Draft Programmatic Environmental Assessment

Permanent Housing Construction

Federal Emergency Management Agency in conjunction with the American Samoa Government

FEMA-1859-DR-AS

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FEMA

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Acronyms and Abbreviations

ASCMP	American Samoa Coastal Management Program
ASDOC	American Samoa Department of Commerce
ASEPA	American Samoa Environmental Protection Agency
ASG	American Samoa Government
ASHPO	American Samoa Historic Preservation Officer
BFE	base flood elevation
BMP	best management practice
BP	before present
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CZMA	Coastal Zone Management Act
DA	U.S. Department of the Army
DMWR	American Samoa Department of Marine and Wildlife Resources
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
GCR	General Conformity Rule
IAP	Individual Assistance Program
IRC	International Residential Code
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service

O_3	ozone
PCB	polyvinyl biphenyls
PEA	Programmatic Environmental Assessment
PHC	Permanent Housing Construction
PKEMRA	Post-Katrina Emergency Management Reform Act
P.L.	Public Law
$PM_{2.5}$	particulate matter less than 2.5 micrometers in diameter
PM_{10}	particulate matter less than 10 micrometers in diameter
PNRS	Project Notification and Review System
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SEA	Supplemental Environmental Assessment
SF	square feet
SO_2	sulfur dioxide
TSCA	Toxic Substances Control Act
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
U.S.C.	United States Code

SECTION ONE: INTRODUCTION

Regulations (44 Code of Federal Regulations [CFR] Part 206.117) implementing the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law [P.L]. 93-288), as amended, authorize the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) through its Individual Assistance Program (IAP) to provide financial or direct assistance to respond to the disaster-related housing needs of individuals and households. Prior to 2006, permanent housing construction was limited to insular areas outside the continental United States or to other locations where no other alternative housing was available. In the past, FEMA has provided financial or direct assistance to eligible applicants for construction of a limited number of permanent dwellings. However, the Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006 (P.L. 109-295) amended the Stafford Act and expanded FEMA's role for disaster response and preparedness and permanent housing construction is no longer limited to remote "insular" locations.

The National Environmental Policy Act of 1969 (NEPA) and its implementing regulations at 40 CFR Part 1500 and 44 CFR Part 10 direct FEMA take into consideration the environmental consequences of proposed actions during the decision-making process. FEMA must comply with NEPA before making Federal funds available for disaster response, recovery, and mitigation, including implementation of the IAP. FEMA has determined through experience that the majority of the typical recurring actions proposed for funding, and for which an Environmental Assessment is required, can be grouped by type of action or location. These groups of actions can be evaluated in a Programmatic Environmental Assessment (PEA) for compliance with NEPA and its implementing regulations without the need to develop and produce a stand-alone Environmental Assessment (EA) for every action.

This PEA evaluates typical actions undertaken by FEMA to implement the IAP to provide permanent housing to displaced residents. FEMA will use this PEA to determine the level of environmental analysis and documentation required under NEPA for permanent housing activities. If the description of the project and the levels of analysis are fully and accurately described in this PEA, FEMA will take no further action. If a specific project is expected to (1) create impacts not described in the PEA; (2) create impacts greater in magnitude, extent, or duration than those described in the PEA; or (3) require mitigation measures to keep impacts below significant levels that are not described in the PEA; then a Supplemental Environmental Assessment (SEA) would be prepared to address the specific action. The SEA would be tiered from this PEA, in accordance with 40 CFR Part 1508.28.[1] Actions that are determined during the preparation of the SEA to require a more detailed or broader environmental review will be subject to the stand-alone EA process.

[1] Tiering refers to incorporating, by reference, the general assessments and discussions from this PEA into a focused SEA. The SEA would focus on the particular effects of the specific action.

SECTION TWO: PURPOSE OF AND NEED FOR ACTION

In the aftermath of the September 29, 2009, earthquake, tsunami, and flooding in the territory of American Samoa, many survivors were left without housing and other essential services. Presidential disaster declaration, FEMA-DR-1859-AS, has made Federal aid available for a variety of programs including housing assistance. A large portion of the homes that were destroyed were located in low-lying areas known as coastal high hazard areas or "V-Zones." Many of these homes were substantially damaged or completely washed away.

Because of the acute need to replace dwellings lost during the earthquake and resulting tsunami and flooding, FEMA, in conjunction with the American Samoa Government (ASG), is proposing to implement a Permanent Housing Construction (PHC) Pilot Program on the island of Tutuila. The pilot program would relocate all substantially damaged or destroyed homes located in the V-Zone to areas outside the coastal high hazard area. Those damaged or destroyed homes situated outside the coastal high hazard area would be reconstructed at their original pre-disaster location.

FEMA will utilize the services of a contractor to construct up to 60 homes, approximately half of which will require relocation. FEMA and ASG have approved two-bedroom and three-bedroom plans. The plans are U.S. Housing and Urban Development-approved and earthquake- and typhoon-resistant. The houses would be constructed using a concrete footing, concrete floor, interior walls, electrical, plumbing, and a metal roof. They are one level. All would conform to local building codes and ordinances. In addition, utilities may need to be extended to some of the approved building sites. The contractor would also supply septic tanks as deemed necessary.

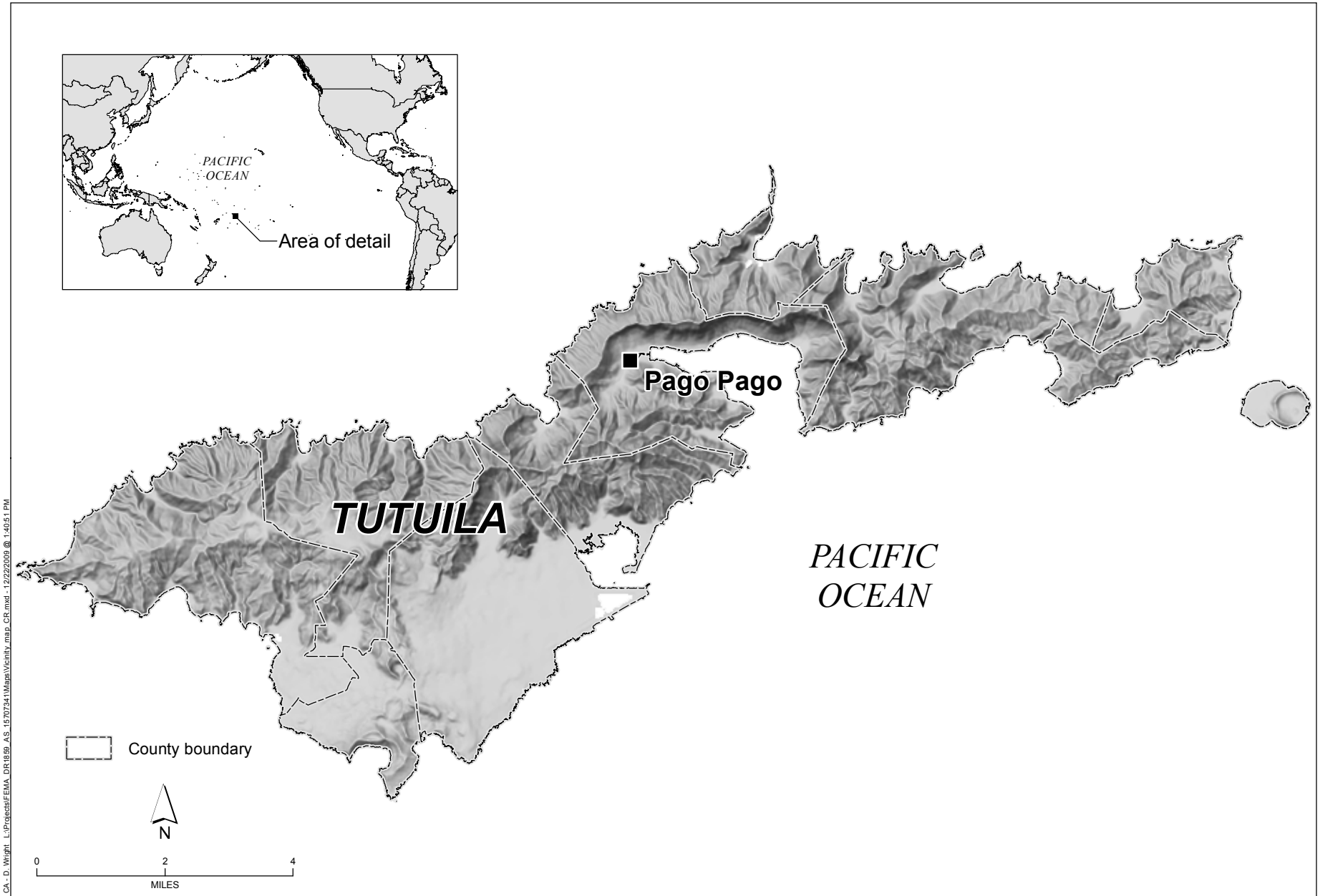
SECTION THREE: ALTERNATIVE ANALYSIS

3.1 ALTERNATIVE 1: NO PROJECT

A No Project Alternative is required to be included in the environmental analysis and documentation in accordance with the Council on Environmental Quality (CEQ) regulations implementing NEPA. The No Project Alternative is defined as maintaining the status quo, with no FEMA involvement for any alternative. The No Project Alternative is used to evaluate the effects of not implementing the PHC Pilot Program for this disaster; thus, this alternative provides a benchmark against which other alternatives may be evaluated. For the purpose of the environmental analysis, under the No Project Alternative, residents would have to rely on savings, insurance, loans, or other forms of assistance to restore their sources of residency. Potential scenarios are too numerous and speculative to be analyzed within the scope of this PEA.

3.2 ALTERNATIVE 2: FEMA'S PROPOSAL (PROPOSED PROJECT)

As described in Section 2 (Purpose of and Need for Action), FEMA would implement a PHC Pilot Program on Tutuila (Figure 1), which would result in FEMA constructing approximately 60 residential structures to replace houses destroyed by disaster FEMA-1859-DR-AS. Approximately half of the destroyed houses were located in Zones V or VE (coastal areas with a 1-percent or greater chance of flooding and an additional hazard associated with storm waves). These houses would be rebuilt outside of Zones V and VE. Damaged houses in Zones A or AE (areas with a 1 percent annual chance of flooding) would be reconstructed on their pre-disaster sites but elevated so that the lowest inhabitable floor (i.e., the lowest horizontal structural member) would be above the base flood elevation (BFE). All houses would be constructed with concrete floors. Houses on sites outside of Zones V, VE, A, and AE would be constructed using concrete footings and slab-on-grade floors. (Some houses on sites in Zones A or AE would not need to be elevated and thus would also be constructed using concrete footings and slab-on-grade floors.) All residences would be one story and have interior walls, electricity, plumbing, covered patios, and metal roofs. Septic systems would be constructed as necessary. Utilities lines (including power, telephone, domestic water, and sanitary) would need to be extended or restored to many housing sites. Two-bedroom houses would have a floor plan of approximately 800 square feet (SF); three-bedroom houses would have a floor plan of approximately 1,200 SF.



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DR-1859-AS	FEDERAL EMERGENCY MANAGEMENT AGENCY PERMANENT HOUSING CONSTRUCTION PILOT PROGRAM	**Figure 1** Vicinity map

SECTION FOUR: AFFECTED ENVIRONMENT, IMPACTS, AND MITIGATION

The analysis presented in this chapter focuses on the resource areas where some level of impact may result from the implementation of the alternatives, including geology and soils, seismicity, water resources, biological resources, historic properties, hazardous materials and wastes, air quality, land use and planning, and socioeconomics and safety. No other resource areas have been identified that would require further evaluation pursuant to NEPA.

4.1 GEOLOGY AND SOILS

The island of Tutuila is of volcanic origin and is characterized by steep mountainsides, small valleys, and a narrow coastal fringe of relatively level land. The island is a narrow mountain range consisting of basic igneous rock, mainly basalt, with small amounts of andesite and trachyte. The mountains extend approximately 20 miles from east to west. At Pago Pago harbor, they have a maximum width of 6 miles and a minimum width of 0.75 mile. The highest peak is 2,142 feet, and the land slopes steeply from the tops of the mountain ridges to the ocean.

Landslides are primarily caused by gravity acting on overly steep slopes. However, many other factors, such as saturation by rainfall, removal of deep-rooted vegetation, and erosion by water channels, contribute to the occurrence of landslides. On Tutuila, landslides often occur when heavy rainfall saturates unstable earth on the island's steep slopes. Because housing locations in valleys and in coastal level areas are at a premium and subject to flooding hazards, many residents are forced to construct on or below steep, unstable slopes. As a result of both natural and human-induced factors, landslides have a high potential to occur on Tutuila.

The Farmland Protection Policy Act (FPPA) requires Federal agencies to evaluate the effects of their activities before taking any action that could result in converting designated prime or unique farmland for nonagricultural purposes. Agricultural production occurs on Tutuila that could be subject to the FPPA. If an action would adversely affect farmland preservation, alternative actions that could avoid or lessen adverse effects must be considered. Determination of the level of impact on prime and unique farmland or farmland of statewide and local importance is done by the lead Federal agency (i.e., FEMA), which inventories farmlands affected by the proposed project and documents the results of the inventory part of an AD 1006 Form, Farmland Conversion Impact Rating, for each alternative. In consultation with the lead Federal agency, the Natural Resources Conservation Service (NRCS) completes the AD 1006 Form and determines the level of consideration for protection of farmlands that needs to occur under the act.

4.1.1 Alternative 1: No Project

The No Project Alternative would not affect geology or soils.

4.1.2 Alternative 2: Proposed Project

The Proposed Project would have the potential to affect geology and soils. Area soils would likely be disturbed during demolition, site preparation, construction of dwellings, and construction of auxiliary facilities. FEMA would implement Best Management Practices (BMPs), such as developing and implementing an erosion and sedimentation control plan, using silt fences or hay bales, revegetating disturbed soils, and maintaining site soil stockpiles, to prevent soils from eroding and dispersing off-site.

The potential exists for the Proposed Project to cause landslides and for landslides to affect housing sites. As mentioned above, housing locations that are not on steep, unstable slopes consist of level areas on the coast and in valleys. Many of these coastal areas are within Zones V or VE. As a result of relocating residents from Zones V and VE to areas outside of these Zones, in some villages, the only alternative locations would be on or just below steep, unstable slopes. Without proper review, design, and construction, clearing vegetation or constructing on steep, unstable slopes would increase frequency and size of landslides. Without proper review, houses sited below steep, unstable slopes would be subject to potential landslides. Therefore, FEMA would require that a licensed and qualified professional engineer reviews each housing site to determine if the Proposed Project could cause landslides or if the proposed location could be subject to landslides. If FEMA determines that the Proposed Project could cause landslides or that landslides could affect the proposed site, FEMA would seek an alternative site or prepare an SEA to document the risks and to provide the design and construction techniques that would be used to minimize or avoid those risks.

The potential exists for the Proposed Project to convert agricultural land to other uses. If farmland is proposed as a housing site, FEMA must determine whether the proposed site contains prime, unique, or other important soils. If the site does not contain these soils, the action complies with the FPPA and no further documentation is required. If the site contains these soils, FEMA must prepare the appropriate sections of an AD-1006 Farmland Conversion Impact Rating Form for the site, coordinate with the NRCS to determine the overall impact of the conversion, and document the results of the FPPA finding in an SEA.

4.2 SEISMICITY

FEMA classifies the island of Tutuila as Seismic Zone 3, which means it will experience earthquake ground shaking of approximately 0.2*g* peak horizontal acceleration (where *g* is the unit used to express gravitational force) and has a 1 in 500 chance per year of sustaining light to moderate building damage (i.e., a 10 percent probability of experiencing ground shaking of at least 0.2*g* every 50 years). This Seismic Zone 3 designation considers all probable earthquake sources affecting American Samoa, local and distant, and translates their effects into different estimates of ground shaking.

The American Samoa region is volcanically active. The submarine volcano Vailulu'u is an active, undersea volcano located east of American Samoa that extends for 20 miles over the

ocean floor at its base. Evidence shows that it may breach the ocean floor during this century. The nearby Ofu-Olosega volcano last erupted in 1866. Until recently, the other volcanoes in the region had been silent for thousands of years. However, another nearby volcano is the recently emerged 1-mile wide submarine Nafanua volcano. Two other submarine volcanoes are emerging near Manu'a in American Samoa that could present a future tsunami threat due to undersea landslides.

Earthquakes in American Samoa originate from the Tonga Trench, approximately 100 miles southwest of Tutuila. The Tonga Trench is located where the Pacific and Australian tectonic plates collide. The trench is considered an area of high seismic activity and generates large but distant earthquakes that are felt on Tutuila. Such earthquakes can be precursors to volcanic activity but generally do not present a seismic threat to the islands.

Most tsunamis (huge water waves) that affect Tutuila are generated by earthquakes from fault movements along the Pacific Rim in the Aleutian Islands, South America, the Tonga Trench, and other locations. In 1868, 1960, and 2009, tsunamis caused damage in the Samoan Islands. The 2009 tsunami was caused by a highly unusual type of earthquake that originated east of the Tonga Trench. Geologists refer to this type of earthquake as an "outer-rise" earthquake. Instances of outer-rise earthquakes are few, but their effects are typically devastating. The 2009 earthquake was the fourth largest outer-rise earthquake recorded since 1900 (USGS 2009).

Executive Order (EO) 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction, requires construction of new buildings to meet standards for seismic safety set by the National Earthquake Hazard Reduction Program. American Samoa does not have a modern building code, and typical residential construction in American Samoa is governed by economics, trade practices, and local customs rather than by building regulations. The 2006 International Building Code is frequently used for non-residential buildings; however, residential construction frequently does not even follow the outdated 1997 Uniform Building Code. Most communities in the Unites States have adopted the 2006 International Residential Code (IRC) as the local ordinance governing residential building construction.

4.2.1 Alternative 1: No Project

Under the No Project Alternative, there would be no change to the current risk of seismic events.

4.2.2 Alternative 2: Proposed Project

Under the Proposed Project, the potential for an earthquake or tsunami remains unchanged. Residences constructed by FEMA would be subject to seismic hazards, including volcanic eruptions, earthquakes, and tsunamis, should such an event occur. Residences constructed by FEMA would be appropriately designed and constructed for local site conditions (including soil type) according to the 2006 IRC. Because most houses destroyed by disaster FEMA-1859-DR-AS were not constructed to meet the 2006 IRC, all replacement houses would be less vulnerable

to damage from an earthquake. Further, residents that are relocated outside of Zones V or VE would be less likely to have their replacement house affected by a tsunami.

4.3 WATER RESOURCES

Surface water formations in Tutuila are perennial and ephemeral streams. The streams provide habitat for freshwater fish, plants, and invertebrates, and are a source of drinking water in some remote parts of the island. All surface waters on the island discharge directly into marine water bodies, eventually reaching the Pacific Ocean. Groundwater is the principal source of domestic and industrial water supply, as it is more abundant and has a higher quality than surface water. Surface water and groundwater are highly dependent on precipitation. American Samoa has a tropical climate with an average annual rainfall of 200 inches. The heaviest rainfall occurs from December to March, during which time typhoons are common. Rainfall occurs on Tutuila on about half of the days of the year.

4.3.1 Water Quality and Hydrology

The American Samoa Environmental Protection Agency (ASEPA) maintains programs in water quality and drinking water under the American Samoa Office of the Governor. The ASEPA has identified three major water quality concerns on Tutuila: (1) sediment, generated by improper land use practices, that enters streams and coastal waters after heavy rains; (2) nutrient enrichment from human and animal wastes in populated areas; and (3) contamination in Pago Pago Harbor. Household waste and other human-made debris is frequently found in streams and on beaches.

In 1991, the U.S. Environmental Protection Agency (USEPA) determined that elevated levels of various heavy metals and pesticides were present in fish, seawater, and sediment in the inner portion of Pago Pago Harbor. Health advisories have been issued warning residents not to eat fish caught in the inner harbor and to always clean and gut fish that are caught in the outer harbor before eating.

Potential groundwater contamination is another concern on Tutuila. Groundwater is the principal source of domestic and industrial water supply because it is more abundant and has a higher quality than surface water (CSREES 2004). However, the volcanic soil and bedrock of the island are highly permeable and do not act as good filters. Therefore, the groundwater is easily threatened by surface contaminants.

American Samoa has wetlands of many varieties: saltwater and freshwater swamps and marshes, cultivated (i.e., agricultural) wetlands, ruderal wetlands, and perennial streams. EO 11990, Protection of Wetlands, requires Federal agencies to take action to minimize the destruction or modification of wetlands by considering both direct and indirect impacts to wetlands. Furthermore, EO 11990 requires that Federal agencies proposing to fund a project that could

adversely affect wetlands consider alternatives to avoid such effects. FEMA's regulations implementing EO 11990 are codified in 44 CFR Part 9.

Section 404 of the Clean Water Act requires that project proponents receive a U.S. Department of the Army (DA) permit for work involving the discharge of dredged or fill materials in waters of the United States (including wetlands). The U.S. Army Corps of Engineers (USACE) is responsible for reviewing projects for DA permits. In addition, Section 401 of the Clean Water Act requires that applicants who conduct work involving any discharge into waters of the United States receive a Section 401 Water Quality Certification or waiver. ASEPA is responsible for reviewing projects needing a Section 401 Water Quality Certification in American Samoa.

Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System (NPDES). The purpose of the NPDES program is to reduce point- and nonpoint-source pollutant discharge into water resources. Construction activities that result in one acre or more of ground disturbance are regulated under the NPDES program and require a NPDES General Permit, which outlines conditions to reduce nonpoint-source pollutant discharge. The NPDES program in America Samoa is administered by the USEPA.

4.3.1.1 Alternative 1: No Project

The No Project Alternative would result in no change to existing water quality or hydrology.

4.3.1.2 Alternative 2: Proposed Project

For the purposes of this PEA, FEMA assumes that the replacement houses would be approximately the same size as the destroyed houses. Therefore, over the long-term, construction of these residences would not increase impervious surfaces, reduce groundwater recharge, or adversely affect water quality through the transmission of pollutants into surface waters or groundwater. Relocating housing sites out of Zones V or VE to upland areas would have a beneficial, though likely negligible, effect on marine water quality at the expense of groundwater and non-marine water quality: domestic activities that previously caused sedimentation and pollution of lagoons would be transferred to upland areas where the same activities would cause sedimentation and pollution of streams, and potentially pollution of groundwater.

During demolition, site preparation, construction of dwellings, and construction of auxiliary facilities, eroded soils and pollutants have the potential to affect surface water (including wetlands) and groundwater. FEMA would mitigate these impacts by implementing BMPs (as described in Section 4.1.2) and ensuring that all fueling and maintenance of heavy equipment occurs at least 100 feet from the nearest water body (including wetlands) and on an impervious surface.

FEMA would not site any residential structure, appurtenant facility, or construction staging area in a surface water body (including wetlands). Further, FEMA would implement the BMPs referenced above to ensure that construction activities would not result in soil, debris, or other

fill being placed into surface water bodies (including wetlands). Therefore, the Proposed Project complies with EO 11990 and Section 404 and 401 of the Clean Water Act; no DA permit or Section 401 Water Quality Certification or waiver is required.

Individual project sites or groups of sites that are constructed as one project are not expected to incur more than 1 acre of ground disturbance on an individual basis; thus FEMA would not be required to acquire a NPDES General Permit. FEMA will determine on an individual project basis if a site or group of sites would disturb 1 acre or more of land. If 1 acre or more of land were disturbed, FEMA would apply for and acquire a NPDES General Permit from the USEPA prior to commencing any construction activities. FEMA will adhere to all conditions outlined in the NPDES General Permit.

4.3.2 Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) of 1972 and the Coastal Zone Act Reauthorization Amendments of 1990 make Federal financial assistance available to any coastal state or territory that is willing to develop and implement a comprehensive coastal management program. These acts apply to all actions within a designated coastal zone; Section 307 of the CZMA requires that any Federal agency whose activities affect the coastal zone be consistent, to the maximum extent practicable, with approved state or territory coastal zone management programs. When a Federal agency is directly responsible for conducting the activity (as opposed to permitting or funding an activity conducted by a state or local agency), the Federal agency must comply with 16 U.S.C. § 1456(c) of the CZMA. This section of the CZMA is codified at 15 CFR Part 930 Subpart C (Consistency for Federal Agency Activities). The ASG has an approved coastal zone management program; thus the CZMA applies to activities in the coastal zone of American Samoa.

The entire island of Tutuila and the sea within 3 miles of the shoreline are within the coastal zone designated by the American Samoa Coastal Management Program (ASCMP). The ASCMP is part of the American Samoa Department of Commerce (ASDOC). American Samoa faces coastal concerns of fishery habitat loss, coastal hazards (such as cyclones, flooding, and erosion), marine debris, and solid waste. To help mitigate the effects of human activity, the ASCMP oversees all construction and earth-moving activities on the island. As described above, the Federal consistency provisions of the CZMA require that all Federal actions directly affecting the coastal zone of American Samoa be conducted in a manner that is consistent with the Federally approved ASCMP pursuant to 15 CFR Part 930 Subpart C.

4.3.2.1 Alternative 1: No Project

The No Project Alternative would not impact the coastal zone and would not require a Federal consistency determination.

4.3.2.2 Alternative 2: Proposed Project

Impacts on coastal resources would be minimized by the application of the BMPs described in Section 4.1.2 of this PEA. As described in Section 4.3.1.2 of this PEA, relocating housing sites out of Zones V or VE to upland areas would have a beneficial, though likely negligible, affect to coastal resources. This PEA represents FEMA's Federal consistency determination and consultation with ASCMP, which was provided an opportunity to comment during the public scoping period and to review this PEA during the public comment period. The analysis included in this PEA demonstrates that FEMA's Proposed Project is consistent with the CZMA, specifically the implementing regulations codified at 15 CFR Part 930 Subpart C.

4.3.3 Floodplain Management

As discussed above, portions of Tutuila fall within areas on FEMA Flood Insurance Rate Maps (FIRM) that are within a 100-year floodplain. These zones include:

- Zone A: An area inundated by 100-year flooding, for which no BFEs have been determined
- Zone AE: An area inundated by 100-year flooding, for which BFEs have been determined
- Zone V: An area inundated by 100-year flooding with velocity hazard (wave action); no BFEs have been determined
- Zone VE: An area inundated by 100-year flooding with velocity hazard; BFEs have been determined

All other portions of Tutuila are Zone X (unshaded), which represents the area determined to be outside the 500-year floodplain.

EO 11988, Floodplain Management, requires Federal agencies to take action to minimize occupancy and modification of floodplains. EO 11988 also requires that Federal agencies proposing to fund a project sited in a 100-year floodplain consider practicable alternatives to avoid adverse effects and incompatible development in the floodplain. FEMA's regulations implementing EO 1988 are codified in 44 CFR Part 9 (2008).

ASG is a participating community in FEMA's National Flood Insurance Program (NFIP). In order to participate in the NFIP, a community must promulgate and enforce a floodplain ordinance at least as stringent as the NFIP. ASG adopted FEMA's FIRMs and the minimum NFIP requirements by EO 02-1991 (Floodplain Management Regulation). ASCMP is responsible for administering American Samoa's Floodplain Management Regulation (ASG 2008). It is likely that some of the houses destroyed by the disaster were not in compliance with the Floodplain Management Regulation, either because they were grandfathered or built illegally.

4.3.3.1 Alternative 1: No Project

The No Project Alternative would have no effect on floodplains in the project area.

4.3.3.2 Alternative 2: Proposed Project

FEMA applies the Eight-Step Decision-Making Process to ensure that it funds projects that are consistent with EO 11988 and 44 CFR Part 9. The NEPA compliance process involves essentially the same basic decision-making process to meet its objectives as the Eight-Step Decision-Making Process. Therefore, the Eight-Step Decision-Making Process has been applied through implementation of the NEPA process. FEMA acknowledges that it proposes to construct houses in the floodplain. FEMA published a cumulative initial public notice at the declaration of the disaster. FEMA has determined that the only alternative to the Proposed Project is not to take action, which runs contrary to the IAP's mission. FEMA determined that the Proposed Project would relocate residents out of Zones V or VE; this would be a beneficial affect on the coastal high-hazard floodplain by allowing this area to return to more natural conditions. The net impact on the floodplain would be beneficial assuming at least one housing site were located from Zones V or VE to Zone X. If appropriate, FEMA would ensure publication of a final public notice before implementation of the project.

The Proposed Project would comply with the ASG Floodplain Management Regulation and the NFIP. The Proposed Project would result in the construction of houses that are less vulnerable to flooding than if the ASG Floodplain Management Regulation or the minimum requirements of the NFIP were followed. Under the Proposed Project, FEMA would not construct houses in Zones V or VE. (By contrast, the NFIP minimum requirements allow residential construction in Zones V or VE under certain conditions.) In addition, in Zones A and AE, FEMA would require that the lowest inhabitable floor (i.e., the lowest horizontal structural member) would be above the BFE. (By contrast, the ASG Floodplain Management Regulation provides variances for new construction and substantial improvements in Zones A or AE so that the lowest inhabitable floor does not need to be elevated above the BFE [ASG 2008].)

Based on the large number of displaced residents, the potential exists for illegal construction or habitation. The primary concern regarding this issue would be families utilizing the area beneath the lowest inhabitable floor as living space. Plywood and sheet metal are readily available to serve as makeshift walls. Construction of lean-tos on these makeshift dwellings would exacerbate the problem. In addition, squatting and repairing disaster-damaged houses could also occur. All of these activities would be in violation of the minimum requirement of the NFIP and would put the ASG's participation in the NFIP in jeopardy. Therefore, to minimize or avoid these impacts, FEMA will demolish all disaster-damaged houses scheduled for replacement. ASCMP will bolster its inspection and monitoring program to ensure that FEMA-constructed houses are not used in a manner that would place people and facilities at risk.

4.4 BIOLOGICAL RESOURCES

Biodiversity of terrestrial species in American Samoa is low due to the islands' remote locations, but the surrounding marine environment is extremely diverse. Most native species are closely related to those of Indonesia (Craig 2002). The main vegetation type found on Tutuila is that of a tropical rainforest, but many nonnative plants have outcompeted the native plants in disturbed environments (Whistler 1995). A narrow ring around the island contains shallow coastal habitats that support coral reef ecosystems. Within 0.5 to 2 miles from the coast, the ocean floor falls steeply, reaching depths of 2,000 feet (Craig 2002).

The Samoan rainforest has a wide variety of native and nonnative species. Trees include two species of native banyan trees (or *aoa*) (*Ficus prolixa* and *F. oblique*), a nonnative banyan tree (*pulu* or Mexican rubber tree; *Castilla elastica*), *fetau* (*Calophyllum inophyllum*), the nonnative *ifi* or Polynesian chestnut (*Inocarpus fagifer*), and native species such as *a'amati'e* (*Elaeocarpus floridanus*), *asi* (*Syzgium inophylloides*), and *tava* or island lychee (*Pometia pinnata*). Some areas on the island may be dominated by *togo* or mangroves (*Rhizophora mangle* and *Bruguiera gymnorrhiza*). Other fruit trees include *gasu* (*Palaquium stehlinii*), *ulu* or breadfruit (*Artocarpus altilis*), *atone* or nutmeg (*Myristica inutilis*), and *moso'oi* or perfume tree (*Cananga odorata*). Some of the native wildlife found in the tropical rainforest includes the Samoan fruit bat (*Pteropus samoensis*), white-naped fruit bat (*Pteropus tonganus*), sheath-tailed bat (*Emballonura semicaudata*), pelagic gecko (*Cyrtodactylus pelagicus*), Polynesian gecko (*Gehyra oceanica*), mourning gecko (*Lepidodactylus lugubris*), stump-toed gecko (*Peropus mutilatus*), snake-eyed skink (*Ablepharus boutonii*), Micronesian skink (*Emoia adspersa*), azure-tailed skink (*Emoia cyanura*), Lawes skink (*Emoia lawesii*), black skink (*Emoia nigra*), Samoan skink (*Emoia samoensis*), and moth skink (*Lipinia noctua*). Several species have been introduced from Polynesian islands. Introduced wildlife species include three species of rats, the house mouse (*Mus musculus*), pigs (*Sus scrofa*), domesticated dogs (*Canis familiaris*), feral cats (*Felis domesticus*), the house gecko (*Hemidactylus frenatus*), the blind burrowing snake (*Typhlops braminus*), and the marine toad (*Bufo marinus*) (Craig 2002).

Stream edges in Tutuila are typically dominated by *Brachiaria mutica*, *Coix* sp., and *Canna* sp., as well as many other weedy species found in taro patches (Volk 1991). Urbanized or agricultural areas near streams frequently have members of the Convolvulaceae (morning-glory), Asteraceae (sunflower), and Malvaceae (mallow) families. Trees in these area includes mango (*Mangifera indicata*), coconut (*Cocos nucifera*), papaya (*Carica papaya*), banana (*Musa paradisiacal*), and fig (*Ficus* spp.). *Barringtonia samoensis*, a medium-sized tree closely related to the dominant coastal forest tree *Barringtonia asiatica*, is commonly found along mountain streams (Volk 1991).

In places other than streams edges, which have a mix of native and nonnative plants, most villages are dominated by nonnative species, especially ornamentals. Notable examples, in addition to those listed above, include Chinese hibiscus (*Hibiscus rosa-sinensis*), red ginger

(Alpinia purpurata), Frangipani (*Plumeria* spp.), *Bougainvillea* spp., and mesquite (*Prosopis pallida*).

4.4.1 Endangered Species Act

Section 7 of the Endangered Species Act (ESA) of 1973 (16 United States Code [U.S.C.] § 1536 [2008]) requires Federal agencies to determine whether projects that they propose to undertake or fund have any potential to affect species listed or proposed for listing as threatened or endangered or their designated critical habitat. To determine the potential for Federally listed endangered, threatened, or proposed species or designated critical habitat to occur in the project area, FEMA reviewed the U.S. Fish and Wildlife Service (USFWS) list of Federally listed species that have the potential to occur in the vicinity of American Samoa and determined that the following species have the potential to occur

- Loggerhead sea turtle (*Caretta caretta*), Federally threatened
- Green sea turtle (*Chelonia mydas*), Federally threatened
- Leatherback sea turtle (*Dermochelys coriacea*), Federally endangered
- Hawksbill sea turtle (*Eretmochelys imbriacata*), Federally endangered

The sea turtles are under USFWS jurisdiction for their use of terrestrial nesting habitats and under the jurisdiction of the National Marine Fisheries Service (NMFS) for their use of off-shore and open ocean habitats. No other species protected under the ESA are known or expected to occur in American Samoa.

4.4.1.1 Alternative 1: No Project

Under the No Project Alternative, there would be no effects on listed or proposed species or their habitats.

4.4.1.2 Alternative 2: Proposed Project

Because replacement housing would primarily be sited in previously disturbed, upland locations, FEMA determined that the Proposed Project would result in no direct effects on Federally listed species protected under Section 7 of the ESA. The Proposed Project would not result in siting houses in Zone V or VE, which includes beaches where turtles nest. In addition, relocating residents from Zones V or VE to upland areas would (potentially) be a beneficial impact to turtle nesting by removing structures and human activity from beaches. As described elsewhere in this PEA, between application of BMPs during construction and relocating domestic activities outside Zones V or VE, marine water quality is not expected to be adversely affected and could even improve in some areas, which would benefit turtles when feeding or otherwise using coral reefs or lagoons. Therefore, FEMA has determined that consultation with USFWS and NMFS was not required and the Proposed Project complies with Section 7 of the ESA.

FEMA notified the American Samoa Department of Marine and Wildlife Resources (DMWR) of this determination on December 21, 2009. FEMA proposed a system of programmatic consultation using DMWR's local expertise. When individual housing locations are determined, FEMA would notify DMWR. DMWR would have 7 calendar days to review the housing location and notify FEMA if DMWR believes that the location could adversely affect sea turtles or their habitat. If a response is not received within 7 days, FEMA would rely on its 'no effect' determination, and further consultation under Section 7 of the ESA would not be required. If DMWR responds that a housing location may adversely affect sea turtles or their habitat, FEMA would either relocate the housing site and re-notify the DMWR or perform consultation under Section 7 of the ESA with USFWS or NMFS and document the results in an SEA. DMWR concurred with FEMA's programmatic consultation strategy on December 21, 2009 with the conditions that all construction activities occur at least 50 feet away from the vegetation line along the beach (and no vegetation between the beach and the proposed site is disturbed), and that construction activities involving substantial lighting be located far enough from the beach to not cause disturbance to nesting sea turtles (i.e. the light source is no visible from any point 50 feet from the beach), or disorient hatchlings away from the ocean. (Appendix A has copies of all correspondence).

4.4.2 Executive Order 13089: Coral Reef Protection

EO 13089 requires Federal agencies to ensure that actions they authorize, fund, or implement will not degrade the conditions of coral reef ecosystems.

Coral reefs surrounding Tutuila are impacted by poor water quality. Natural phenomena such as cyclones and disease have always taken their toll on reefs, but their effects are exacerbated by human activities in the ocean and on land. Besides destructive fishing practices and coral collecting, impacts come from sediments eroded from agricultural and construction operations, sewage, and other effluents.

4.4.2.1 Alternative 1: No Project

Under the No Project Alternative, there would be no new impacts on coral reefs around the island.

4.4.2.2 Alternative 2: Proposed Project

The Proposed Project has the potential to cause minor, short-term, adverse impacts on coral reefs downstream of the project area by increasing erosion that could be transported into the ocean during construction. FEMA would implement Best Management Practices (BMPs), such as developing and implementing an erosion and sedimentation control plan, using silt fences or hay bales, revegetating disturbed soils, and maintaining site soil stockpiles, to prevent soils from eroding and dispersing off-site. FEMA will also require that coral is not a component of fill

materials or used in the concrete mixture for the Proposed Project. The Proposed Project would comply with EO 13089.

4.4.3 Executive Order 13112: Invasive Species

EO 13112, Invasive Species, requires Federal agencies to prevent the introduction of invasive species; provide for their control; and minimize the economic, ecological, and human health impacts that invasive species cause. Specifically, EO 13112 requires that Federal agencies not authorize, fund, or implement actions that are likely to introduce or spread invasive species unless the agency has determined that the benefits outweigh the potential harm caused by invasive species and that all feasible and prudent measures to minimize harm have been implemented.

4.4.3.1 Alternative 1: No Project

The No Project Alternative would not affect invasive species.

4.4.3.2 Alternative 2: Proposed Project

The Proposed Project would potentially result in the clearing of vegetation at construction sites; removed vegetation could consist of native and nonnative (including invasive species). Any revegetation activities performed by FEMA would utilize native species, thus decreasing the amount of invasive species in the project area.

Ornamental landscaping and vegetation of individual housing sites will be the privilege and responsibility of the resident. While FEMA would encourage residents to use native or even nonnative, noninvasive vegetation for ornamental landscaping, there is a potential that residents may choose to use invasive species.

4.5 HISTORIC PROPERTIES

Section 2 of the National Historic Preservation Act (NHPA) of 1966 declares Federal policy in cooperation with other nations, states and local governments, Indian tribes and private organizations and individuals to provide leadership in the preservation of the prehistoric and historic resources of the United States and the international community of nations and in the administration of the national preservation program in partnership with states, Indian tribes, Native Hawaiians and local governments. Subsequent amendments designated the State Historic Preservation Officer as the individual responsible for administering state- and territory-level programs. Section 106 of the NHPA and implementing regulations (36 CFR 800) outline the procedures to be followed in the documentation, evaluation, and mitigation of effects on historic properties. The Section 106 process applies to any Federal undertaking that has the potential to affect historic properties. It stipulates the steps Federal agencies take to identify eligible or potentially eligible historic properties that may be affected by an undertaking and mitigate

adverse effects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP).

There are 23 NRHP-listed properties in American Samoa. The archipelago has been populated for approximately 3,000 years and was settled by people from other islands across Polynesia. NRHP-listed properties related to the early settlement of American Samoa are primarily habitation sites near the coast. Archaeological remains primarily consist of pottery, tools, glass, shell ornaments, and faunal remains. From between 1700 before present (BP) and 1000 BP, stone quarries were likely utilized; one quarry and associated tools are listed on the NRHP. European settlement occurred during the 1700s. NRHP-listed sites during this period consist of properties such as a monument to French explorers and schools established by British missionaries. American Samoa was under control of the U.S. Navy during the first half of the 1900s; NRHP-listed properties from this period primarily consist of sites of military importance (American Samoa Historic Preservation Officer (ASHPO) 2009).

4.5.1 Alternative 1: No Project

Under the No Project Alternative, there would be no affects on historic properties because no construction or other activities would occur that could potentially disturb historic properties.

4.5.2 Alternative 2: Proposed Project

Because the construction of the permanent housing would primarily occur in previously disturbed locations, FEMA has determined that the Proposed Project will result in no adverse effect on historic properties. FEMA notified the ASHPO of this determination on December 21, 2009. FEMA proposed a system of programmatic consultation using ASPHO's local expertise. When individual housing locations are determined, FEMA would notify ASHPO. ASHPO would have 7 calendar days to review the housing location and notify FEMA if ASHPO believes that the location could adversely affect historic properties. If a response is not received within 7 days, FEMA would rely on its 'no historic properties affected' (results of identification and evaluation) determination, and further consultation under Section 106 of the NHPA would not be required. If ASHPO responds that a housing location may adversely affect a historic property, FEMA would either relocate the housing site and re-notify ASHPO or consult with ASHPO under Section 106 of the NHPA and document the results in an SEA. ASHPO concurred with FEMA's programmatic consultation strategy on December 27, 2009. (Appendix A has copies of all correspondence).

4.6 AIR QUALITY

The Clean Air Act (CAA) of 1970 (42 U.S.C. §§ 7401–7661 [2008]) is a comprehensive Federal law that regulates air emissions from area, stationary, and mobile sources. The act authorized the USEPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The NAAQS include standards for the following criteria pollutants:

nitrogen oxides (NO_X), ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter less than 10 micrometers in diameter (PM_{10}), and particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$). Areas where the monitored concentration of a pollutant exceeds the NAAQS are classified as being in nonattainment for that pollutant. If the monitored concentration is below the standard, the area is classified as in attainment. After monitoring documents that a nonattainment area meets air quality standards, and if there is a 10-year plan for continuing to meet and maintain such standards, USEPA re-designates the area as a maintenance area.

Prior to approval of any Federal action, the General Conformity Rule (GCR) (Title 40 CFR Part 51.853) states that a "a conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed" (40 CFR 51.853 b) any of the threshold screening rates specified in the GCR.

American Samoa is classified as being in attainment or is unclassified for all criteria pollutants (USEPA 2008). Therefore, under the GCR, conformity determination requirements do not apply to projects in American Samoa.

4.6.1 Alternative 1: No Project

Under the No Project Alternative, no effects on air quality would occur.

4.6.2 Alternative 2: Proposed Project

A conformity determination is not required based on the GCR. There would be no long-term impacts on air quality; no new permanent air emission sources would be constructed. Implementation of the Proposed Project would result in temporary, localized impacts to air quality. These impacts include temporary increases of fugitive dust (PM_{10} and $PM_{2.5}$) and combustion emissions (CO, NO_X, $PM_{10,}$ $PM_{2.5}$, SO_2, and volatile organic compounds). Fugitive dust emissions would be generated by vehicle movement over paved roads, dirt tracked onto paved areas from unpaved areas, and particulate matter that is suspended during construction. Combustion emissions would be generated from the operation of construction equipment during the construction process. As these impacts would be temporary and localized, implementation of the Proposed Project would not cause or contribute to a violation of NAAQS.

To minimize localized air quality impacts, FEMA will employ the following measures to limit emissions, fugitive dust, and exhaust: maintaining and covering soil piles, covering the load of haul vehicles containing fill or cut, and keeping construction equipment properly tuned.

4.7 HAZARDOUS MATERIALS AND WASTE

Hazardous materials and wastes are regulated in the United States under a variety of Federal and state/territorial laws. Federal laws and subsequent regulations governing the assessment,

transportation, and disposal of hazardous materials and wastes include the Resource Conservation and Recovery Act (RCRA); the RCRA Hazardous and Solid Waste Amendments; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Solid Waste Act; the Toxic Substances Control Act (TSCA); and the CAA.

RCRA is the Federal law that regulates hazardous waste. RCRA regulates hazardous waste from the time the waste is generated through its management, storage, transport, treatment, and final disposal. The USEPA is responsible for implementing this law and may delegate this responsibility to the states and territories to implement it. RCRA also sets forth a framework for the management of non-hazardous wastes. The 1986 amendments to RCRA enable the USEPA to address the environmental problems that can result from underground tanks storing petroleum and hazardous substances. RCRA focuses only on active and proposed facilities and does not address abandoned or historical sites.

TSCA gives the USEPA the ability to track the approximately 75,000 industrial chemicals currently produced or imported into the United States. The USEPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. The USEPA may ban the manufacture and import of chemicals that pose an unreasonable risk. The USEPA may also control these chemicals as necessary to protect human health and the environment. TSCA supplements other Federal statutes, including CAA and the Toxic Release Inventory under the Emergency Planning and Community-Right-to-Know Act. TSCA includes regulations regarding asbestos and polychlorinated biphenyls (PCBs).

CERCLA and the Superfund Amendments and Reauthorization Act (SARA) govern the process of identifying and prioritizing the cleanup of abandoned or other sites not regulated under RCRA contaminated by the release of hazardous materials. The USEPA was given power to seek out those parties responsible for any release and ensure their cooperation in the cleanup. Superfund site identification, monitoring, and response activities in states and territories are coordinated through the state and territorial environmental protection or waste management agencies.

Section 112 of the CAA requires the USEPA to develop emission standards for hazardous air pollutants. In response to this section the USEPA published a list of hazardous air pollutants and promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations. Because lead and asbestos present a substantial risk to human health as a result of air emissions from one or more source categories, they are considered hazardous air pollutants and, thus, hazardous materials. The Asbestos NESHAP (40 CFR 61, Subpart M) addresses milling, manufacturing, and fabricating operations; demolition and renovation activities; waste disposal issues; active and inactive waste disposal sites; and asbestos conversion processes.

4.7.1 Alternative 1: No Project

Under the No Project Alternative, there would be no impacts on hazardous materials and waste.

4.7.2 Alternative 2: Proposed Project

Activities that occurred historically at sites proposed for temporary housing may have generated hazardous materials or wastes. Asbestos-containing building materials and lead-based paint are the most likely sources of hazardous wastes (i.e., hazardous air pollutants) to occur on proposed housing sites. Household hazardous wastes could occur on proposed housing sites. Ground disturbance associated with the Proposed Project could contribute to environmental releases of any latent hazardous waste or expose residents to hazardous wastes. Before initiating construction on any site, FEMA would conduct a Phase I Environmental Site Assessment (i.e., Environmental Baseline Survey) to determine if hazardous wastes are known or suspected to be on the site.

If any hazardous wastes are confirmed or suspected at the site, FEMA and ASG would select an alternative site or perform testing and follow territorial and Federal regulations for the handling, transport, and disposal of these materials prior to construction. FEMA will coordinate with ASEPA and the USEPA, as appropriate. The result of the any testing and any remediation actions would be documented in an SEA.

4.8 LAND USE AND PLANNING

American Samoa's 2003 Territorial General Plan presents a policy agenda for development, but does not provide geographically specific land uses or prescribe geographically specific land use zones in the manner of a city or county comprehensive or master plan. The Territorial General Plan incorporates specific master and comprehensive plans where they exist, such as the 2003 Pago Pago Bay Shoreline Development Plan or the 1999 Port Master Plan (ASG 2008). One reason for the lack of territory-wide, comprehensive land-use planning and zoning is that over 96 percent of the land in American Samoa is owned in a traditional communal manner, where the village chief *(matai)* regulates the occupancy and land use within his/her village. To date, Pago Pago and Tualauta have master plans that include zoning (ASG 2008).

Land use in American Samoa is regulated by the ASCMP. This program evaluates and restricts incompatible development in areas subject to natural hazards including flooding, storm surge, tsunami, landslide, coastal erosion, and salt water intrusion (ASG 2008). To determine compliance with the ASCMP, all projects involving ground disturbance require that a Land Use Permit Application be submitted for review under the Project Notification and Review System (PNRS). In addition to evaluating land use for natural hazards, the PNRS reviews permit applications for compliance with building codes, environmental regulations, infrastructure/utility requirements, historic preservation regulations, public health regulations, and recreational/shoreline accessibility.

4.8.1 Alternative 1: No Project

Under the No Project Alternative, there would be no impacts on the existing land ownership or land uses.

4.8.2 Alternative 2: Proposed Project

Land use may change in areas where new housing sites would replace destroyed houses in Zones V or VE. It is possible that undeveloped or agricultural upland land uses would become residential land use. In addition, residential land uses in Zone V or VE would become undeveloped, recreational, or other land uses compatible with coastal high hazard areas. FEMA assumes that all proposed housing sites would be on communal land regulated by village chiefs. Thus, changes in land use would be sanctioned by village chiefs. FEMA will request and obtain permission from the appropriate chiefs to complete the Proposed Project. No changes in land ownership would occur, and no land transfers would be necessary.

As a Federal agency, FEMA has sovereignty from compliance with state/territorial and local laws, regulations, and ordinances. Nonetheless, FEMA would ensure that the ASCMP is notified of each proposed housing location at least 7 calendar days prior to construction. If the ASCMP has any concerns with the proposed location, FEMA and ASG would either select an alternate site or consult with ASCMP regarding the issue of concern. The results of any consultation would be documented in an SEA.

4.9 SOCIOECONOMICS AND SAFETY

According to the 2000 Census of American Samoa (U.S. Bureau of the Census 2009), the population of American Samoa is 57,291. The Census indicates that 51.1 percent of the population is male, and 88.2 percent is ethnic Samoan (one ethnicity). 78 percent of residents frequently speak a language other than English at home (Samoan). The median age is 21.3 years, with 55.4 percent of the village population aged 18 or older.

American Samoa has 10,052 housing units, of which 9,349 are occupied and 7,838 are detached, one-unit structures. The average household size is 6.05 people. The median household income is $18,219, and the median home cost is $44,778.

4.9.1 Executive Order 12898: Environmental Justice

EO 12898, Environmental Justice, requires Federal agencies to make achieving environmental justice part of their missions by identifying and addressing disproportionately high and adverse human health or environmental effects on minority and low-income populations that result from their programs, policies, or activities. EO 12898 also tasks Federal agencies with ensuring that public notifications regarding environmental issues are concise, understandable, and readily accessible. The majority of the island of Tutuila identifies itself as ethnic Samoan and speaks a language other than English at home. Therefore, the project area is considered a minority community protected under EO 12898.

4.9.1.1 Alternative 1: No Project

Under the No Project Alternative, there would be no impacts on minority or low-income populations.

4.9.1.2 Alternative 2: Proposed Project

The Proposed Project would provide benefits to residents, including EO 12898-protected populations, whose houses were destroyed by providing replacement housing. No substantial adverse environmental impacts have been identified in this PEA. Therefore, the Federally funded action would not cause disproportionately high adverse human health, environmental, economic, or social effects on minority populations and would comply with EO 12898.

As described in Section 5, public scoping notices were published in English and Samoan. Public notification regarding the availability of this PEA for public review and comment were also published in both English and Samoan. FEMA's final decision document will also be published in English and Samoan.

4.9.2 Public Safety

American Samoa is subject to natural disasters including cyclones, earthquakes, and tsunamis. Over the past 50 years, seven major cyclones have struck American Samoa, ranging in intensity from Category 2 to Category 5, and resulting in a combined total of 115 fatalities. Earthquakes and resultant tsunamis are discussed in detail in Section 4.2 of this PEA. During the September 2009 earthquake and tsunami, 189 people died across the region, with 22 deaths in American Samoa.

4.9.2.1 Alternative 1: No Project

Under the No Project Alternative, threats to public safety would remain unchanged.

4.9.2.2 Alternative 2: Proposed Project

During construction, FEMA will implement standard BMPs to ensure that all construction activities are conducted without increasing the risk to public safety.

As discussed in Section 4.2.2, replacement structures would be designed according to the 2006 IRC. Replacement houses would be less vulnerable to damage from an earthquake; thus, the threat to public safety from an earthquake would be reduced. Residents that are relocated out of Zones V or VE would be less likely to be affected by a tsunami, which would also be beneficial to public safety.

As discussed in Section 4.3.3.2, residents relocated out of Zones V or VE and residents whose replacement houses would be elevated above the BFE would be less likely to be injured or killed during a flood. However, as also discussed in Section 4.3.3.2, the potential exists for squatting or

illegal construction in the floodplain. Incorporating the measures described in Section 4.3.3.2 would minimize or avoid this impact, so the risk to public safety is not increased by residents living in inappropriately constructed dwellings in the floodplain.

Based on the design criteria described in Section 3.2 of this PEA, the replacement houses could increase the risk to public safety. One of the primary safety hazards that occurs from high winds associated with cyclones is the high potential for roofs to be ripped off homes. Corrugated metal sheets, as opposed to formed concrete, are much more likely to be substantially damaged during a cyclone. Metal panels must be secured with cyclone strength wind-rated tie-downs, and the panels need to be secured to a fully sheathed roof (i.e., continuous decking). In addition to the public safety risk to residents whose roof has been destroyed during a cyclone, metal roofs are notorious for becoming deadly sharp projectiles. The use of metal roofs is generally inconsistent with modern building design in areas subject to tropical storm strength winds. FEMA would review the proposed housing designs (as described in Section 3.2 of this PEA) to ensure that they comply with 2006 IRC, FEMA Publication 499 (*Homebuilders' Guide to Coastal Construction*), FEMA Publication 55 (*Coastal Construction Manual*), FEMA Publication 550 (*Recommended Residential Construction for the Gulf Coast*), International Code Council Publication 600 (*Standards for Residential Construction in High Wind Regions*), and American Society of Civil Engineers Publication 7-05 (*Minimum Design Loads for Buildings and Other Structures*).

4.10 CUMULATIVE IMPACTS

Cumulative impacts are defined as environmental effects that are greater in magnitude, extent, or duration than the direct and indirect effects of the proposed FEMA-associated action when combined with the effects of other current and future actions, regardless of the proponent. Cumulative impacts will be considered when determining the compatibility of this PEA for activities that occur at individual project sites. If cumulative impacts are identified, they will be analyzed and documented in an SEA.

SECTION FIVE: PUBLIC PARTICIPATION AND AGENCY COORDINATION

FEMA is the lead Federal agency for conducting the NEPA compliance process for this proposal. The lead Federal agency is responsible for expediting the preparation and review of NEPA documents in a way that is responsive to the needs of residents of American Samoa while meeting the spirit and intent of NEPA and complying with all NEPA provisions.

Coordination with agencies specific to biological and cultural resources concerns is discussed in Sections 4.4 and 4.5, respectively. In addition, FEMA conducted a scoping program during the beginning of the NEPA review process. FEMA transmitted coordination letters with a request for comments to the following agencies on December 18, 2009, notifying them about the project and the preparation of the Draft PEA:

- ASDOC
- DMWR
- American Samoa Department of Public Works
- ASEPA
- American Samoa Office of the Governor
- ASHPO
- American Samoa Power Authority
- Office of Samoan Affairs
- USACE

FEMA notified the public that it was preparing a Draft PEA by publishing a public notice in the *Samoa News* on December 22, 2009 and *The Sunday Post* on December 23, 2009. The public notice was published in both English and Samoan. Potentially interested territorial and Federal agencies were notified via electronic mail. (A copy of the public notice and a sample agency coordination letter are in Appendix B.)

FEMA will circulate the Draft PEA for a 7-day public comment period. Interested territorial and Federal agencies will be notified of the availability of the Draft PEA by electronic mail and through the FEMA Web Site. (A copy of the notice of availability and a list of interested territorial and federal agencies are in Appendix C.) The public will be notified of the availability of the Draft PEA through the FEMA Web site and the publication of a public notice in *The Sunday Post* and *Samoa News*. The public notice will be published in both English and Samoan. Copies of the Draft PEA will be made available for public review at http://www.fema.gov/plan/ehp/envdocuments/ea-region9.shtm and at the Disaster Service Center, located in the Utulei Convention Center in American Samoa. During the public comment period, FEMA will accept written comments on the Draft PEA; written comments should be addressed to the FEMA Region IX Environmental Office, 1111 Broadway, Suite 1200, Oakland,

California 94607 or to fema-rix-ehp-documents@dhs.gov. At the end of the public comment period, FEMA will review the comments and consider them in the decision-making process before notifying the public of its final determination.

SECTION SIX: REFERENCES

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SECTION SEVEN: LIST OF PREPARERS

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Appendix A
Agency Consultation

U.S. Department of Homeland Security
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FEMA

December 21, 2009

Marlowe G. Sabater
Chief Fishery Biologist
Department of Marine and Wildlife Resources
American Samoa Government
Executive Office Building, Utulei
Pago Pago, AS 96799

Re: Permanent Housing Construction Pilot Program
FEMA-1859-DR-AS

Dear Mr. Sabater:

The Department of Homeland Security's Federal Emergency Management Agency (FEMA) proposes to implement its Permanent Housing Construction Pilot Program at multiple locations on the Island of Tutuila in American Samoa to replace housing lost as a result of the earthquake, tsunami and flooding that occurred in September 2009. FEMA plans to construct an estimated 60 residential units at as yet unspecified locations. Therefore, the project area could be located anywhere on Tutuila. Nonetheless, because the construction of the permanent housing would primarily occur in previously disturbed locations, FEMA has determined that the proposed project would result in no effect to federally listed species protected under Section 7 of the Endangered Species Act (16 U.S.C. 1536).

This letter represents FEMA's request for a programmatic consultation with the American Samoa Department of Marine and Wildlife Resources (DMWR) for the proposed pilot housing construction program. This letter describes FEMA's proposed project and provides a framework for FEMA to meet its consultation responsibilities with the U.S. Fish and Wildlife (USFWS) and the National Marine Fisheries Service (NMFS) under Section 7.

Approximately half of the destroyed houses were located in areas susceptible to coastal flooding (referred to as "Zone V" on FEMA's Flood Insurance Rate Maps). These houses would be rebuilt in new locations outside Zone V. Damaged houses outside Zone V would be reconstructed on their pre-disaster sites but elevated so that the lowest inhabitable floor (i.e., the lowest horizontal structural member) would be above the base flood elevation. All houses would be constructed with concrete floors. Houses on sites outside of Zone V and Zone A would be constructed using concrete footings and slab-on-grade floors. (Some houses on sites in Zone A would not need to be elevated and thus would also be constructed using concrete footings and slab-on-grade floors.) All residences would be one story and have interior walls, electricity, plumbing, covered patios, and metal roofs. Septic systems would be constructed as necessary.

Utilities lines (including power, telephone, domestic water, and sanitary) would need to be extended or restored to many housing sites. Two-bedroom houses would have a floorplan of approximately 800 square feet; three-bedroom houses would have a floorplan of approximately 1,200 square feet.

FEMA determined that four species of sea turtles are the only animals or plants that are federally listed as threatened or endangered (or proposed for listing) and have the potential to occur in the vicinity of Tutuila. The four protected sea turtles are loggerhead sea turtle (*Caretta caretta*)(threatened), green sea turtle (*Chelonia mydas*)(threatened), leatherback sea turtle (*Dermochelys coriacea*)(endangered), and hawksbill sea turtle (*Eretmochelys imbricata*) (endangered).

Because the proposed project involves actions that are similar and repetitive in nature, FEMA proposes that its consultation under Section 7 with the USFWS and NMFS be treated programmatically and with assistance from DMWR. We suggest that as soon as each individual housing location, or a set of housing locations, is identified by FEMA and the American Samoa Government (ASG), FEMA would provide your office with a map showing the site location. Unless your office responds within 7 calendar days of receipt of the site location, FEMA would assume your office concurs with FEMA's determination of "no effect" to protected sea turtles for the specific site. FEMA is not required to consult with the USFWS and NMFS under Section 7 for projects that would have no effect on protected species. If your office believes that construction of housing at a specific site has the potential to result in an effect to protected sea turtles, then FEMA and ASG would either relocate the housing site (and provide your office this information with an additional 7 calendar days to review) or initiate consultation with the USFWS or NMFS (as appropriate) under Section 7 for that specific site.

Should you require any additional information about the proposed project or FEMA's request, please do not hesitate to contact me at (510) 627-7027 or fema-rix-ehp-documents@dhs.gov. Because of the urgent nature of the proposed project and a scheduled construction date set by the Governor of American Samoa, FEMA anticipates a positive response from your office within 7 calendar days of receipt of this letter. Thank you in advance for your assistance.

Sincerely,

Donna M. Meyer
Deputy Environmental and
Historic Preservation Officer

U.S. Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

FEMA

December 21, 2009

Mr. David J. Herdrich
State Historic Preservation Officer
American Samoa Historic Preservation Office
American Samoa Government
Executive Offices of the Governor
Pago Pago, AS 96799

Re: Permanent Housing Construction Pilot Program
FEMA-1859-DR-AS

Dear Mr. Herdrich:

The Department of Homeland Security's Federal Emergency Management Agency (FEMA) proposes to implement its Permanent Housing Construction Pilot Program at multiple locations on the Island of Tutuila in American Samoa to replace housing lost as a result of the earthquake, tsunami and flooding that occurred in September 2009. FEMA's action of constructing permanent housing units meets the definition of a Federal Undertaking in accordance with 36 C.F.R. Part 800.16(y), and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. §§ 470 et seq. [2008]). FEMA proposes to construct an estimated 60 residential units at as yet unspecified locations. Therefore FEMA has not yet identified an area of potential effect (APE). Nonetheless, because the construction of the permanent housing would primarily occur in previously disturbed locations, FEMA has determined that the Undertaking would result in no adverse effect to historic properties, pursuant to 36 C.F.R. Part 800.5(b).

Approximately half of the destroyed houses were located in areas susceptible to coastal flooding (referred to as "Zone V" on FEMA's Flood Insurance Rate Maps). These houses would be rebuilt in new locations outside Zone V. Damaged houses outside Zone V would be reconstructed on their pre-disaster sites but elevated so that the lowest inhabitable floor (i.e., the lowest horizontal structural member) would be above the base flood elevation. All houses would be constructed with concrete floors. Houses on sites outside of Zone V and Zone A would be constructed using concrete footings and slab-on-grade floors. (Some houses on sites in Zone A would not need to be elevated and thus would also be constructed using concrete footings and slab-on-grade floors.) All residences would be one story and have interior walls, electricity, plumbing, covered patios, and metal roofs. Septic systems would be constructed as necessary. Utilities lines (including power, telephone, domestic water, and sanitary) would need to be extended or restored to many housing sites. Two-bedroom houses would have a floorplan of approximately 800 square feet; three-bedroom houses would have a floorplan of approximately

1200 square feet. The APE for each housing site would be defined as the area subject to ground disturbance.

Because the Undertaking involves actions that are similar and repetitive in nature, FEMA proposes that its consultation with your office be treated programmatically. We suggest that as soon as each individual housing location, or a set of housing locations, is identified by FEMA and the American Samoa Government (ASG), FEMA would provide your office with a map showing the site location and APE. Unless your office responds within 7 calendar days of receipt of this information, FEMA would assume your office concurs with FEMA's determination of "no historic properties affected" for the specific site. If your office believes that the proposed Undertaking has the potential to result in an adverse effect to historic properties at a specific site, then FEMA and ASG would either relocate the housing site (and provide your office this information with an additional 7 calendar days to review) or initiate consultation with your office under Section 106 for that specific site.

Should you require any additional information about the Undertaking or FEMA's proposed approach for compliance with Section 106, please do not hesitate to contact me at (510) 627-7027 or fema-rix-ehp-documents@dhs.gov. Because of the urgent nature of the Undertaking and a scheduled construction date set by the Governor of American Samoa, FEMA anticipates a positive response from your office within 7 calendar days of receipt of this letter. Thank you in advance for your assistance.

Sincerely,

Donna M. Meyer
Deputy Environmental and
Historic Preservation Officer

DEPARTMENT OF MARINE & WILDLIFE RESOURCES

AMERICAN SAMOA GOVERNMENT
P.O. BOX 3730
PAGO PAGO, AMERICAN SAMOA 96799
TEL. (684) 633-4456
FAX: (684) 633-5944

TOGIOLA T.A. TULAFONO
Governor

AITOFELE T.F. SUNIA
Lt. Governor

UFAGAFĀ RAY TULAFONO
Director

FUA ALOFA TUAUMU
Deputy Director

December 21, 2009

Serial No. 156-09

Donna M. Meyer
Deputy Environmental and
Historic Preservation Officer
U.S. Dept. of Homeland Security – FEMA

Re: Permanent Housing Construction Pilot Program (FEMA-1859-DR-AS)

Dear Ms. Meyer,

Talofa. This letter is a response to the request for assistance in determining potential impacts of the Permanent Housing Construction Pilot Program to four species of sea turtles occurring within the territorial waters of American Samoa. We confirm that these four species occurs within the territorial waters, however, all but two (leatherback sea turtle, *Dermochelys coriacea* and olive ridley, *Lepidochelys olivacea* instead of loggerhead sea turtle) have been documented to be utilizing (primarily for nesting) the island shores of American Samoa. Therefore, our determination is only based on two turtle species: *Chelonia mydas*, and *Eretmochelys imbricata*.

Based on initial information provided (as per your letter dated December 21, 2009 re: Permanent Housing Construction Pilot Program FEMA-1859-DR-AS), our preliminary determination is NO-EFFECT, the rationale primarily being: the construction will be done on previously disturbed locations. However, this "no-effect" determination is applicable only to project locations that meet the 50 feet statutory distance from the vegetation line along the beach. This is also in-line with the local regulations through the Project Notification and Review System (PNRS). Based on data derived from our beach mapping and monitoring, some structures particularly at the village of Tula are in violation of this rule which could potentially result in a possible effect on the nesting turtle population. In this case, we suggest moving such structure farther to comply with this statutory distance. Any new construction projects with significant lighting installation must be located farther for the lights can affect the nesting population by distracting the nesting females away from suitable nesting areas and disorients hatchlings from going to the ocean. If these conditions are met then the "no-effect" determination will cover all project locations.

I hope this letter suffice in order for FEMA to proceed with the construction of the much needed houses for the victims of the 9/29 event. Please contact me or Mr. Tagarino or Sabater for any further clarification on this matter.

Sincerely,

Utagafa Ray Tulafono
Director
Department of Marine and Wildlife Resources

Hon. Togiola T. A Tulafono
Governor

Faoa A. Sunia
Lieutenant Governor

Executive Offices of the Governor
American Samoa Historic Preservation Office
American Samoa Government
Pago Pago, American Samoa 96799

David J. Herdrich
Historic Preservation Officer

Phone: (684) 699-2316
Fax: (686) 699-2276

December 27,2009

Ms. Donna Meyer
Deputy Environmental and
Historic Preservation Officer
U.S. Department of Homeland Security
111Broadway, Suite 1200
Oakland, CA **94607-4052**

Dear Ms. Meyer:

Thank you for your letter of December 21,2009 concerning Department of Homeland Security's Federal Emergency Management Agency (FEMA) Permanent Housing Construction Pilot Program undertaking. I have reviewed your letter and offer the following comments.

I concur with your determination of no adverse effect to historic properties provided that excavations associated with the construction are monitored by an archaeologist meeting the Secretary of the Interior's Qualifications Standards in order to ensure that post review discoveries of historic properties are taken into account as per 36 CRF 800.13.

Since FEMA is not able at this time to provide the APE for individual housing sites, I also concur with your proposal to treat each individual housing location programmatically wherein FEMA would provide my office with a map showing the site location and APE for comment within 7 calendar days of receipt of the information. As per your letter, should there be the potential for an adverse effect to historic properties at a specific site I concur with the options to either relocate the housing site (providing my office with the new information and another 7 calendar of review), or initiate Section 106 consultation with regard to that particular site, as necessary.

Thank you for your time and attention. This correspondence was provided upon the request of the FEMA in order to assist the FEMA with its Section 106 responsibilities under the National Historic Preservation Act of 1966, as amended.

If you have any questions concerning this correspondence please do not hesitate to contact me at (684) 699-2316.

Sincerely,

David J. Herdrich
Historic Preservation Officer

Appendix B
Public Scoping

U.S. Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, CA 94607-4502

FEMA

The Department of Homeland Security – Federal Emergency Management Agency (FEMA) proposes to implement a Permanent Housing Construction Pilot Program and construct 50 or more private dwellings replacing those lost during the Presidentially-declared American Samoa earthquake, tsunami and flooding disaster (DR-1859-AS) of September 29, 2009.

FEMA's mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

In accordance with the Intergovernmental Cooperation Act of 1968, 40 CFR Parts 1501.7 and 1506.6 of the Council on Environmental Quality's regulations implementing the National Environmental Policy Act (NEPA) of 1969fillin , and FEMA's Emergency Management and Assistance regulations 44 CFR Part 10, FEMA is examining alternatives in anticipation of preparing a Programmatic Environmental Assessment (PEA). Action alternatives under consideration include: 1) reconstruction on previous building sites to pre-disaster condition; 2) site selection, relocation and new construction on sites other than the applicant's pre-disaster site; and 3) no action.

FEMA invites comments from the public, on the proposal, and will accept information that individuals believe should be considered in assessing the potential environment and/or socioeconomic impacts. FEMA requests public comments are submitted within seven days of this notice. Please direct correspondence to Ms. Donna M. Meyer, Deputy Regional Environmental Officer at the letterhead address above, by email to fema-rix-ehp-documents@dhs.gov or by telephone at (510) 627-7027.

U.S. Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, CA 94607-4502

FEMA

O le Matagaluega ole Pulpuiga ole Lotoifale - Ofisa o le Pulega o Faalavelave Faafuasei a le Feterale (FEMA) o loo fuafua e faataatia se Polokalame Pilate mo le Fausiaina o ni Fale Tumau ma fausia ni fale nofo mo aiga se 50 pe sili atu foi e sui tulaga i fale na fa'aleagaina i le taimi na faalauiloa ai e le Peresitene le mafuie ma le galulolo ma lologa (DR-1859-AS) i Amerika Samoa ia Setema 29, 2009.

O le sini a le FEMA o le lagolagoina lea o o tatou tagatanuu ma le au laveai muamua ina ia faamautinoa o le avea ai o i tatou o se atunuu e tasi tatou te galulue faatasi e fausia, tausia ma faalelela lo tatou agavaa e sauniuni ai, puipui agai, tali atu, toe faafoisia mai ma faaititia faafitauli uma.

E tusa ai ma le Tulafono mo le Galulue Faatasi o Matagaluega o le 1968, vaega 40 CFR1501.7 ma le 1506.6 ole Pulega o Tulafono o le Tulaga o le Siosiomaga o loo faatinoina ai le Tulafono mo le Siosiomaga Lautele (NEPA) o le 1969, ma tulafono o fesoasoani mo faalavelave faafuasei a FEMA 44 CFR Vaega 10, o loo iloiloina e FEMA ni auala mo le saunia o se Polokalame Suesue mole Siosiomaga (PEA). O nisi gaioiga o loo i lalo o le fuafuaga e aofia ai le: 1) toe fausiaina o fale i nofoaga sa fausia ai i le tulaga na muai iai ao lumanai le faalavelave; 2) filifiliina o le nofoaga, siitia ma fale fou e fausia i nofoaga e ese mai nai lo le nofoaga na muai talosaga mai ai le o loo talosaga; ma 3) leai se gaioiga.

E valaaulia e le FEMA ni manatu faaalia mai le mamalu lautele o le atunuu e uiga i le talosaga, ma talia faamatalaga e talitonu tagata taitoatasi e tatau ona iai i le iloiloina o ni aafiaga faale-siosiomaga poo le soifua lautele. E talosaga atu le FEMA ina ia tuuina mai i totonu faamatalaga mai le mamalu lautele o le atunuu i le fitu o aso talu ona tuuina atu lenei faaaliga. Faamolemole faafesootai sao ane Donna M. Meyer, Tagata Ofisa Lagolago o le Siosiomaga i le tuatusi o loo i le ulutala i luga o lenei tusi poo le imeli fema-rix-ehp-documents@dhs.gov poo le telefoni i le (510) 627-7027.

U.S. Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

FEMA

December 18, 2009

Mr. George Young
Chief, Regulatory Branch
U.S. Army Corps of Engineers
Regulatory Branch
Building 230
Fort Shafter, HI 96858

Subject: DR-1859 Permanent Housing Construction (PHC)

Dear Mr. Young:

The Department of Homeland Security – Federal Emergency Management Agency (FEMA) proposes to implement a PHC Pilot Program to construct 50 or more private dwellings replacing those lost during the Presidentially-declared American Samoa earthquake, tsunami and flooding disaster (DR-1859-AS) of September 29, 2009.

FEMA's mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

In accordance with the Intergovernmental Cooperation Act of 1968, 40 CFR Parts 1501.7 and 1506.6 of the Council on Environmental Quality's regulations implementing the National Environmental Policy Act (NEPA) of 1969, and FEMA's Emergency Management and Assistance regulations 44 CFR Part 10, FEMA is examining alternatives in anticipation of preparing a Programmatic Environmental Assessment (PEA). Action alternatives under consideration include: 1) reconstruction on previous building sites to pre-disaster condition; 2) site selection, relocation and new construction on sites other than the applicant's pre-disaster site; and 3) no action.

FEMA invites comments from the public, on the proposal, and will accept information that individuals believe should be considered in assessing the potential environmental and/or socioeconomic impacts. FEMA requests public comments are submitted within seven days of this notice. Please direct correspondence to Ms. Donna M. Meyer, Deputy Regional Environmental Officer at the letterhead address above, by email to fema-rix-ehp-documents@dhs.gov; or by telephone at (510) 627-7027.

Appendix C
Notice of Availability of Draft Programmatic Environmental Assessment

Notice of Availability

Draft Programmatic Environmental Assessment
Permanent Housing Construction Pilot Program

U.S. Department of Homeland Security's Federal Emergency Management Agency in conjunction with the American Samoa Government

The Department of Homeland Security – Federal Emergency Management Agency (FEMA) proposes to implement a Permanent Housing Construction (PHC) Pilot Program to construct 50 or more private dwellings replacing those lost during the Presidentially-declared American Samoa earthquake, tsunami and flooding disaster (DR-1859-AS) of September 29, 2009.

FEMA's mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

In accordance with the Intergovernmental Cooperation Act of 1968, 40 CFR Part 1506.6 of the Council on Environmental Quality's regulations implementing the National Environmental Policy Act (NEPA) of 1969, and FEMA's Emergency Management and Assistance regulations at 44 CFR Part 10, FEMA invites comments on the Draft Programmatic Environmental Assessment (DPEA) prepared for implementation of the PHC Pilot Program. The DPEA, which evaluates the environmental impacts of the proposal and alternatives, is available for public review and comment beginning January 4, 2010. The document is available on-line at http://www.fema.gov/plan/ehp/envdocuments/ea-region9.shtm. A copy of the DPEA may also be viewed at the FEMA Disaster Service Center at the Utulei Convention Center.

Interested members of the public are invited to submit written comments regarding the merits of this DPEA on or before January 11, 2010. Please direct correspondence to Ms. Donna M. Meyer, Deputy Regional Environmental and Historic Preservation Officer at the letterhead address above, by email to fema-rix-ehp-documents@dhs.gov, or by telephone at (510) 627-7027.

NOA List of Recipients

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