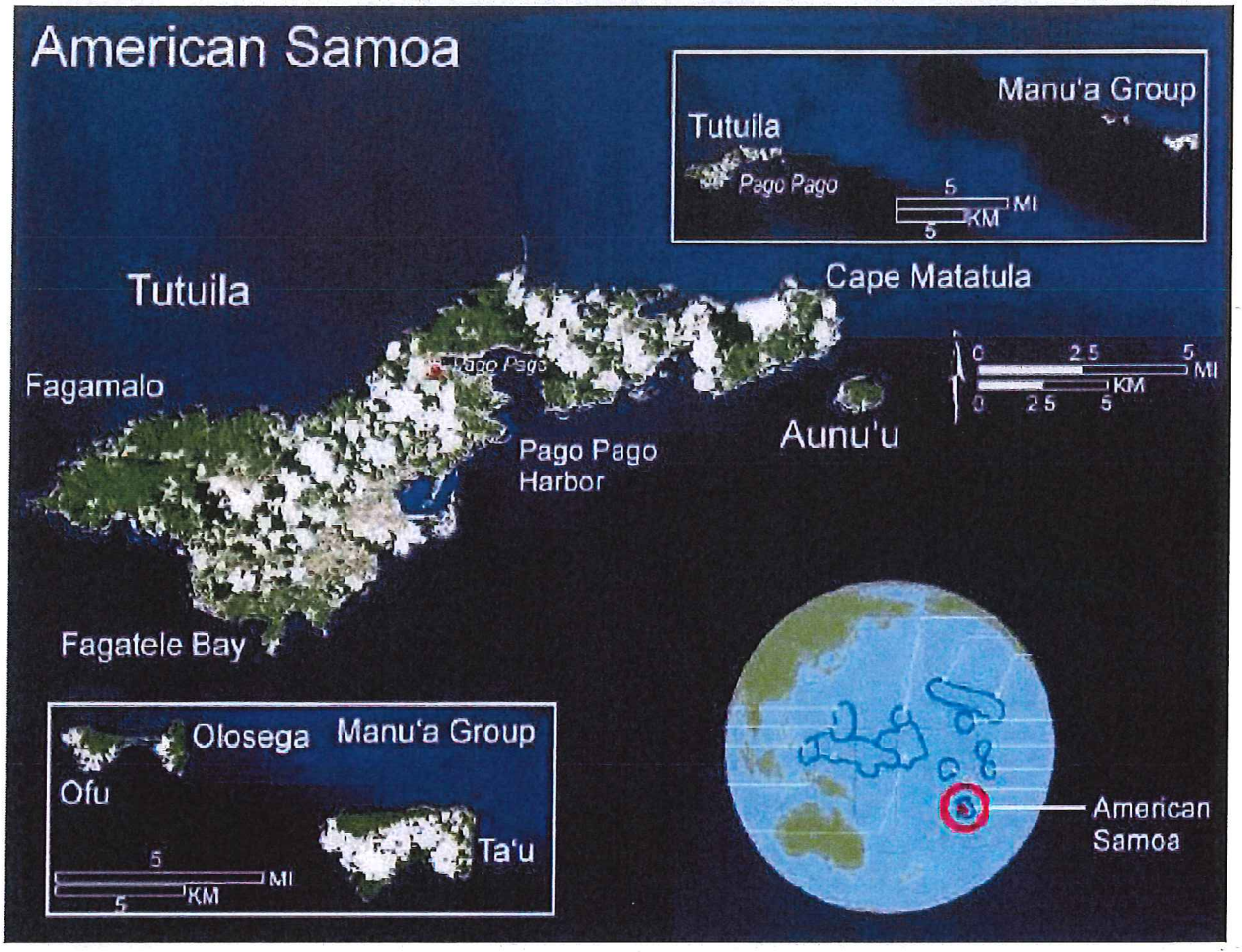
We appreciate your cooperation on this matter and respectfully request a response within 30 days. We will continue to coordinate this effort with you as the study progresses and the assessment is developed. Should you have any questions, comments, or wish to request either an extension for response or a meeting to discuss this request, please contact Ms. Jessie K. Paahana, Environmental Coordinator, Civil and Public Works Branch, Honolulu District at (808) 835-4042 or e-mail: jessie.k.paahana@usace.army.mil.

Sincerely,

Florence Ching, P.E.
Acting Deputy District Engineer
Programs and Project Management

Enclosure

USACE FY 19 Emergency Supplemental
Watershed Study Area Maps



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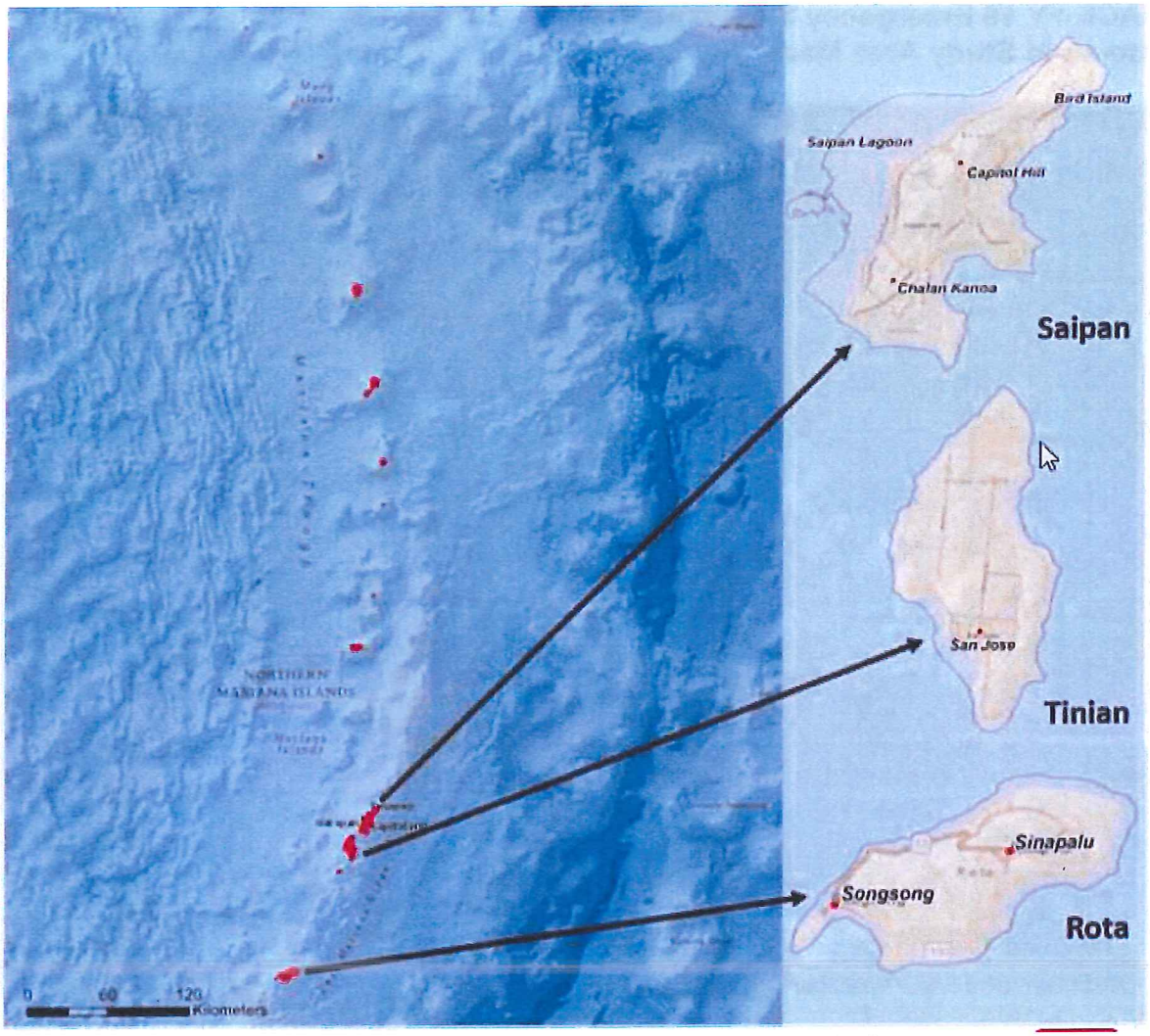

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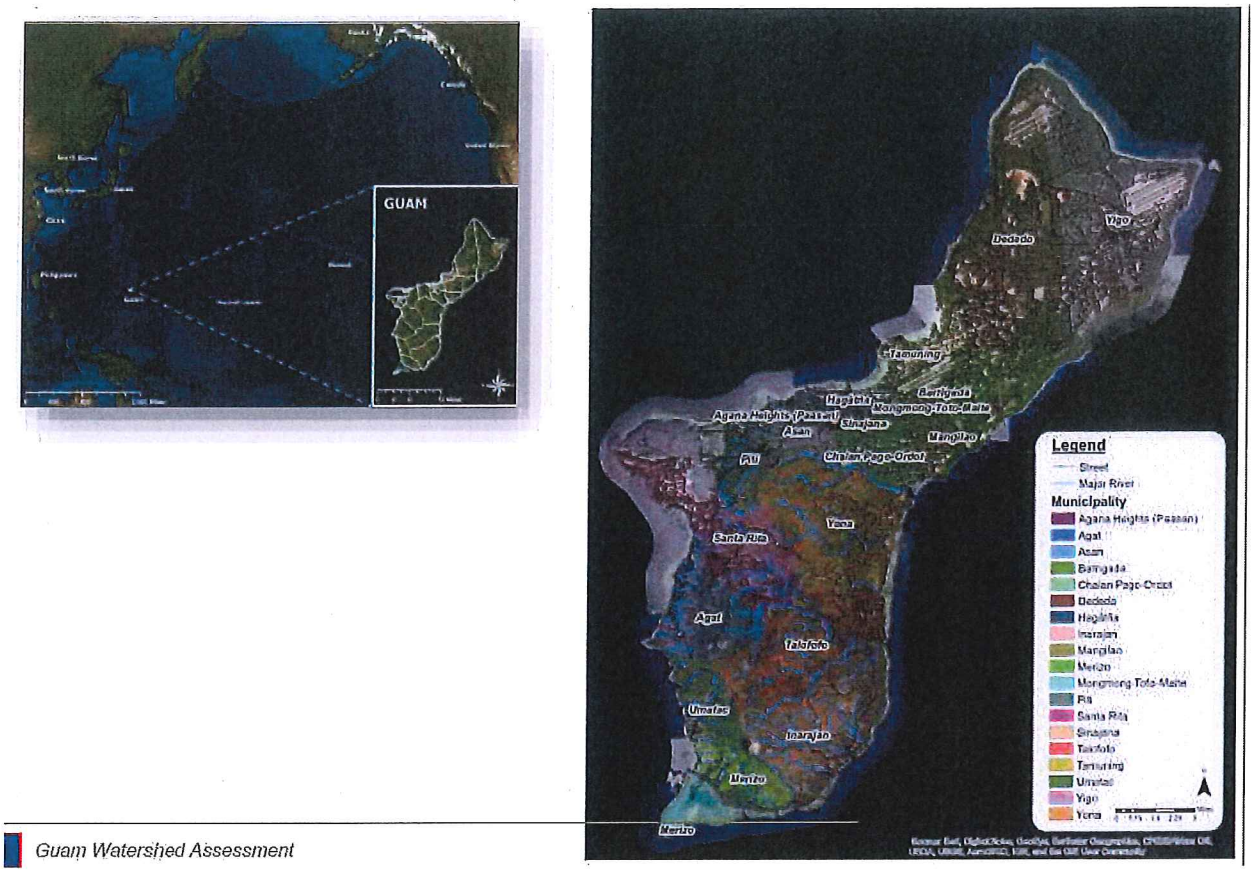

Guam Watershed Assessment

Figure 3. Guam Study Area

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

January 14, 2021

Civil and Public Works Branch
Programs and Project Management Division

Ms. Chelsa Muña-Brecht, Director
Department of Agriculture
163 Dairy Road
Mangilao, Guam 96913

Dear Director Muña-Brecht:

The Honolulu District, U.S. Army Corps of Engineers (Corps) is conducting Post-Disaster Watershed Assessments (assessments) for the Territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), (see Enclosure). The assessments are being conducted pursuant to Section 729 of the Water Resources Development Act of 1986, as amended, and funded under the Additional Supplemental Appropriations for Disaster Relief Act of 2019 (Public Law 116-20), enacted on June 6, 2019. As authorized, these assessments will address identified water resources needs, provide a shared vision of a desired end state, and provide recommendations for potential involvement by the Corps, other federal agencies, or non-federal interests. In response to typhoons and tropical cyclones striking the territories in 2018, the Corps received disaster relief funds in January 2020. The assessments are fully federally funded and expected to be complete by 2022.

We appreciate the Department of Agriculture's (DOA) participation during the virtual stakeholder meetings held in July and November 2020. The team will continue to collaborate with stakeholders and review existing resiliency projects to identify the problems and develop community-based mitigation strategies for flood risk. The assessments are still in the early data gathering phase; no specific decisions have been made. The next major milestone is the Shared Vision Milestone, scheduled for January 2021.

Pursuant to Planning Bulletin 2019-01 Watershed Studies, we are consulting our agency partners to gather data necessary to develop the Shared Vision among stakeholders. One of our goals at this time is to determine the baseline conditions and existing environment within the study area to assist in the development of recommendations to be described in the Watershed Assessment. We invite you and other federal and state agencies, cultural organizations, local agencies, interested parties, and individuals interested in providing comments and identifying any issues or concerns to participate in this collaborative effort. We request your technical assistance in identifying any natural resources or other resources of concern subject to DOAs' purview, occurring within the study area. Any comments received will be fully considered in the development of the final Watershed Assessment. Additional study background information is provided below:

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We appreciate your cooperation on this matter and respectfully request a response within 30 days. We will continue to coordinate this effort with you as the study progresses and the Watershed Assessment is developed. Should you have any questions, comments, or wish to request either an extension for response or a meeting to discuss this request, please contact Ms. Jessie K. Paahana, Environmental Coordinator, Civil and Public Works Branch, Honolulu District at (808) 835-4042 or e-mail: jessie.k.paahana@usace.army.mil.

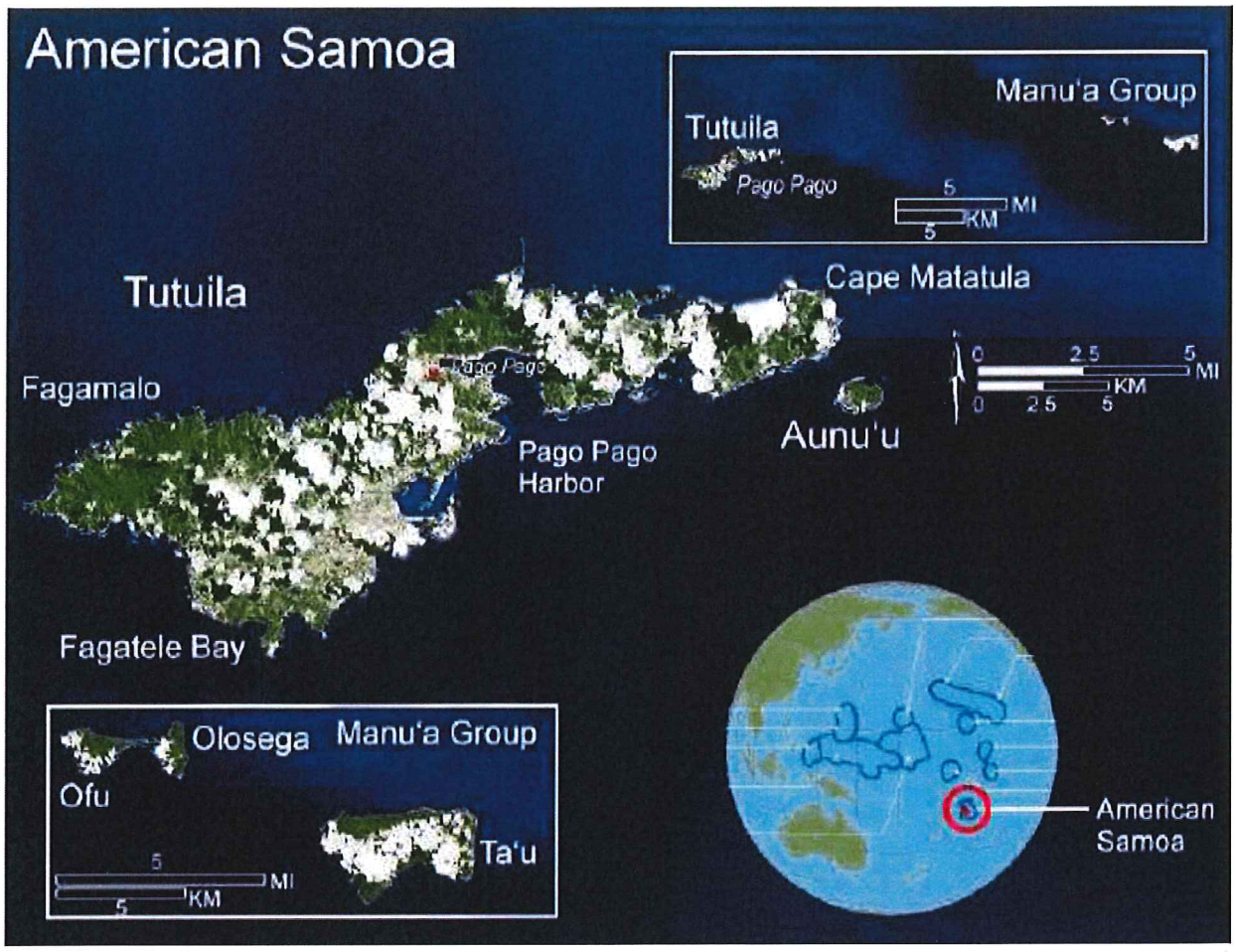
Sincerely,

Florence M. Ching

Florence Ching, P.E.
Acting Deputy District Engineer
Programs and Project Management

Enclosure

USACE FY 19 Emergency Supplemental
Watershed Study Area Maps



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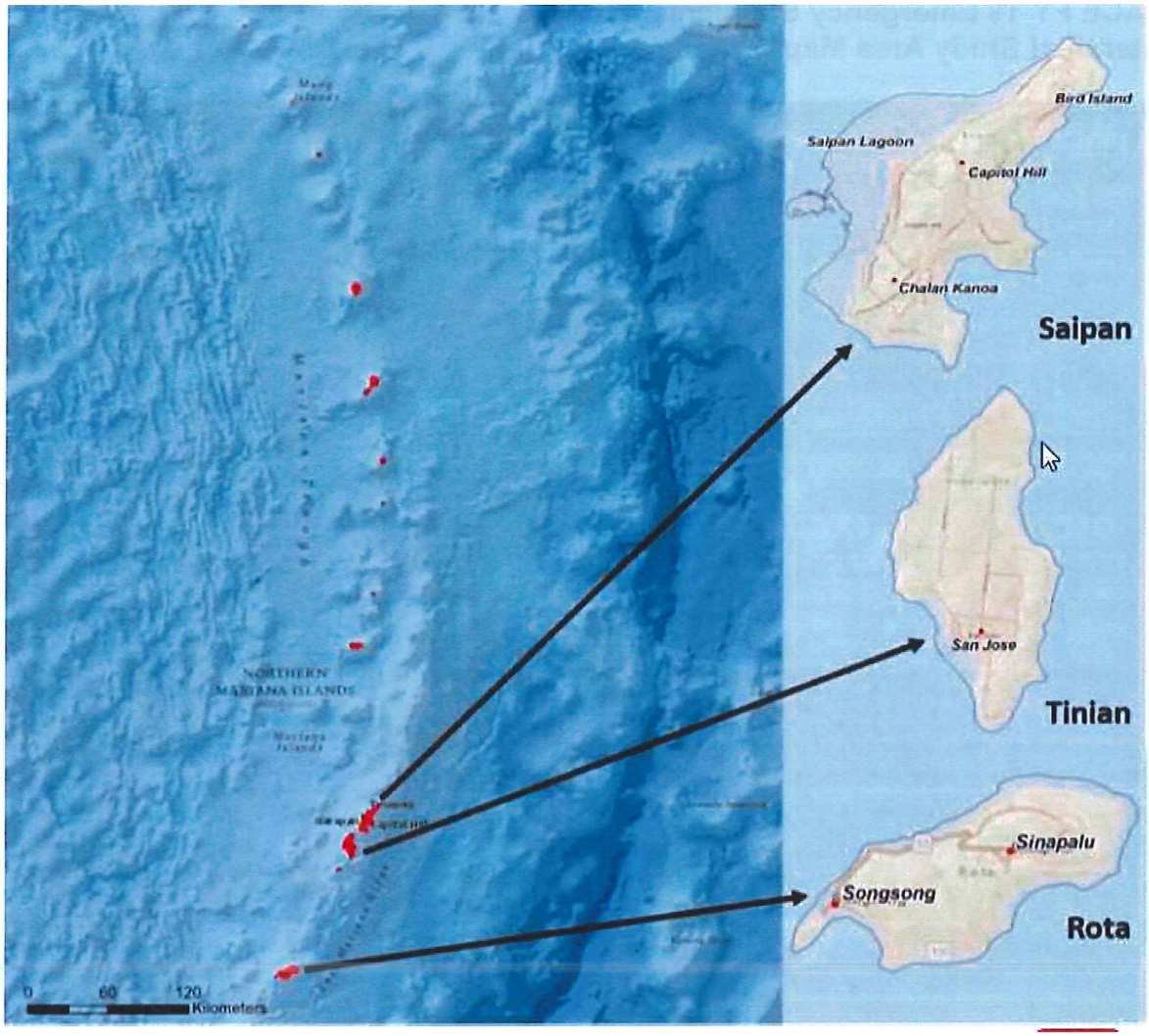

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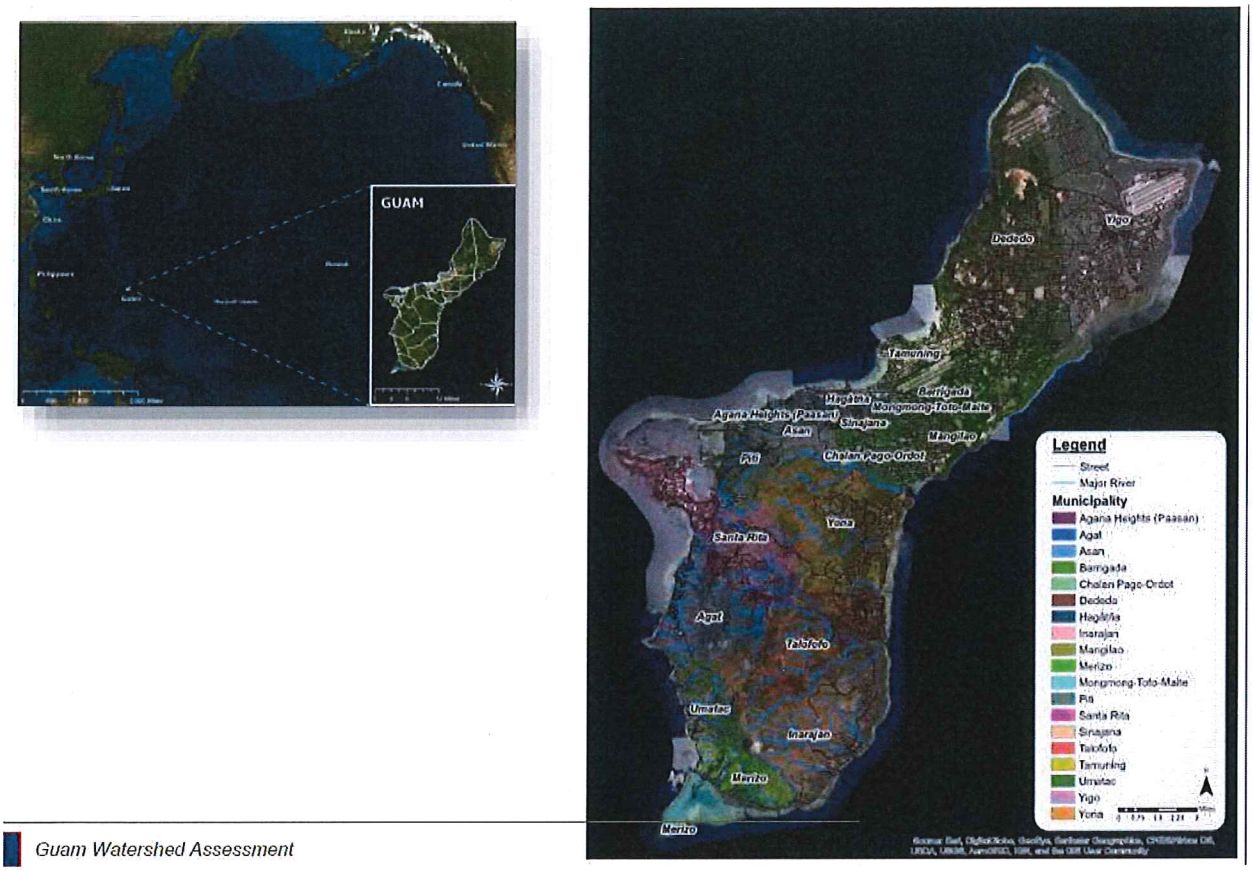


Guam Watershed Assessment

Figure 3. Guam Study Area

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

November 13, 2020

Civil and Public Works Branch
Programs and Project Management Division

Ms. Elena Vaouli
U.S. Environmental Protection Agency
Region 9, TIP-1
75 Hawthorne Street
San Francisco, CA 94105

Dear Ms. Vaouli:

The Honolulu District, U.S. Army Corps of Engineers (Corps) is conducting Post-Disaster Watershed Assessments (assessments) for the territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), (see Enclosure). The assessments are being conducted pursuant to Section 729 of the Water Resources Development Act of 1986, as amended, and funded under the Additional Supplemental Appropriations for Disaster Relief Act of 2019 (Public Law 116-20), enacted on June 6, 2019. As authorized, these assessments will address identified water resources needs, provide a shared vision of a desired end state, and provide recommendations for potential involvement by the Corps, other federal agencies, or non-federal interests.

The study area encompasses the entire territories of American Samoa, Guam, and CNMI. The purpose of these assessments is to identify, and address community needs in each territory and increase resiliency. Typhoons and Tropical Cyclones striking the territories in 2018 led to the appropriation of disaster relief funds, received in January 2020, by the Corps. The assessments are fully federally funded and expected to be complete by 2022.

Problems by Territory

American Samoa has a history of chronic riverine and coastal flooding from convective storms, cyclones and tsunamis. Problems associated with these floods include damages resulting from run off and ponding of water, shoreline erosion, water quality and water supply contamination, and landslides. These problems pose a threat to public health and safety and the health of the environment.

Guam has two distinct geographic landscapes; Northern Guam is comprised of limestone plateau while Southern Guam contains ridgelines from volcanic rises. Problems identified in Northern Guam include threats to the Northern Lens Aquifer

(main source of drinking water) from exposure to nitrates from septic tanks and land use practices, poor storm water management and infrastructure allowing point-source pollution to flow into the near shore waters. Problems identified in Southern Guam include heavy conveyance of water that carries sedimentation and pollutants to the river deltas resulting in algal blooms and coral reef decline, severe riverbank erosion resulting in loss of property and exacerbating water quality issues, lack of forested lands due to prescribed fires for development, and reforestation plans that are missing diversity of native species to reduce erosion and promote biodiversity.

The CNMI contains 14 islands, of which, five are inhabited. The assessment is focused on the villages inhabiting the islands of Saipan, Tinian, and Rota. The following problems were identified through prior studies and input from CNMI stakeholders/agencies: Frequent intense rainfall events trigger flooding along watercourses and in low lying areas, causing life safety risks and economic damages, including effects to critical infrastructure (Saipan). Storms and high wave events contribute to coastal erosion, endangering critical infrastructure (Saipan and Rota). Flooding reduces water quality and water supply, leading to contaminated drinking water (Saipan, Tinian, and Rota). Wildfires exacerbated by drought and invasive species threaten the ecology (Tinian and Rota).

Stakeholder meetings were held virtually in July (participants included American Samoa and Guam U.S. Environmental Protection Agency (EPA)). The team will continue to collaborate with stakeholders and review existing resiliency projects to identify the problems and develop community-based mitigation strategies for flood risk. The assessments are still in the early data gathering phase; no specific decisions have been made. The next major milestone is the Shared Vision Milestone, scheduled for January 2021.

Pursuant to Planning Bulletin 2019-01 Watershed Studies, we are beginning to gather data necessary through collaboration with agency partners and stakeholders to inform preparation of the Shared Vision Milestone. One of our goals at this time is to determine the baseline conditions and existing environment within the study area. Determining the existing conditions and objectives collaboratively will assist in the development of recommendations described in the Watershed Assessment. We invite you and other Federal and State agencies, cultural organizations, local agencies, interested parties, and individuals interested in providing comments and identifying any issues or concerns to participate in this collaborative effort. We request your assistance in identifying any natural resources or other resources of concern occurring within the study area. Additionally, we welcome any information you may possess regarding the existing environment within the study area. Any comments received will be fully considered in the development of the final Watershed Assessment.

We appreciate your cooperation on this matter and respectfully request a response within 30 days. We will continue to coordinate this effort with you as the study

progresses and the Watershed Assessment is developed. Should you have any questions, comments, or wish to request either an extension for response or a meeting to discuss this request, please contact Ms. Jessie K. Paahana, Environmental Coordinator, Civil and Public Works Branch, Honolulu District at (808) 835-4042 or e-mail: jessie.k.paahana@usace.army.mil.

Sincerely,

Jennifer Moore, PMP
Deputy District Engineer
Programs and Project Management

Enclosure

USACE FY 19 Emergency Supplemental
Watershed Study Area Maps

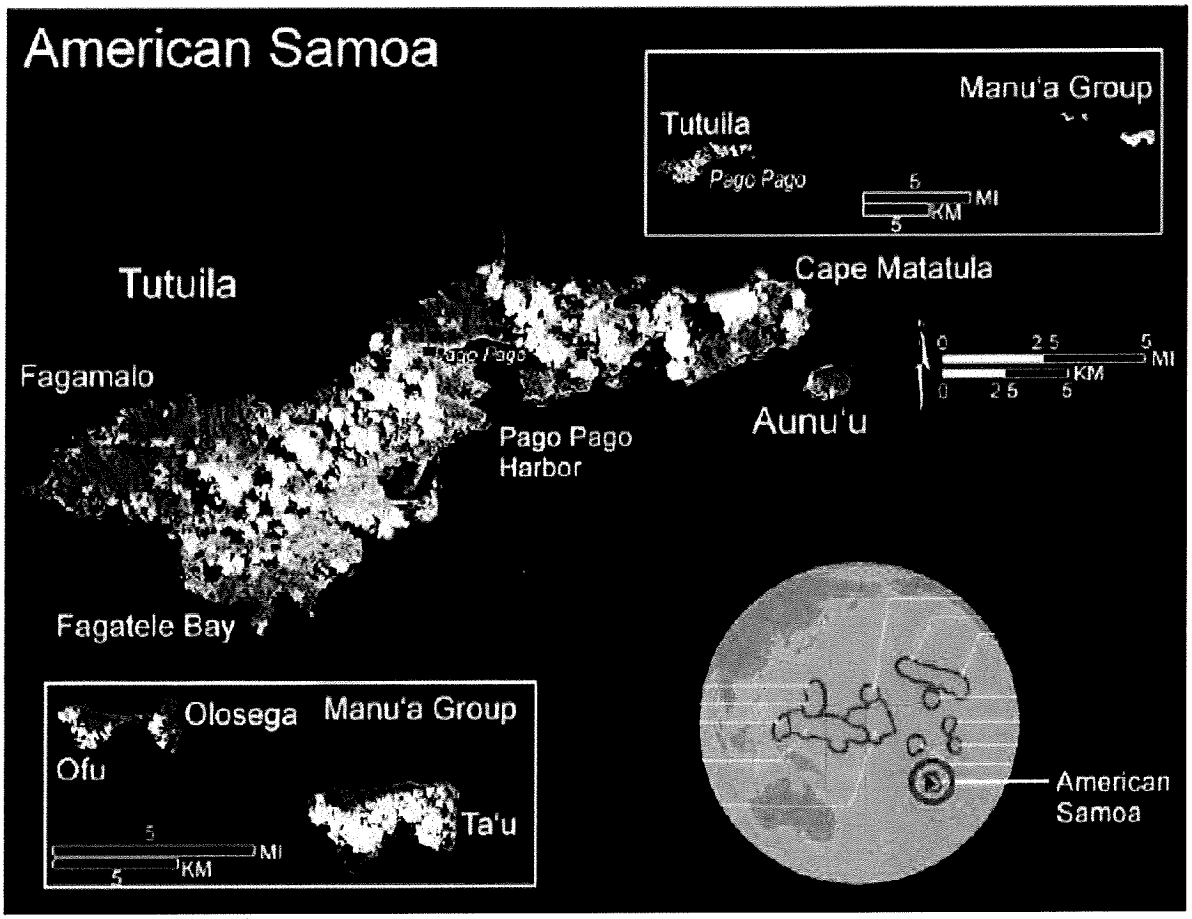


Figure 1. American Samoa Study Area

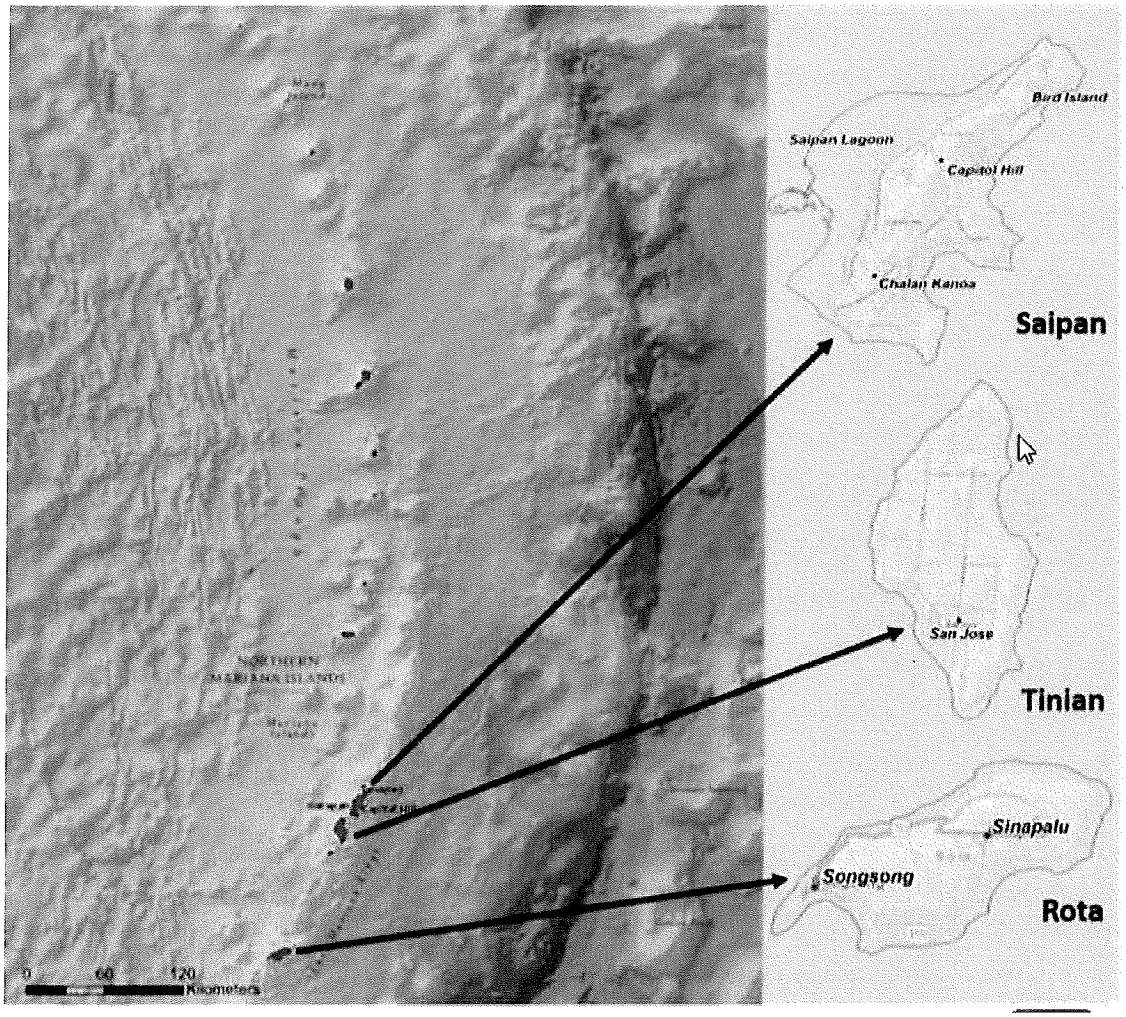
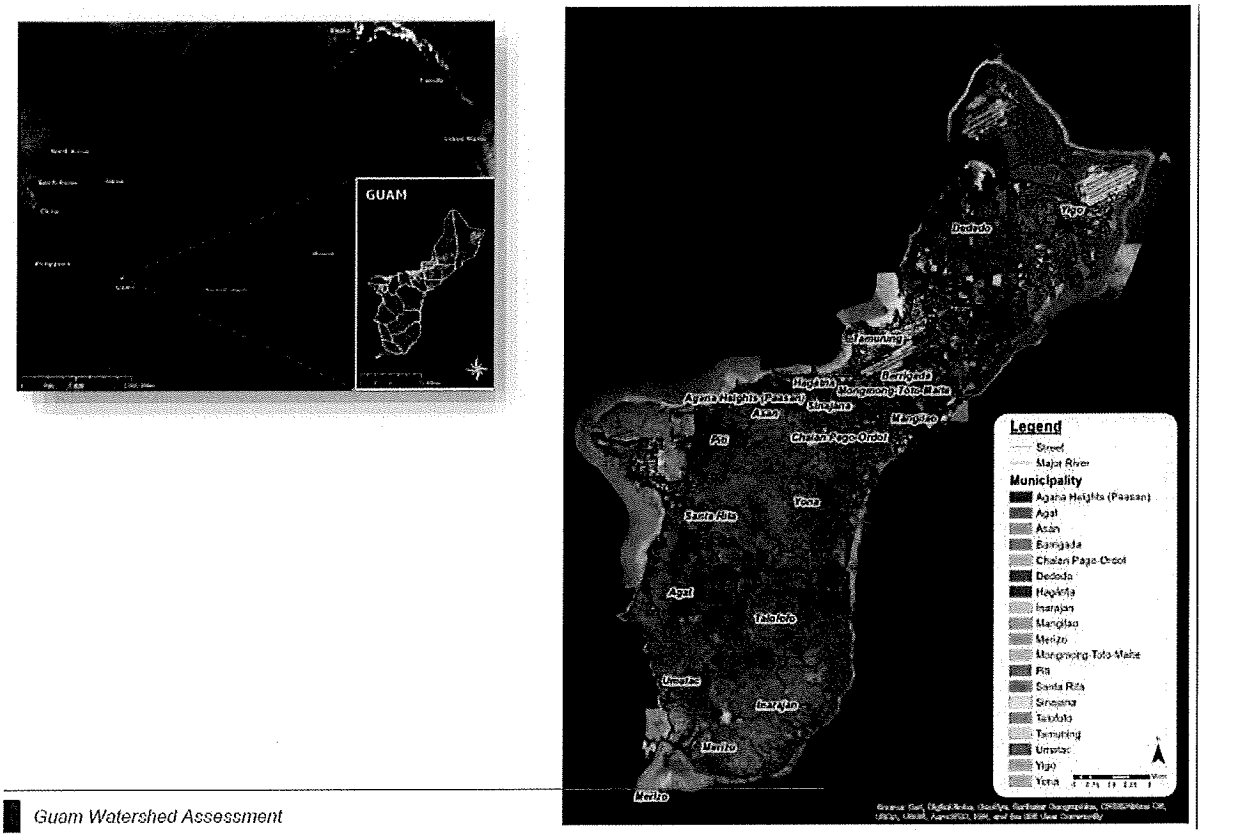


Figure 2. Commonwealth of the Northern Mariana Islands Study Area



Guam Watershed Assessment

Figure 3. Guam Study Area

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

December 8, 2020

Civil and Public Works Branch
Programs and Project Management Division

Mr. Aaron Nadig
Island Team Manager
Pacific Islands Fish and Wildlife Service
300 Ala Moana Boulevard, Room 3-122
Honolulu, HI 96850

Dear Mr. Nadig:

The Honolulu District, U.S. Army Corps of Engineers (Corps) is conducting Post-Disaster Watershed Assessments (assessments) for the territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), (see Enclosure). The assessments are being conducted pursuant to Section 729 of the Water Resources Development Act of 1986, as amended, and funded under the Additional Supplemental Appropriations for Disaster Relief Act of 2019 (Public Law 116-20), enacted on June 6, 2019. As authorized, these assessments will address identified water resources needs, provide a shared vision of a desired end state, and provide recommendations for potential involvement by the Corps, other federal agencies, or non-federal interests.

The study area encompasses the entire territories of American Samoa, Guam, and CNMI. The purpose of these assessments is to identify, and address community needs in each territory and increase resiliency. In response to typhoons and tropical cyclones striking the territories in 2018, the Corps received disaster relief funds in January 2020. The assessments are fully federally funded and expected to be complete by 2022.

Problems by Territory

American Samoa has a history of chronic riverine and coastal flooding from convective storms, cyclones and tsunamis. Problems associated with these floods include damages resulting from run off and ponding of water, shoreline erosion, water quality and water supply contamination, and landslides. These problems pose a threat to public health and safety and the health of the environment.

Guam has two distinct geographic landscapes; Northern Guam is comprised of limestone plateau while Southern Guam contains ridgelines from volcanic rises. Problems identified in Northern Guam include threats to the Northern Lens Aquifer (main source of drinking water) from exposure to nitrates from septic tanks and land use practices, poor storm water management and infrastructure allowing point-source pollution to flow into the near shore waters. Problems identified in Southern Guam include heavy conveyance of water that carries sedimentation and pollutants to the river deltas resulting in algal blooms and coral reef decline, severe riverbank erosion resulting in loss of property and exacerbating water quality issues, lack

of forested lands due to prescribed fires for development, and reforestation plans that are missing diversity of native species to reduce erosion and promote biodiversity.

The CNMI contains 14 islands, of which, five are inhabited. The assessment is focused on the villages inhabiting the islands of Saipan, Tinian, and Rota. The following problems were identified through prior studies and input from CNMI stakeholders/ agencies: Frequent intense rainfall events trigger flooding along watercourses and in low lying areas, causing life safety risks and economic damages, including effects to critical infrastructure (Saipan). Storms and high wave events contribute to coastal erosion, endangering critical infrastructure (Saipan and Rota). Flooding reduces water quality and water supply, leading to contaminated drinking water (Saipan, Tinian, and Rota). Wildfires exacerbated by drought and invasive species threaten the ecology (Tinian and Rota).

Stakeholder meetings were held virtually in July (participants included American Samoa, CNMI and Guam FWS personnel). The team will continue to collaborate with stakeholders and review existing resiliency projects to identify the problems and develop community-based mitigation strategies for flood risk. The assessments are still in the early data gathering phase; no specific decisions have been made. The next major milestone is the Shared Vision Milestone, scheduled for January 2021.

Pursuant to Planning Bulletin 2019-01 Watershed Studies, we are consulting our agency partners to gather data necessary to develop the Shared Vision among stakeholders. One of our goals at this time is to determine the baseline conditions and existing environment within the study area to assist in the development of recommendations to be described in the assessment. We invite you and other federal and state agencies, cultural organizations, local agencies, interested parties, and individuals interested in providing comments and identifying any issues or concerns to participate in this collaborative effort. In particular, we request your technical assistance in identifying any natural resources or other resources of concern subject to USFWS' purview, occurring within the study area. Any comments received will be fully considered in the development of the final Watershed Assessment.

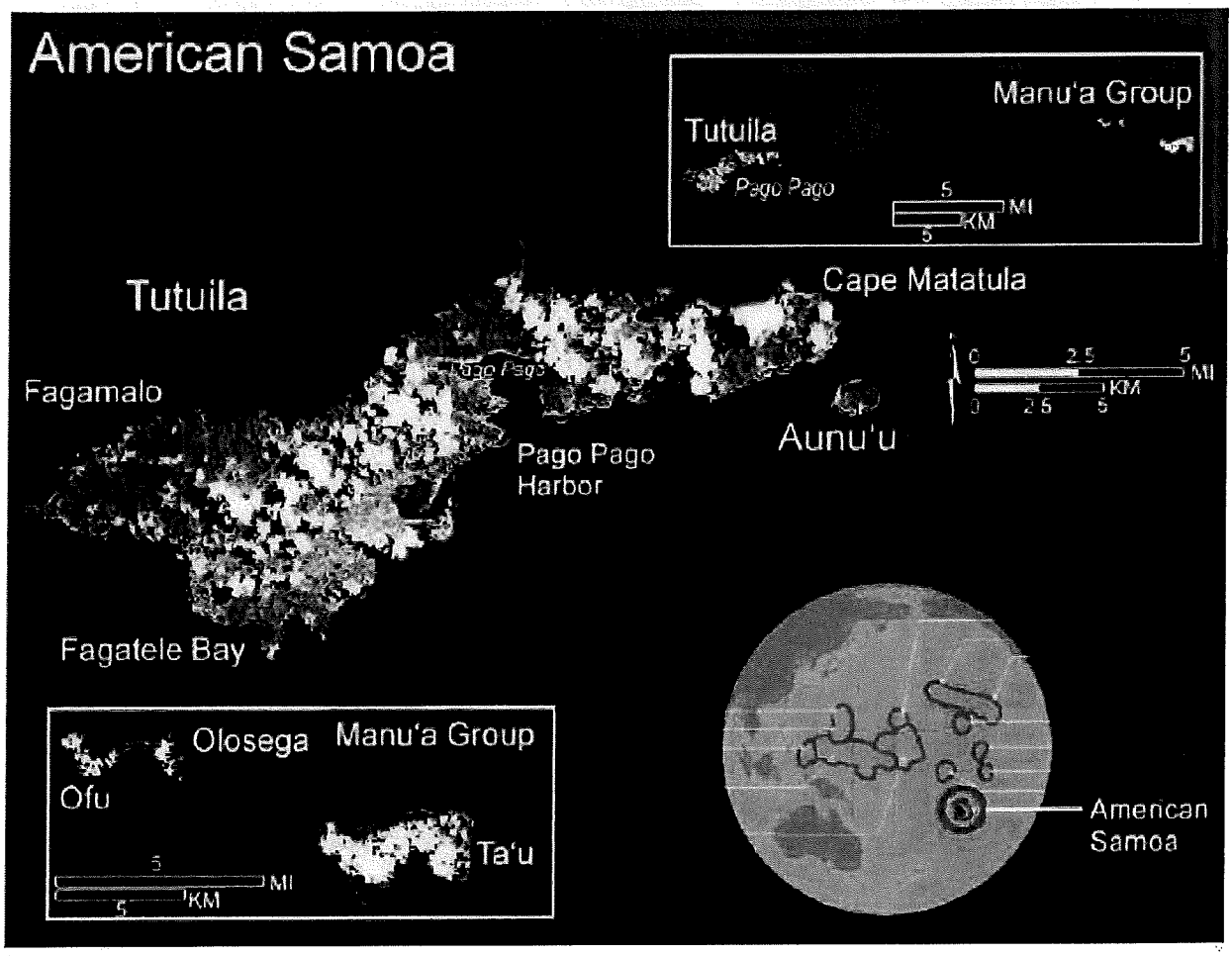
We appreciate your cooperation on this matter and respectfully request a response within 30 days. We will continue to coordinate this effort with you as the study progresses and the assessment is developed. Should you have any questions, comments, or wish to request either an extension for response or a meeting to discuss this request, please contact Ms. Jessie K. Paahana, Environmental Coordinator, Civil and Public Works Branch, Honolulu District at (808) 835-4042 or e-mail: jessie.k.paahana@usace.army.mil.

Sincerely,

Jennifer Moore, PMP
Deputy District Engineer
Programs and Project Management

Enclosure

USACE FY 19 Emergency Supplemental
Watershed Study Area Maps



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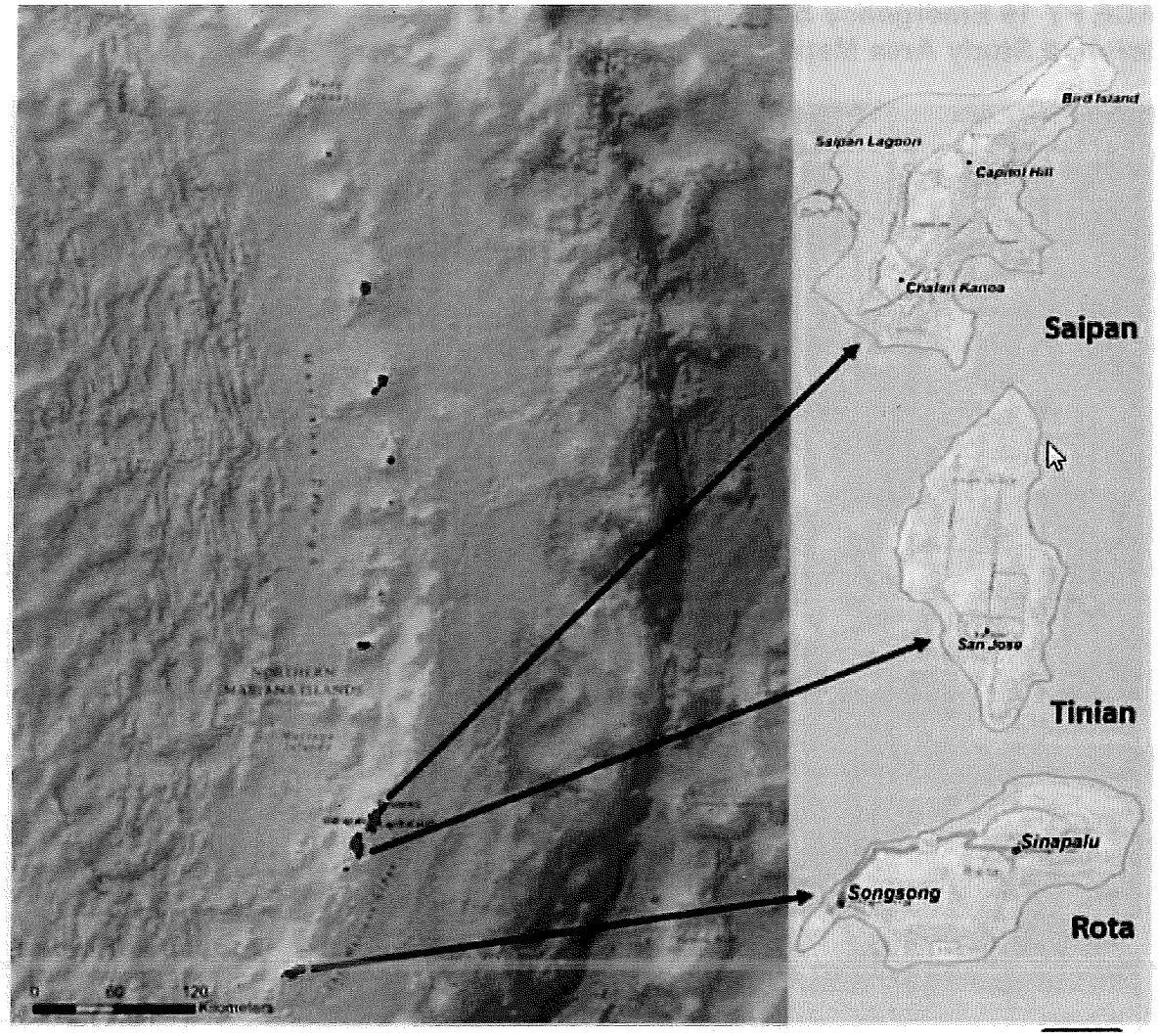
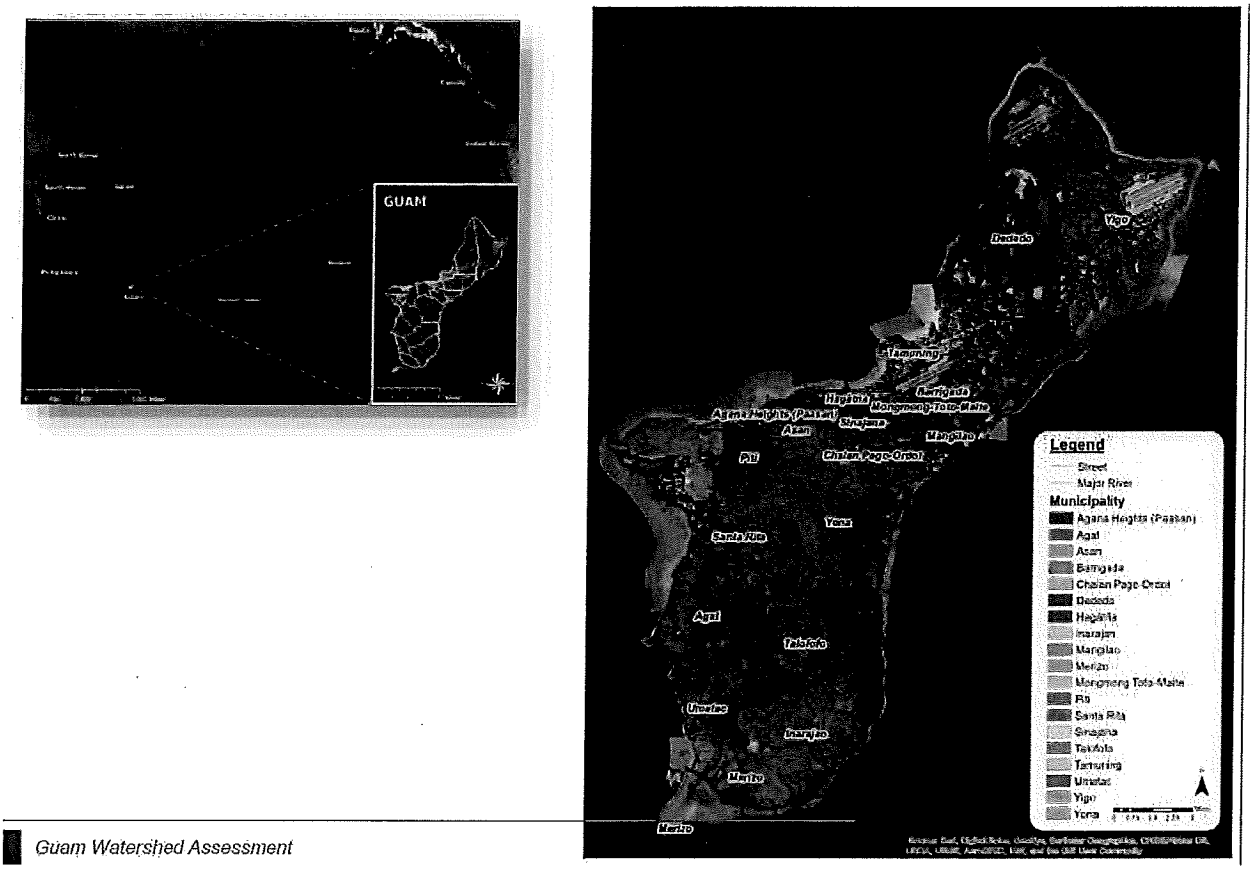


Figure 2. Commonwealth of the Northern Mariana Islands Study Area



Guam Watershed Assessment

Figure 3. Guam Study Area

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

December 10, 2020

Civil and Public Works Branch
Programs and Project Management Division

Ms. Ann Garrett, Protected Resources Division
Mr. Gerry Davis, Habitat Conservation Division

Pacific Islands Regional Office
National Marine Fisheries Service
1845 Wasp Boulevard, Building 176
Honolulu, HI 96818

Dear Ms. Garrett and Mr. Davis:

The Honolulu District, U.S. Army Corps of Engineers (Corps) is conducting Post-Disaster Watershed Assessments (assessments) for the territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), (see Enclosure). The assessments are being conducted pursuant to Section 729 of the Water Resources Development Act of 1986, as amended, and funded under the Additional Supplemental Appropriations for Disaster Relief Act of 2019 (Public Law 116-20), enacted on June 6, 2019. As authorized, these assessments will address identified water resources needs, provide a shared vision of a desired end state, and provide recommendations for potential involvement by the Corps, other federal agencies, or non-federal interests.

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Problems by Territory

American Samoa has a history of chronic riverine and coastal flooding from convective storms, cyclones and tsunamis. Problems associated with these floods include damages resulting from run off and ponding of water, shoreline erosion, water quality and water supply contamination, and landslides. These problems pose a threat to public health and safety and the health of the environment.

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Problems identified in Northern Guam include threats to the Northern Lens Aquifer (main source of drinking water) from exposure to nitrates from septic tanks and land use practices, poor storm water management and infrastructure allowing point-source pollution to flow into the near shore waters. Problems identified in Southern Guam include heavy conveyance of water that carries sediment and pollutants to the river deltas, resulting in algal blooms and coral reef decline, severe riverbank erosion resulting in loss of property and exacerbating water quality issues, lack of forested lands due to prescribed fires for development, and reforestation plans that are missing diversity of native species to reduce erosion and promote biodiversity.

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Stakeholder meetings were held virtually in July (participants included American Samoa and Guam NMFS). The team will continue to collaborate with stakeholders and review existing resiliency projects to identify the problems and develop community-based mitigation strategies for flood risk. The assessments are still in the early data gathering phase; no specific decisions have been made. The next major milestone is the Shared Vision Milestone, scheduled for January 2021.

Pursuant to Planning Bulletin 2019-01 Watershed Studies, we are consulting our agency partners to gather data necessary to develop the Shared Vision among stakeholders. One of our goals at this time is to determine the baseline conditions and existing environment within the study area to assist in the development of recommendations to be described in the assessment. We invite you and other Federal and State agencies, cultural organizations, local agencies, interested parties, and individuals interested in providing comments and identifying any issues or concerns to participate in this collaborative effort. In particular we request your technical assistance in identifying any natural resources or other resources of concern subject to NMFS' purview occurring within the study area. Any comments received will be fully considered in the development of the final Watershed Assessment.

We appreciate your cooperation on this matter and respectfully request a response within 30 days. We will continue to coordinate this effort with you as the study progresses and the assessment is developed. Should you have any questions, comments, or wish to request either an extension for response or a meeting to discuss

this request, please contact Ms. Jessie K. Paahana, Environmental Coordinator, Civil and Public Works Branch, Honolulu District at (808) 835-4042 or e-mail: jessie.k.paahana@usace.army.mil.

Sincerely,

Jennifer Moore, PMP
Deputy District Engineer
Programs and Project Management

Enclosure

USACE FY 19 Emergency Supplemental
Watershed Study Area Maps

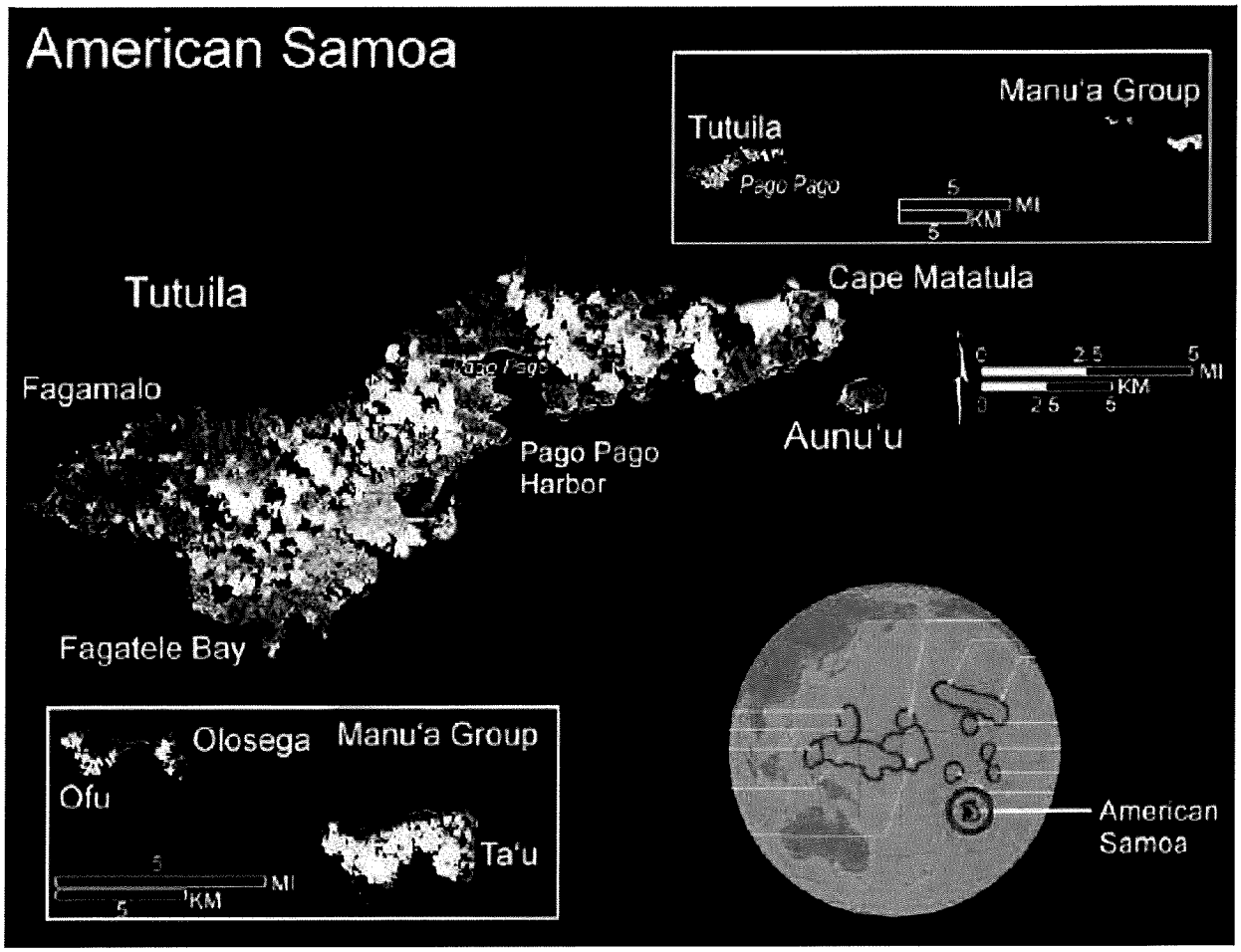


Figure 1. American Samoa Study Area

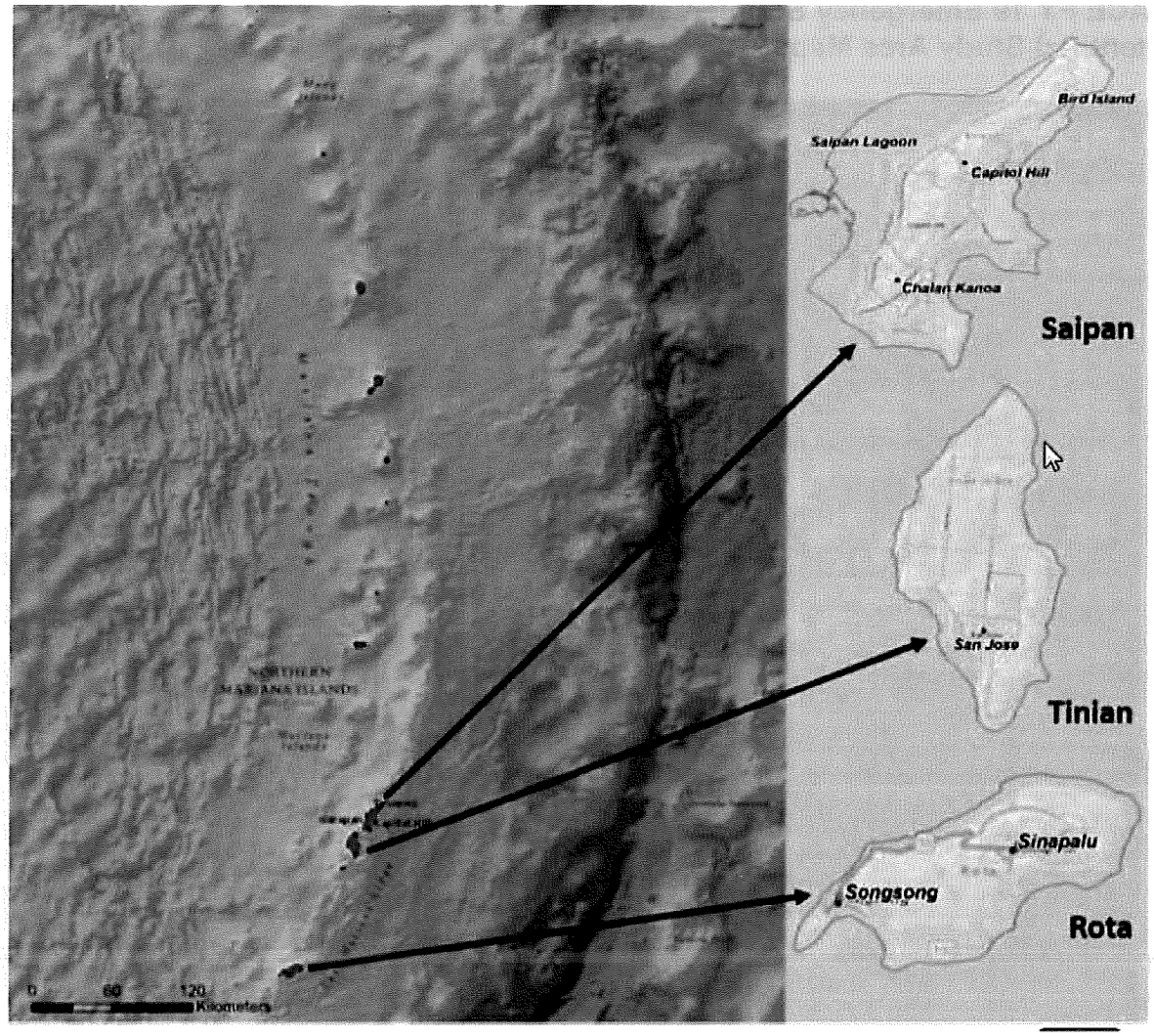
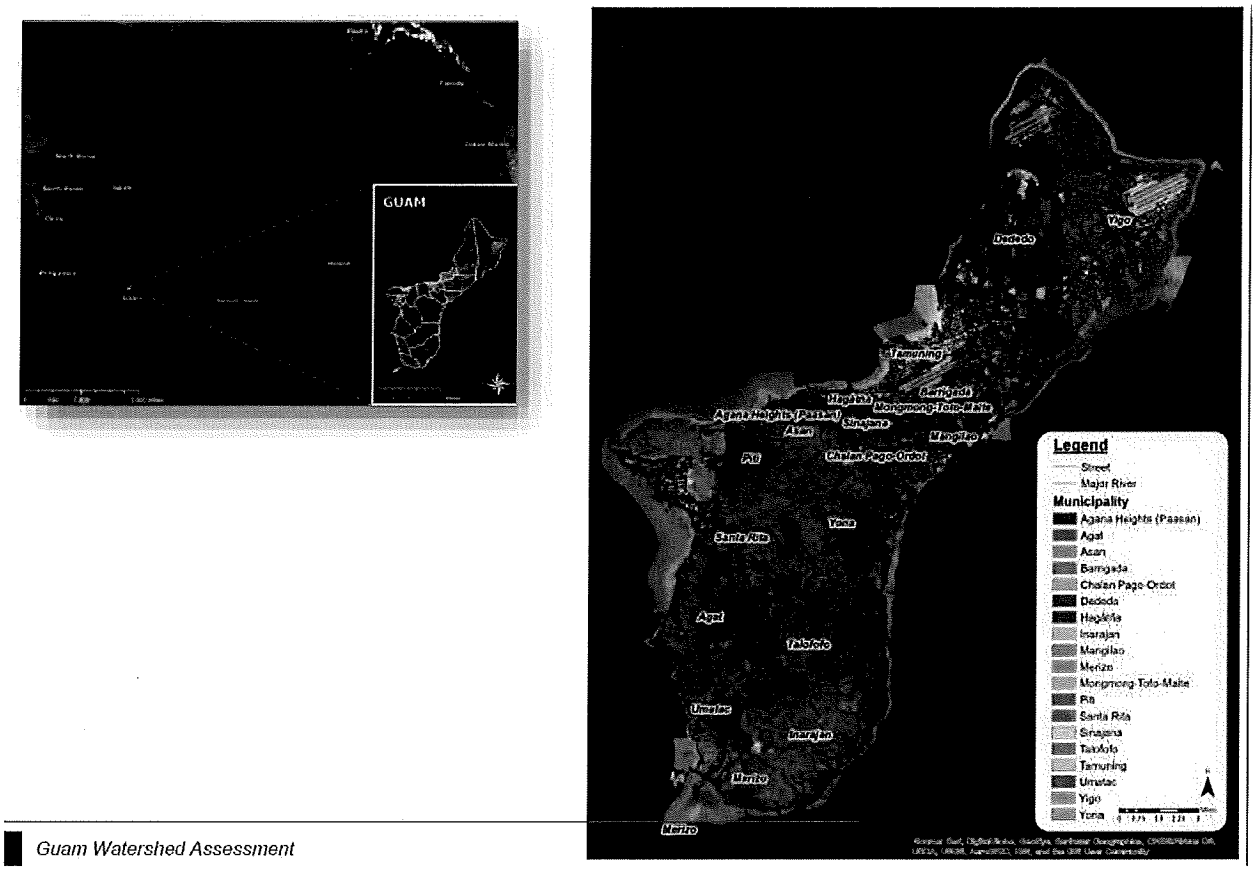


Figure 2. Commonwealth of the Northern Mariana Islands Study Area



Guam Watershed Assessment

Figure 3. Guam Study Area

US Army Corps
of Engineers ®
Honolulu District

Appendix A – Attachment 2

American Samoa Final Watershed Plan

Letters of Support

Included Letters

Honorable Representative Larry Sanitoa Letter of Support

Honorable Representative Samuel Ioka Ale Meleisea Letter of Support

Office of Disaster Assistance and Petroleum Management Letter of Support

FEMA Region IX Letter of Support

NOAA Office of Coastal Management Letter of Support

American Samoa Department of Homeland Security Letter of Support

University of Hawaii Water Resources Research Center Letter of Support

LEGISLATURE OF AMERICAN SAMOA
HOUSE OF REPRESENTATIVES

Rep. Larry Sanitoa
Tualauta District #15

P.O. Box 5033 Pago Pago, American Samoa 96799
Work: (684) 633-5363 Mobile: (684)258-3400

In Reply refer to:LS22-0425

April 25, 2022

Lieutenant Colonel Eric S. Marshall
District Commander
U.S. Army Corps of Engineers, Honolulu District
Fort Shafter, HI 96858

RE: American Samoa Post-Disaster Watershed Plan, Section 729 Study

Lieutenant Colonel Marshall:

This letter is to express my support for the broad recommendations and proposed collaboration with the U.S. Army Corps of Engineers, Honolulu District, as a partner in furthering the recommendations made within the American Samoa Post-Disaster Watershed Plan. We understand this study assessed the scope and potential solutions pertaining to rainfall and storms, coastal hazards, water quality and supply, and tsunamis efforts in American Samoa by analyzing risk and uncertainty of stressors and identifying potential opportunities to leverage collaborative risk reduction strategies and optimize resiliency from a multi-objective system perspective.

On behalf of my constituents that reside in Tualauta district, I herewith express support for the recommendations set forth in the American Samoa Post-Disaster Watershed Plan and will collaborate in the advancement and application of the strategies pertaining to rainfall and storms, coastal hazards, water quality and supply, and tsunamis.

Feel free to contact me regarding any updates and information needed to help move this project forward.

Larry Sanitoa
Representative, Tuaalauta, District #15

LEGISLATURE OF AMERICAN SAMOA
HOUSE OF REPRESENTATIVES
Pago Pago, American Samoa 96799
Tel: (684)633-5763 Ext. 237

April 29, 2022

Lieutenant Colonel Eric S. Marshall
District Commander
U.S. Army Corps of Engineers, Honolulu District
Fort Shafter, HI 96858

RE: American Samoa Post-Disaster Watershed Plan, Section 729 Study

Talofa (Greetings) Lieutenant Colonel Marshall,

This letter of support is in reference to the proposed post-disaster watershed plan for the Territory of American Samoa. The Section 729 study by the U.S. Army Corps of Engineers is the most comprehensive plan that seeks to address the flooding issues that have plagued my district of Tualauta for decades.

The District of Tualauta is home to more than 22,000 residents. Half of whom reside within the Tafuna watershed. Hundreds of residents have seen their homes and property inundated, destroyed or damaged by the ever growing threat of the watershed runoff.

As one of the Representatives of Tualauta District, I strongly support the U.S. Army Corps of Engineers' post-disaster watershed plan of the Section 729 study. I strongly believe and support these proposed efforts to build resilient infrastructure to better counter the impacts of climate change to safeguard our people's lives and property. Thank you for your time and attention to this legislative letter of support.

Ma le fa'aaloalo tele (Very Respectfully),

Samuel Ioka Ale Meleisea
Honorable Representative
Tualauta District No. 15
American Samoa House of Representatives

Lemanu P.S. Mauga
Governor

Talauega E.V. Ale
Lieutenant Governor

OFFICE OF DISASTER ASSISTANCE AND PETROLEUM MANAGEMENT (ODAPM)

OFFICE OF THE GOVERNOR
AMERICAN SAMOA GOVERNMENT

Lisa Tautalatasi Tuato'o
Director
Chief Petroleum Officer

Salu Tuigamala
Deputy Director

April 27, 2022

Serial: 046-2022

Lieutenant Colonel Eric S. Marshall
District Commander
U.S. Army Corps of Engineers, Honolulu District
Fort Shafter, HI 96858

American Samoa Disaster Recovery Office (ASDRO-FEMA PA & HMGP)

RE: American Samoa Post-Disaster Watershed Plan, Section 729 Study

Lieutenant Colonel Marshall:

American Samoa Property Insurance (ASPI)

This letter is to express the Office of Disaster Assistance and Petroleum Management (ODAPM) full support for the broad recommendations and proposed collaboration with the U.S. Army Corps of Engineers, Honolulu District, as a partner in furthering the recommendations made within the American Samoa Post-Disaster Watershed Plan. We understand this study assessed the scope and potential solutions pertaining to rainfall and storms, coastal hazards, water quality and supply, and tsunamis efforts in American Samoa by analyzing risk and uncertainty of stressors. It also identifies potential opportunities to leverage collaborative risk reduction strategies and optimize resiliency from a multi-objective system perspective.

American Samoa Petroleum Cooperative (ASPC)

ODAPM expresses support for the recommendations set forth in the American Samoa Post-Disaster Watershed Plan and will collaborate in the advancement and application of the strategies pertaining to rainfall and storms, coastal hazards and tsunamis.

Office of Petroleum Management (OPM)

In furthering our support, we have designated Lima Fiatoa, the State Hazard Mitigation Officer as the point of contact for this project and she can be reached via email at lima.fiatoa@odapm.as.gov. Mrs. Fiatoa will provide most invaluable assistance and with her outstanding background and historical knowledge in hazard mitigation, she is an asset in this undertaking.

Look forward to our partnership and I welcome this great opportunity to enhance the level of collaboration with USACE.

Sincerely,

Lisa T. Tuato'o
Director

P.O. Box 997653
Pago Pago, American Samoa 96799

Phone: (684) 699-1329 / 1330
Fax: (684) 699-5005
Email: odapm@as.gov

U.S. Department of Homeland Security
FEMA Region 9
1111 Broadway, Suite 1200
Oakland, CA 94607

FEMA

April 28, 2022

Lieutenant Colonel Eric S. Marshall
District Commander
U.S. Army Corps of Engineers, Honolulu District
Fort Shafter, HI 96858

Reference: **American Samoa Post-Disaster Watershed Plan, Section 729 Study**

Dear Lieutenant Colonel Marshall:

This letter is to express our support for the partnership with the U.S. Army Corps of Engineers, Honolulu District, to further the recommendations made within the American Samoa Post-Disaster Watershed Plan. We understand this study assesses the scope of hazards pertaining to rainfall and storms, coastal hazards, water quality and supply, and tsunamis efforts in American Samoa, and further identifies potential opportunities to leverage collaborative risk reduction strategies to optimize resiliency.

FEMA Region 9 expresses support for the recommendations set forth in the American Samoa Post-Disaster Watershed Plan and will collaborate to advance the identified strategies pertaining to tsunamis, flooding, and other natural hazards.

The point of contact for this project is Kate Kilduff, Risk Analyst. She can be contacted by email at Katherine.Kilduff@fema.dhs.gov or by phone at 202-568-4216.

Sincerely,

KATHRYN J LIPIECKI

Digitally signed by KATHRYN J LIPIECKI
Date: 2022.04.29 11:27:24 -07'00'

Kathryn Lipiecki
Director, Mitigation Division
FEMA Region 9

Cc: Michael Bishop, Acting Chief, Risk Analysis Branch

Lieutenant Colonel Eric S. Marshall
District Commander
U.S. Army Corps of Engineers, Honolulu District
Fort Shafter, HI 96858

RE: American Samoa Post-Disaster Watershed Plan, Section 729 Study
DATE: April 21, 2022

Lieutenant Colonel Marshall:

This letter expresses NOAA's Office for Coastal Management's support for the broad recommendations and proposed collaboration with the U.S. Army Corps of Engineers, Honolulu District, as a partner in furthering the recommendations made within the American Samoa Post-Disaster Watershed Plan. We understand this study assessed the scope and potential solutions pertaining to rainfall and storms, coastal hazards, water quality and supply, and tsunamis efforts in American Samoa by analyzing risk and uncertainty of stressors and identifying potential opportunities to leverage collaborative risk reduction strategies and optimize resiliency from a multi-objective system perspective.

NOAA's Office for Coastal Management expresses support for the recommendations set forth in the American Samoa Post-Disaster Watershed Plan and will collaborate, as resources permit, in the advancement and application of the strategies pertaining to coastal hazards and community resilience.

I have designated Jean Tanimoto, Regional Director, Pacific Islands Region as the point of contact for this project. She may be reached at Jean.Tanimoto@noaa.gov or at 808-725-5253.

Sincerely,

Jeffrey Payne
Director
NOAA, Office for Coastal Management

AMERICAN SAMOA GOVERNMENT
DEPARTMENT OF HOMELAND SECURITY
(ASDHS)
OTICIDE – SPICIN- INTERPOL
TEMCO
Vital Statistics
Office of Homeland Security

Hon Lemanu P. Mauga
Governor
~+~+~+~+~
Talauega Eleasalo V. Ale
Lt. Governor

Samana S. Ve'ave'a
Director
~+~+~+~+~
Vinnie Atofau Jr.
Deputy Director
Marvis Toafa Vaiaga'e
Deputy Director

Lieutenant Colonel Eric S. Marshall April 27th 2022
District Commander
U.S. Army Corps of Engineers, Honolulu District
Fort Shafter, HI 96858

RE: American Samoa Post-Disaster Watershed Plan, Section 729 Study

Lieutenant Colonel Marshall:

This letter is to express The American Samoa Department of Homeland Security's support for the broad recommendations and proposed collaboration with the U.S. Army Corps of Engineers, Honolulu District, as a partner in furthering the recommendations made within the American Samoa Post-Disaster Watershed Plan. We understand this study assessed the scope and potential solutions pertaining to rainfall and storms, coastal hazards, water quality and supply, and tsunamis efforts in American Samoa by analyzing risk and uncertainty of stressors and identifying potential opportunities to leverage collaborative risk reduction strategies and optimize resiliency from a multi-objective system perspective.

The American Samoa Department of Homeland Security expresses support for the recommendations set forth in the American Samoa Post-Disaster Watershed Plan and will collaborate in the advancement and application of the strategies pertaining to rainfall and storms, coastal hazards, and tsunamis.

American Samoa Department of Homeland Security has designated Mr. Alex Baker as the point of contact for this project. He can be reached at 684 699 3800.

Samana S. Ve'ave'a
Director of American Samoa Homeland Security

Water Resources Research Center

UNIVERSITY of HAWAI'I MĀNOA

Lieutenant Colonel Eric S. Marshall

4-26-2022

District Commander
U.S. Army Corps of Engineers, Honolulu District
Fort Shafter, HI 96858

RE: American Samoa Post-Disaster Watershed Plan, Section 729 Study

Lieutenant Colonel Marshall:

This letter is to express the University of Hawaii Water Resources Research Center support for the broad recommendations and proposed collaboration with the U.S. Army Corps of Engineers, Honolulu District, as a partner in furthering the recommendations made within the American Samoa Post-Disaster Watershed Plan. We understand this study assessed the scope and potential solutions pertaining to rainfall and storms, coastal hazards, water quality and supply, and tsunamis efforts in American Samoa by analyzing risk and uncertainty of stressors and identifying potential opportunities to leverage collaborative risk reduction strategies and optimize resiliency from a multi-objective system perspective.

The Water Resources Research Center expresses support for the recommendations set forth in the American Samoa Post-Disaster Watershed Plan and we are interested in continuing to collaborate in the advancement and application of the strategies pertaining to Flooding Mitigation, Weather Hazard Monitoring and improvements to Forecasting, Resilience Planning, and Monitoring and Mitigation of Saltwater Intrusion.

Christopher Shuler will continue to serve as the designated point of contact for this project.

Signed,

Christopher Shuler
Researcher
Water Resources Research Center
University of Hawaii

2540 Dole Street, Holmes Hall 283
Honolulu, Hawai'i 96822
Telephone: (808) 956-7847
Fax: (808) 956-5044