



Final Environmental Assessment

# **Taputapu Elementary School Replacement**

Fagali'i, American Samoa

Territorial Office of Fiscal Reform  
American Samoa Department of Education

*August 2013*



**FEMA**

THIS DOCUMENT WAS PREPARED FOR



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COVER PHOTO: VIEW TO NORTH FROM PROJECT SITE



FINAL ENVIRONMENTAL ASSESSMENT

# TAPUTAPU ELEMENTARY SCHOOL REPLACEMENT

FAGALI'i, AMERICAN SAMOA

TERRITORIAL OFFICE OF FISCAL REFORM  
AMERICAN SAMOA DEPARTMENT OF EDUCATION

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# Table of Contents

Acronyms and Abbreviations.....	iv
Executive Summary .....	vii
<b>1.0</b> Introduction .....	1
<b>2.0</b> Purpose and Need for Proposed Action.....	5
2.1 Purpose .....	5
2.2 Need.....	5
<b>3.0</b> Alternatives Analysis .....	7
3.1 Alternative Not Carried Forward.....	7
3.2 Alternative 1: No Action.....	8
3.3 Alternative 2: Proposed Action.....	8
<b>4.0</b> Affected Environment, Impacts, and Mitigation .....	13
4.1 Air Quality and Greenhouse Gas Emissions .....	13
4.2 Water Resources .....	16
4.2.1 Flood Hazards.....	17
4.2.2 Water Quality .....	18
4.3 Coastal Resources.....	21
4.4 Biological Resources .....	22
4.4.1 Threatened and Endangered Species .....	24
4.4.2 Invasive Species .....	26
4.4.3 Protection of Wetlands .....	27
4.4.4 Coral Reef Protection .....	28
4.4.5 Protection of Fisheries Resources.....	29
4.4.6 Wildlife and Vegetation.....	30
4.5 Cultural Resources .....	31
4.6 Geology, Soils, and Seismicity .....	33
4.6.1 Geology and Soils .....	33
4.6.2 Seismicity .....	36
4.7 Land Use and Planning.....	36
4.8 Transportation.....	38
4.9 Noise .....	39

4.10 Utilities .....41

4.11 Socioeconomics/Environmental Justice and Public Safety.....41

4.12 Visual Resources .....44

4.13 Cumulative Impacts .....45

5.0 Public Participation and Agency Coordination .....47

6.0 References .....49

7.0 List of Preparers .....53

7.1 Federal Emergency Management Agency .....53

7.2 AECOM .....53

Appendices .....55

Appendix A: Agency Consultation.....55

Appendix B: Public Scoping Notices, Agency Distribution List, and Responses.....61

Appendix C: Notice of Availability of Draft Environmental Assessment,  
Distribution List, and Comments Received During Comment Period.....71

Appendix D: Cultural Resources Inventory Report.....79

List of Figures

Figure 1.1: Taputapu Elementary School Location Map .....2

Figure 3.1: Proposed Taputapu Elementary School Site .....9

Figure 3.2: Taputapu Elementary School Concept Site Plan .....11

## List of Images

Image 1: View facing west to a destroyed school structure adjacent to the shoreline in the village of Poloa.....	5
Image 2: View facing southwest to a destroyed classroom/office building in the village of Poloa. ....	6
Image 3: View facing northwest of portion of proposed project area (at left) abutting road constructed in 2012. ....	10
Image 4: View facing east toward southwest end of proposed project area. ....	12
Image 5: View of drainage outfall of the culvert that runs beneath the road constructed in 2012.....	17
Image 6: View of on-site secondary forest vegetation community.....	23
Image 7: View of on-site secondary forest vegetation community with nonnative ground cover.....	27
Image 8: Modern shade structure is not of sufficient age to be evaluated as a potential historic property. ....	32
Image 9: View facing north to new road from proposed Taputapu Elementary School site. ....	38
Image 10: View facing northeast from the proposed Taputapu Elementary School property. ....	44

# Acronyms and Abbreviations

AMSL	above mean sea level
APE	Area of Potential Effects
ASCMP	American Samoa Coastal Management Program
ASDMWR	American Samoa Department of Marine and Wildlife Resources
ASDOC	American Samoa Department of Commerce
ASDOE	American Samoa Department of Education
ASDPW	American Samoa Department of Public Works
ASEPA	American Samoa Environmental Protection Agency
ASG	American Samoa Government
ASHPO	American Samoa Historic Preservation Office
ASPA	American Samoa Power Authority
BFE	base flood elevation
BMP	best management practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH <sub>4</sub>	methane
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
EA	Environmental Assessment

EFH	Essential Fish Habitat
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FFE	finished floor elevation
FIRM	Flood Insurance Rate Map
GCR	General Conformity Rule
GHG	greenhouse gas
LUP	Land Use Permit
MBTA	Migratory Bird Treaty Act
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NO <sub>2</sub>	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
N <sub>2</sub> O	nitrous oxide
O <sub>3</sub>	ozone
PA	Public Assistance
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in diameter
PM <sub>10</sub>	particulate matter less than 10 microns in diameter
PNRS	Project Notification and Review System

RCRA	Resource Conservation and Recovery Act
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
TOFR	Territorial Office of Fiscal Reform
U.S.C.	U.S. Code
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

# Executive Summary

## Introduction

Through the American Samoa Territorial Office of Fiscal Reform (TOFR), the American Samoa Department of Education (ASDOE) has applied to the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) for funds to reconstruct on a site in the village of Fagali'i the Taputapu Elementary School that was destroyed by the September 2009 earthquake, tsunami and flooding disaster (FEMA -1859-DR-AS) at its original location in the village of Poloa (the Proposed Action). Approval of this funding is a federal action subject to the National Environmental Policy Act of 1969 (NEPA); thus FEMA has prepared this Environmental Assessment (EA) in compliance with NEPA.

The Taputapu campus was situated in the village of Poloa adjacent to the Pacific Ocean at approximately 11 feet above mean sea level (AMSL). The Taputapu School was totally destroyed by the disaster. The Taputapu School students are being temporarily accommodated at nearby schools. This EA examines the potential environmental effects of constructing and operating permanent replacement facilities (the Proposed Action).

## Proposed Action

The Proposed Action by ASDOE is to construct a replacement Taputapu Elementary School campus on a site approximately 0.6 mile to the north of the pre-disaster campus, in the village of Fagali'i. The proposed site is approximately 1.56 acres in area and is located approximately 700 feet from the shoreline at an average elevation of approximately 285 feet AMSL, outside the 500-year floodplain. Any replacement facilities must be protected from future flood hazards as required by the regulations of both FEMA and the American Samoa Government. The proposed site is adjacent to a paved road that was constructed in 2012 with conduit for utilities running along the right-of-way. In 2012, ASG obtained a 55-year leasehold on the proposed 1.56-acre site that will expire in 2067.

## Environmental Analysis and Mitigation

The EA presents an examination of the Proposed Action's environmental effects with respect to the following issue areas: air quality and greenhouse gas emissions; water resources; coastal resources; biological resources; cultural resources; geology, soils, and seismicity; land use and planning; transportation; noise; utilities; socioeconomics/environmental justice and public safety; and visual resources.

The EA identifies several potential adverse effects, but concludes that effective implementation, enforcement, and monitoring of proposed best management practices (BMPs) and project-specific mitigation measures would prevent the Proposed Action from resulting in any adverse effects. As discussed in the respective sections of Chapter 4, BMPs or mitigation measures are identified for the following issue areas: air quality and greenhouse gas emissions; water resources; coastal resources; biological resources; cultural resources; soils; transportation; noise; and public safety. With effective implementation, enforcement, and monitoring of proposed BMPs and mitigation measures, the Proposed Action would not result in adverse environmental effects.

# 1.0 Introduction

On September 29, 2009, a major earthquake occurred beneath the Pacific Ocean in the Tonga Trench, generating a tsunami that caused major devastation in the United States (U.S.) territory of American Samoa (American Samoa), 120 miles to the northeast. A Presidential Disaster (FEMA-1859-DR-AS) was declared, authorizing federal assistance.

Through the American Samoa Territorial Office of Fiscal Reform (TOFR), the American Samoa Department of Education (ASDOE) has applied to the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) for funds to reconstruct on a site in the village of Fagali'i the Taputapu Elementary School that was totally destroyed by the tsunami disaster at its original location in the village of Poloa (the Proposed Action). Approval of this funding is a federal action subject to the National Environmental Policy Act of 1969 (NEPA); thus FEMA has prepared this Environmental Assessment (EA) in compliance with NEPA.

American Samoa is a Pacific Ocean archipelago located approximately 2,600 miles south-southwest of Hawaii and 1,800 miles north-northeast of New Zealand (Figure 1.1). It consists primarily of five volcanic islands and two coral atolls. The Proposed Action is located on Tutuila, by far the largest island of the territory. Tutuila is approximately 54 square miles in area and home to approximately 90 percent of the population. American Samoa is an unorganized and unincorporated U.S. territory. As such, American Samoa is partially self-governing and administered by the Office of Insular Affairs, U.S. Department of the Interior. Unlike citizens of other U.S. territories, American Samoans are noncitizen U.S. Nationals.

FEMA proposes to provide federal financial assistance to the American Samoa TOFR pursuant to Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (42 U.S. Code [U.S.C.] § 5172) and Title 44 Code of Federal Regulations (CFR) § 206.

FEMA is the federal agency responsible for the preparation of this EA. This EA has been prepared according to the requirements of NEPA, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500–1508), and FEMA's implementing regulations (44 CFR Part 10).

The EA process provides steps and procedures to evaluate the potential environmental, social, and economic impacts of the Proposed Action and its alternatives. These potential impacts are measured by their context and intensity, as defined in the CEQ regulations. This process



Source: American Samoa Department of Commerce Web Portal; FEMA; ESRI 2013

Figure 1.1  
Taputapu Elementary School Location Map

includes an opportunity for the public and local, territorial, and federal agencies to provide input and/or submit comments. Any change to the scope of work for the Proposed Action and its alternatives would require reevaluation for compliance with NEPA, other laws, and Executive Orders (EOs). This EA does not directly address all federal, American Samoa Government (ASG), and local requirements. Acceptance of federal funding requires the recipient (TOFR and ASDOE) to comply with all federal, ASG, and local laws. Failure by TOFR and ASDOE to obtain all appropriate federal, ASG, and local environmental permits and clearances may jeopardize federal funding.

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# 2.0 Purpose and Need for Proposed Action

## 2.1 Purpose

The objective of the FEMA Public Assistance (PA) Program is to provide assistance to state, territorial, tribal, and local governments, as well as certain types of private nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President. Through the PA Program, FEMA provides supplemental federal disaster grant assistance for debris removal; emergency protective measures; and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain private nonprofit organizations. The PA program also encourages protection of these facilities from future disaster events by providing assistance for hazard mitigation during the recovery process. The purpose of the project is to provide PA funding to the grantee, TOFR, and consequently the sub-grantee, ASDOE.

## 2.2 Need

The September 29, 2009, earthquake, tsunami and flooding disaster (FEMA-1859-DR-AS) caused widespread destruction in coastal areas of American Samoa during an incident period lasting until October 6, 2009 (Image 1).



Image 1: View facing west to a destroyed school structure adjacent to the shoreline in the village of Poloa

In the village of Poloa, the Taputapu Elementary School, including four buildings constructed in 1970, one building constructed in 1998, and additional site improvements, was totally destroyed by the disaster (Image 2). FEMA considers a structure or facility to be “totally destroyed” when its repair costs equal or exceed 90 percent of its replacement costs (44 CFR 9.4). The Taputapu campus was situated adjacent to the Pacific Ocean at approximately 11 feet above mean sea level (AMSL) and the shoreline was fortified by a revetment of large boulders. Even so, the campus was directly in the path of the tsunami and was destroyed (Image 1). Walls and doors broke away, floors were washed out, roofs collapsed, and electrical systems were destroyed. The buildings were damaged beyond repair, and the school site was vacated (Image 2).



Image 2: View facing southwest to a destroyed classroom/office building in the village of Poloa.

Following the tsunami disaster, the school's students were accommodated at other ASDOE schools in nearby villages. These alternate schools are farther away from the students' homes, which places a burden on the students and their families. Additionally, the alternate schools do not have the capacity to serve the increased student enrollment on a permanent basis.

Action is needed to restore the function of the entire Taputapu Elementary School campus, including buildings and site improvements destroyed by or no longer usable after the tsunami disaster. Restoring the function of these facilities would provide educational services to the children in the Poloa area at pre-disaster operational levels. Any replacement facilities must be protected from future flood hazards as required by FEMA's regulations and ASG.

# 3.0 Alternatives Analysis

The tsunami destroyed the entire Taputapu Elementary School campus, which consisted of five separate education buildings, referred to as Sites 1–5. Site 1 was a 6,400-square-foot classroom/office building; Site 2 was a 6,000-square-foot cafeteria building; Site 3 was a 2,400-square-foot early child education (ECE) building; Site 4 was a 450-square-foot restroom facility; and Site 5 was a 384-square-foot *fale* (traditional Samoan open air pavilion). All of these structures were one story and built on slabs at grade. Supporting features of the Taputapu campus included 3-foot-wide sidewalks, graded play areas, an unpaved parking area, and utility connections (electrical, phone, natural gas, and water) to each building site.

Three alternatives were initially considered for replacing the Taputapu Elementary School buildings: on-site replacement in the original buildings' locations, replacement in a nearby field area used for informal recreation, and replacement in a different location to alleviate future flood hazards. The first two alternatives were determined to be infeasible and were removed from consideration, as discussed below in Section 3.1. Accordingly, the remaining two alternatives carried forward for consideration in this EA are the No Action Alternative (Alternative 1) and the Proposed Action (Alternative 2), as discussed below in Sections 3.2 and 3.3, respectively.

## 3.1 Alternative Not Carried Forward

An alternative was initially considered that would rebuild the damaged school buildings on their pre-disaster location in the village of Poloa. However, this location as well as the majority of the adjacent level coastal plain is located in FEMA Flood Insurance Rate Map (FIRM) Zone VE (Zone VE) with a base flood elevation (BFE) of 28 feet AMSL. High-risk coastal areas with a 1 percent or greater chance of flooding (100-year flood) that are subject to an additional hazard of storm wave action are encompassed by V and VE Zones. Furthermore, in Zone VE the BFE derived from in-depth analysis is indicated at selected intervals on the FIRM to provide additional detail (FEMA 2006).

FEMA's regulations implementing EO 11988, Floodplain Management, prohibit the Agency from funding new construction in Zone VE that is not functionally dependent on water or facilitates open space use. The definition of new construction in 44 CFR 9.4 includes "the replacement of a structure or facility which has been totally destroyed." FEMA considers a structure or facility to be "totally destroyed" when its repair costs equal or exceed 90 percent of its replacement costs. Therefore, this alternative was considered infeasible and is not being carried forward in this EA.

The very limited amount of level developable land in the immediate vicinity of the pre-disaster school site required consideration of off-site alternatives; however, any such site would need to be outside of Zone VE. One alternative site, a relatively level parcel of land at a higher elevation used for informal recreation, was initially identified nearby the original campus. However, the land was unavailable for acquisition, and ASDOE was unable to find additional suitable locations in the village of Poloa outside of Zone VE. Therefore, this alternative was also considered infeasible and is not assessed in this EA.

### 3.2 Alternative 1: No Action

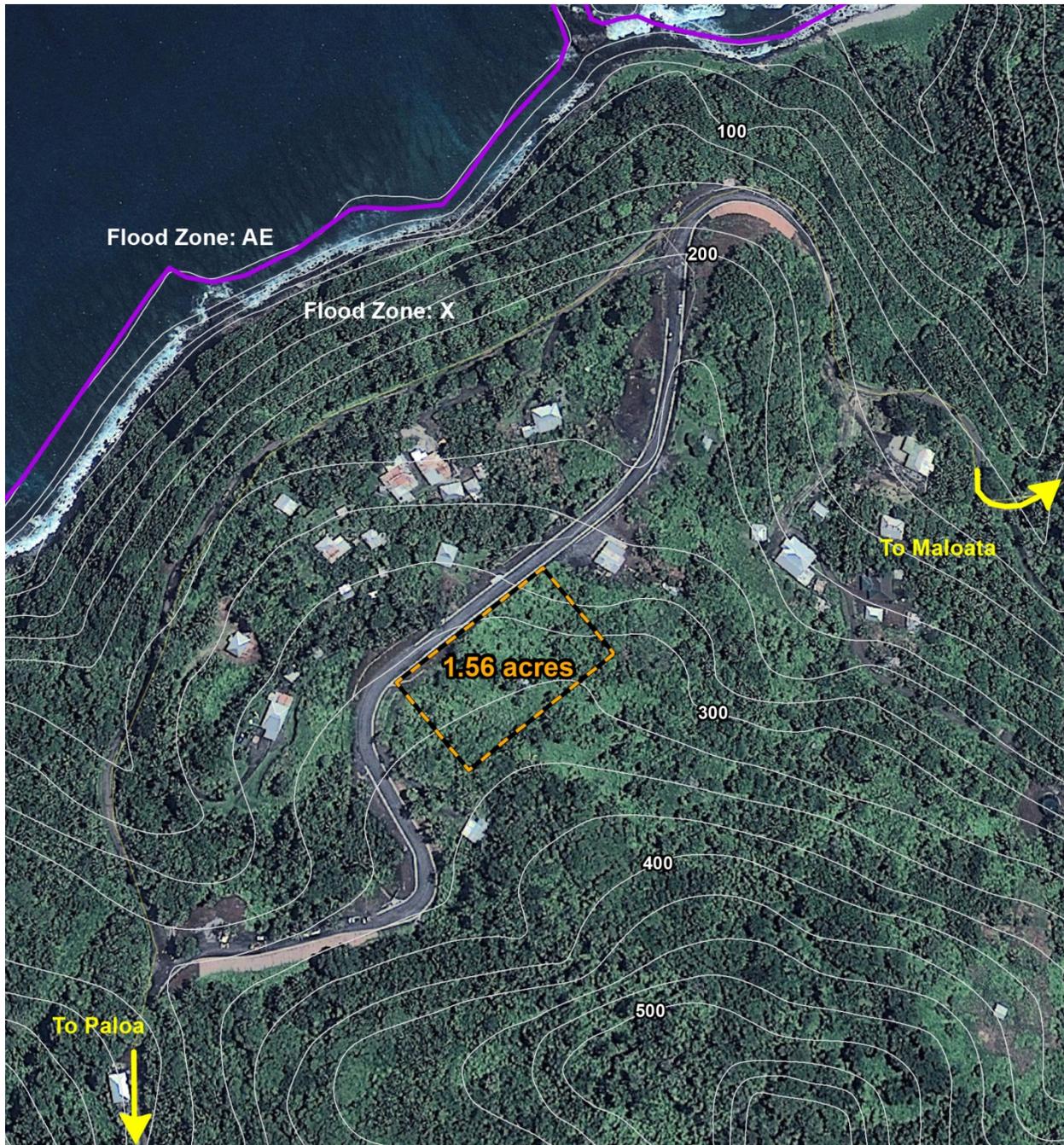
A No Action Alternative is required to be included in the environmental analysis and documentation pursuant to CEQ regulations implementing NEPA. The No Action Alternative maintains the status quo with no project and no FEMA financial assistance. The No Action Alternative is used to evaluate the effects of not providing assistance for the proposal and provides a benchmark against which other alternatives may be evaluated.

For the purposes of this EA, it is assumed under the No Action Alternative that the five Taputapu campus buildings that were completely destroyed would not be replaced, and the school would not be returned to pre-disaster functionality and capacity. Students who otherwise would have attended the Taputapu Elementary School would continue to be accommodated at other ASDOE schools and would continue to be bused outside of their residential area, which places a burden on the students and their families. Students and faculty of the other ASDOE schools serving the displaced students, as well as the former Taputapu Elementary School students, would be adversely affected due to the schools operating beyond their intended enrollment capacity.

### 3.3 Alternative 2: Proposed Action

The Proposed Action by ASDOE is to construct a replacement Taputapu Elementary School campus on a site approximately 0.6 mile to the north of the pre-disaster campus, in the village of Fagali'i. The proposed site is approximately 1.56 acres in area and is located approximately 700 feet from the shoreline at an average elevation of approximately 285 feet AMSL (Figure 3.1). It is adjacent to a paved road that was constructed in spring of 2012 (referred to in this EA as the new road) with conduit for utilities running along the right-of-way.

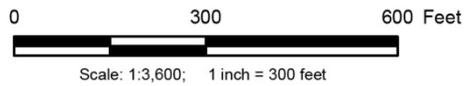
The proposed site is situated on a hill that generally slopes up toward the southeast, having previously been used for cultivating subsistence crops such as coconut trees [*niu*], breadfruit [*'ulu*], banana trees [*fa'i*], and taro plants. In 2012, ASG obtained a 55-year leasehold on the proposed 1.56-acre site that will expire in 2067 (Image 3).



Source: American Samoa Department of Commerce Web Portal; Site Boundary Source: Survey of Land in Fagali'i Village to be Leased For School Purposes, DWG# LS-3146, American Samoa Department of Public Works; Google Earth 2012; AECOM

**LEGEND**

-  Proposed Site
-  Flood Zone Boundary



**Figure 3.1**  
**Proposed Taputapu Elementary School Site**

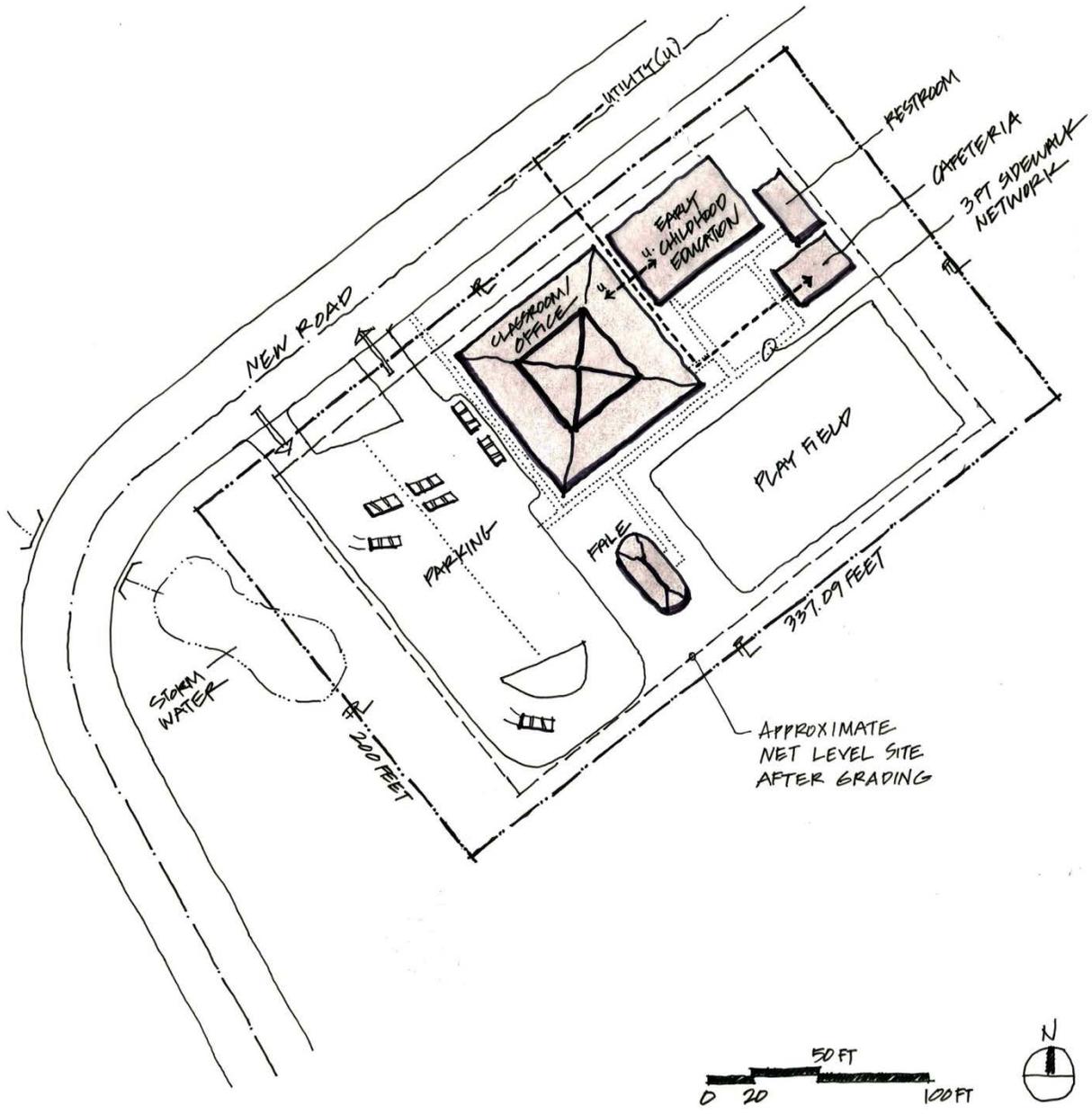


Image 3: View facing northwest of portion of proposed project area (at left) abutting road constructed in 2012.

Under the Proposed Action, ASDOE proposes to erect new campus buildings and construct additional features on the 1.6-acre site as follows:

- a two-story classroom and administration building (approximately 6,272 square feet);
- a two-story cafeteria and classroom building (approximately 1,960 square feet);
- an ECE building (approximately 1,568 square feet);
- a restroom building (approximately 450 square feet);
- a concrete playground (approximately 1,000 square feet);
- an unpaved parking lot (approximately 1,080 square feet);
- a gravel driveway (approximately 1,480 square feet); and
- concrete walkways within the campus (approximately 2,028 square feet).

Current plans are conceptual and the exact layout of the facilities within the project area may vary as the construction documentation plans are developed. However, the proposed relocation site is adequate in size to both contain all elements of the replacement school and provide flexibility for optional layout configurations of the elements within the campus (Figure 3.2). Because the site is not flat, substantial cut and fill would be required to make conditions acceptable for establishing building foundations. Though detailed grading plans have not yet been prepared, it is anticipated that the cut and fill would be fairly balanced and little export would be required.



Source: AECOM, FEMA PA-09-AS-1859-PW-00197(0)

**Figure 3.2**  
**Taputapu Elementary School Concept Site Plan**

The proposed facilities would require utility connections (electricity, telephone, water, and wastewater) to be provided from connection points along the new road constructed in 2012 to the individual buildings within the site. The proposed school site would have access to water service from the village water tank to the east via waterlines to be installed along the new road right-of-way separate from this project.

Located at approximately 285 feet AMSL, the new school campus is located in FEMA Flood Zone X. Zone X (unshaded on FIRM) encompasses areas that are outside the limits of the 500-year floodplain. However, an unnamed stream flows southwest of the proposed site, leading to an existing pipe culvert beneath the new road. Grading plans for the Proposed Action would need to include consideration of site drainage and the capacity of that stream. The Proposed Action may entail installation of a storm water basin on the site to ensure storm water flows from the campus do not exceed the capacity of the off-site stream culvert under the road (Image 4). Hydrologic calculations considering the impact of storm water flow through the roadway culvert would be a necessary part of the design and grading plan process for the new campus (see Section 4.2 of this document).



Image 4: View facing east toward southwest end of proposed project area.

The Proposed Action would require substantial earthwork/cut and fill of the approximately 1.6-acre site to produce a level pad for installation of the building foundations. In addition, trenching would be needed for installation of the utility connections including electricity, telephone, and water, as well as a soil-based sewer system connection. The duration of construction would be approximately 10 months. Staging for construction equipment and materials would occur on-site, including areas proposed for the parking lot and play field. The Proposed Action is focused on reconstructing the school in an off-site location and would not modify the existing disaster-damaged school site.

# 4.0 Affected Environment, Impacts, and Mitigation

The assessment of the Proposed Action consists of a description of existing conditions in the project area; discussions of the two alternatives, including the potential of each to result in direct and indirect effects on the environment; and, if necessary, a description of mitigation measures or best management practices (BMPs) that would be effectively implemented, enforced, and monitored to avoid or minimize these effects.

The assessment pursuant to NEPA (42 U.S.C. 4321 et seq.) is focused on the environmental resources for which some level of effect may result: air quality and greenhouse gas emissions, water resources, coastal resources, biological resources, cultural resources, geology, soils and seismicity, land use and planning, transportation, noise, utilities, socioeconomics/environmental justice and public safety, and visual resources

## 4.1 Air Quality and Greenhouse Gas Emissions

The federal Clean Air Act (CAA) of 1970 was enacted to regulate air emissions from area, stationary, and mobile sources. The CAA authorized the U.S. Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. Six major pollutants of concern or “criteria pollutants” are identified by USEPA: carbon monoxide (CO), lead, nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter less than 10 micrometers (PM<sub>10</sub>), and particulate matter less than 2.5 micrometers (PM<sub>2.5</sub>).

Specific geographic areas or air basins are designated by USEPA as either in “attainment” if they are within or “nonattainment” if they exceed allowable NAAQS for any criteria pollutant, based on air quality monitoring data submitted to USEPA and the number of days in which standards were exceeded. Areas previously designated as nonattainment, but reclassified from nonattainment to attainment, are designated as “attainment/maintenance” areas. The CAA requires each state or territory to develop a State Implementation Plan (SIP) for areas in nonattainment of NAAQS. Pursuant to current USEPA listings, American Samoa is in attainment for all criteria pollutant NAAQS and, as a result, is not required to have a SIP in place for any criteria pollutant.

The CAA requires USEPA to promulgate rules to ensure that federal actions undertaken in nonattainment or maintenance areas are consistent with the CAA and with federally enforceable air quality management plans, including SIPs. These rules, known as the General Conformity Rule (GCR) (40 CFR Parts 51.850–51.860 and 93.150-93.160) require any federal agency that is responsible for an action in a federal nonattainment or attainment/maintenance area to demonstrate conformity to the applicable SIP, either by determining that the action is exempt from the GCR or by making a formal conformity determination. As stated above, American Samoa is currently classified as in attainment of all NAAQS; therefore, general conformity determination requirements currently do not apply to projects in American Samoa.

In addition to criteria air pollutants of direct concern for human health, other air emissions are the result of natural processes and human activities, including greenhouse gases (GHGs), which trap heat in the atmosphere, regulating the earth's temperature. Water vapor is a naturally occurring GHG that accounts for the largest percentage of the greenhouse effect. Other common GHGs emitted from natural processes and human activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O).

Scientific evidence indicates a trend of increasing global temperatures (i.e., global warming) over the past century due to an increase in global GHG emissions. Climate change associated with global warming is predicted to produce negative environmental, economic, and social consequences across the globe. Recent observed environmental changes include shrinking glaciers, thawing permafrost, a lengthened growing season, and shifts in plant and animal ranges (IPCC 2007). Predictions of long-term negative environmental impacts include sea level rise, changing weather patterns with increases in the severity of storms and droughts, changes to local and regional ecosystems including the potential loss of species, and a significant reduction in winter snow pack.

The Governor of American Samoa issued EO 10A-2007 to address the issue of climate change in the territory. EO 10A-2007 identified the repercussions of global warming and climate change to American Samoa, including loss of land mass and shoreline from sea level rise, increased food cost and dependence on off-island food sources, potential need for population relocation and the resulting loss of spiritual connection to the land, and loss of coral reefs with the resulting increase in mortality and economic loss from lack of reef protection from cyclones.

#### **Alternative 1: No Action**

Under the No Action Alternative, no facilities would be built and no construction activities would occur, resulting in no project-related pollutant emissions. Therefore, there would be no effects on air quality and no GHG emissions would occur.

**Alternative 2: Proposed Action**

Implementation of the Proposed Action would result in emission of a minor amount of pollutants on a temporary basis due to construction-related ground disturbance and vehicle and equipment operation. Impacts would include temporary increases of fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>) and direct emissions related to fossil fuel combustion (CO, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and volatile organic compounds) powering construction equipment and vehicles. Construction of this small-scale project is expected to occur for a period of approximately 10 months. Due to the small scale of the proposed construction, pollutant emissions would not be of a concentration that would create health concerns or affect air quality. To further minimize temporary air quality effects, ASDOE would require contractors to employ the following BMPs to limit emissions, fugitive dust, and exhaust:

- maintain and cover spoils piles,
- cover the load of haul vehicles containing fill or cut soil,
- keep construction equipment properly tuned, and
- enforce a limitation on idling time for construction vehicles.

The Proposed Action does not include any considerable source of direct permanent pollutant emissions and effects would be limited to the temporary emissions during construction. Long-term effects include a minor amount of emissions due to ongoing campus uses, including vehicle use and maintenance equipment operation, but these emissions would not be considerable due to the small size of the school.

The Proposed Action would not generate new vehicle trips, but would displace trips that occurred to the original school site before the disaster and move them to a new location. Therefore, the Proposed Action would not result in permanent increases in pollutant emissions. Furthermore, general conformity determination requirements do not currently apply to projects in American Samoa due to the territory's NAAQS attainment status as stated above.

Similarly, the Proposed Action would result in temporary emissions of GHG during construction. The potential effects of proposed GHG emissions are, by nature, global and cumulative effects, as individual projects or sources of GHG emissions are not large enough to have an appreciable effect on climate change. Thus, an appreciable effect on global climate change would only be measurable if proposed GHG emissions were to be considered together with all other GHG emissions from human-made activities across the globe.

To date, there are no formally adopted or published NEPA thresholds of significance for GHG emissions. The *Draft NEPA Guidance on Consideration of the Effects of Climate Change and*

*Greenhouse Gas* issued by the CEQ (CEQ 2010) suggested a threshold of 25,000 metric tons of GHG emissions per year as an indicator for GHG impact assessment. The Proposed Action's GHG emissions would be negligible short-term emissions due to construction activity far below the CEQ threshold. Consequently, the Proposed Action would not contribute substantially to cumulative effects associated with global climate change. Furthermore, ASDOE would be responsible for complying with ASG climate change and GHG regulations as outlined in ASG EO 10A-2007. The Proposed Action would result in minor and temporary effects related to GHG emissions.

## 4.2 Water Resources

Surface water on Tutuila is primarily in the form of perennial and ephemeral streams that provide habitat for freshwater fish, plants, and invertebrates. Streams are also a source of drinking water in some remote parts of the island. All surface waters on the island discharge directly into marine water bodies. Groundwater is the principal source of the domestic and industrial water supply as it is more abundant and has a higher quality than surface water (FEMA 2010). The project area experiences a tropical maritime climate with abundant rain and warm, humid days and nights. Rainfall across Tutuila is highly variable due to the effects of the steep mountainous terrain, averaging between 120 and 200 inches annually. The driest period is during winter (June–September) and the wettest is during the summer (December–March) (Clark and Herdrich 1993).

The proposed Taputapu campus is in the Fagali'i watershed and is bounded by Leileia Mountain's Tuigaava Ridge to the southwest and Lealafaalava Mountain's Tausina Ridge to the northeast. Along the shoreline, the watershed extends between Leopard Point in the southwest and Fagalea Point in the northeast. This watershed drains toward the northwest and includes four unnamed streams and Vaisa Stream; the latter is located approximately 0.5 mile northeast of the proposed site. These five streams discharge surface runoff to the nearshore waters that adjoin the watershed (ASEPA and American Samoa Coastal Management Program [ASCMP] 2000). A review of the wetlands database compiled by the American Samoa Geographic Information System (GIS) User Group (ASGIS User Group 2012) indicated that no wetlands occur within or adjacent to the proposed site. In addition, AECOM's site visit in April 2012 determined that no wetlands occur within the Area of Potential Effects (APE) or project area. An unnamed stream running approximately 500 feet west of the proposed site is classified as waters of the United States.

#### 4.2.1 Flood Hazards

According to the respective FIRM, the proposed site is located within Zone X, which represents an area outside the 500-year floodplain (FEMA 2006). An unnamed stream flows toward the northwest approximately 500 feet west of the proposed site, crossing beneath the new road in a piped culvert. The site is upslope from this stream (Image 5).



Image 5: View of drainage outfall of the culvert that runs beneath the road constructed in 2012.

EO 11988, Floodplain Management, requires federal agencies to avoid, to the extent possible, the short- and long-term adverse effects associated with the occupancy and modification of floodplains. FEMA's regulations for complying with EO 11988 are found in 44 CFR Part 9, Floodplain Management and Protection of Wetlands (FEMA 2008). FEMA applies an Eight-Step Decision-Making Process to ensure that funded projects are consistent with EO 11988 and 44 CFR Part 9. The NEPA compliance process involves essentially the same decision-making process. Therefore, the Eight-Step Decision-Making Process has been integrated into the analysis in this EA.

#### **Alternative 1: No Action**

Under the No Action Alternative, no new facilities would be built; therefore, no effect on floodplains in the project area would occur.

**Alternative 2: Proposed Action**

One of the purposes of the Proposed Action is to protect against future flood hazards by reconstructing school facilities farther from the ocean and outside of FEMA Flood Zones V or VE. Under the Proposed Action, the proposed Taputapu campus would be located at a site that has an elevation of approximately 285 feet AMSL within Zone X, approximately 600 horizontal feet from the ocean. At this elevation and distance from the shore, there would be no potential for another tsunami to affect the reconstructed school, and there are no surface water features that would pose a threat from flooding with adequate site design. Therefore, the Proposed Action would result in a beneficial effect with respect to on-site flooding.

In accordance with the EO 11988 and 44 CFR Part 9, FEMA published a cumulative Initial Public Notice for FEMA-1859-DR-AS. TOFR and ASDOE, with support from FEMA, would be required to publish an individual Final Public Notice before implementation of the Proposed Action.

**4.2.2 Water Quality**

As noted above, the proposed site does not contain any surface water or wetlands, but is near an unnamed stream that flows into the Pacific Ocean. Though some of the streams in the Fagali'i watershed are used for potable water, the stream adjacent to the site is not used for this purpose. The nearest stream used for potable water is located approximately 1,000 feet east of the proposed site (ASEPA and ASCMP 2000). The American Samoa Environmental Protection Agency (ASEPA) maintains programs to ensure the quality of surface water and drinking water, such as the American Samoa Watershed Protection Plan (ASEPA and ASCMP 2000), Guidance Manual for Runoff Control (ASG and ASEPA 2001), and ASEPA's American Samoa Erosion & Sediment Control Field Guide (ASEPA and ASCMP 2011). The ASEPA's Guidance Manual for Runoff Control provides direction to property owners, construction contractors, government agencies, developers and others who are performing activities that could result in pollution of American Samoa's surface and/or groundwater resources as a result of storm water runoff (ASG and ASEPA 2001).

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. The harbor is geographically separated from the project site; therefore, it is not relevant to these alternatives. Additionally, household waste and other human-made debris are frequently found in streams and on beaches.

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.

The proposed site is located in an area containing Fagasa-Ofu silty clays, which have an erosion potential of moderate to severe and in which surface runoff is considered moderate to rapid (ASEPA and ASCMP 2000). These conditions, combined with the presence of the stream adjacent to the site, mean the site can contribute to sedimentation in downstream areas.

Sections 401 and 404 of the Clean Water Act (CWA) (33 U.S.C. §1251 et seq.) regulate discharge into jurisdictional wetlands and waters of the U.S. to ensure water quality in these surface water features is properly maintained. Section 401 requires discharge activities to acquire water quality certifications from the applicable regulatory agency, which in American Samoa is ASEPA. Section 404 of the CWA requires discharge activities to obtain a permit from the U.S. Army Corps of Engineers.

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 1 acre or more of ground disturbance are regulated under the NPDES program and require an NPDES General Permit, which outlines conditions to reduce nonpoint-source pollutant discharge. The NPDES program in American Samoa is administered by USEPA.

#### **Alternative 1: No Action**

The No Action Alternative would not result in any ground disturbance on the site; therefore, existing water quality in the nearby water features would remain unchanged.

#### **Alternative 2: Proposed Action**

Because the on-site soils are susceptible to severe erosion, the Proposed Action would have the potential for sedimentation in downstream water bodies, thereby indirectly affecting off-site surface water (including wetlands) and groundwater. This would particularly be a concern during construction, as the Proposed Action would entail grading of the site to create level pads for the proposed foundations.

As the proposed site would be larger than 1 acre in area, at approximately 1.56 acres, ASDOE would be required to apply for and acquire an NPDES General Permit from USEPA prior to commencing any construction activities. The Proposed Action's temporary effect on water

quality would be mitigated by ASDOE's fulfillment of permit conditions. This effect would also be mitigated by conditions placed on the Proposed Action by ASG, including the effective implementation, enforcement, and monitoring of an erosion control plan that would be prepared as part of the Project Notification Review System (PNRS) NPDES Land Use Permit (LUP) process. ASG would issue conditions in the LUP requiring ASDOE to ensure that sediment generated within project limits by storm water flows is contained on-site. ASDOE would be required to consult with ASEPA on specific BMPs, which must be implemented as directed and approved by ASEPA. ASDOE would be required to ensure that silt fences, curtains, and other water quality structures are properly installed and maintained to avoid transport of fill or exposed soils from the construction site. The permit would give the ASCMP authority to stop work, require corrective measures, and seek legal enforcement in the unforeseen event that the Proposed Action's BMPs are not effectively controlling water quality on the site. If ASDOE cannot for any reason meet the conditions described in their LUP and if any discharge occurs to waters of the U.S. such that a 401 or 404 permit might be necessary, ASDOE would be required to halt work immediately and notify TOFR, FEMA, and ASEPA or USACE (as appropriate), to determine the proper steps to initiating the relevant Clean Water Act permit process.

To meet the NPDES permit conditions and the conditions that would be placed on the Proposed Action's LUP prior to construction, ASDOE would require the contractor to prepare and implement an erosion control plan. The erosion control plan would include phased construction to minimize the amount of exposed soil at any given time and would require all work to cease during heavy rains. The plan would require that all soil stockpiled on-site for use as fill or that has been excavated from the project area be covered and surrounded by a sediment barrier to prevent sediment loss.

Additionally, the plan would include debris-disposal to ensure that all excavated material is transferred to a designated and preapproved debris disposal site as described in ASEPA's American Samoa Erosion & Sediment Control Field Guide (ASEPA and ASCMP 2011) and the ASEPA Guidance Manual for Runoff Control (ASG and ASEPA 2001). ASDOE would also implement permanent erosion control measures as described in the American Samoa Erosion & Sediment Control Field Guide, where appropriate, when construction is completed (ASEPA and ASCMP 2011).

Due to the increase in impervious surfaces proposed on the site due to the construction of concrete foundations and buildings (Proposed Action), ASG storm water guidelines may require or recommend diversion of storm water into an infiltration basin or other storm water detention facility to regulate the flow of storm water and improve water quality.

In addition to the erosion control plan, ASDOE would ensure the effective implementation, enforcement, and monitoring of the standard BMPs required of the construction contractor throughout construction to limit the potential for construction-related pollutants to affect storm water runoff. These BMPs would follow ASEPA's American Samoa Erosion & Sediment Control Field Guide (ASEPA and ASCMP 2011) and the ASEPA Guidance Manual for Runoff Control (ASG and ASEPA 2001). BMPs would include such measures as vegetative stabilization and physical stabilization. ASDOE would not site any school structure, appurtenant facility, or construction staging area in a surface water body (including wetlands).

With implementation of the erosion control plan and the BMPs stated above and compliance with all permits pursuant to the Clean Water Act, ASDOE would ensure that construction activities would not result in soil, debris, or other fill materials being placed into surface water bodies (including wetlands) and no adverse effects would occur. Therefore, the Proposed Action would not result in the direct or indirect effect on wetlands or jurisdictional waters and would not require a water quality certification from ASEPA or a Section 404 permit from the U.S. Army Corps of Engineers. Furthermore, ASDOE would ensure that there will be no discharge and runoff of sediment to the marine environment due to the Proposed Action.

### 4.3 Coastal Resources

American Samoa faces coastal concerns of fishery habitat loss, coral reef health coastal hazards (such as cyclones, flooding, and erosion), marine debris, and solid waste. To help mitigate the effects of human activity, the ASG operates the ASCMP as part of the ASG Department of Commerce (ASDOC). The ASCMP designates the entire island of Tutuila and the ocean within 3 miles of the shoreline as a coastal zone. The ASCMP oversees all construction and earth-moving activities on the island to ensure coastal resources are not affected by project work.

The United States Congress enacted the Coastal Zone Management Act (CZMA) in 1972 and the Coastal Zone Act Reauthorization Amendments in 1990 in response to the increasing pressures of overdevelopment on the nation's coastal resources. These laws make federal financial assistance available to any coastal state or territory that is willing to develop and implement a comprehensive coastal management program.

These regulations apply to all actions within a designated coastal zone and require that any federal agency whose activities directly affect the coastal zone be consistent, to the maximum extent practicable, with approved state or territory coastal zone management programs (FEMA 2008). The federal consistency provisions of the CZMA require that all federally funded,

licensed, or permitted projects affecting the coastal zone of American Samoa be conducted in a manner that is consistent with the federally approved ASCMP (FEMA 2008).

**Alternative 1: No Action**

Under the No Action Alternative, no construction would occur, and no effects on the coastal zone would occur.

**Alternative 2: Proposed Action**

The Proposed Action would entail a moderate amount of soil disturbance and construction activity that would occur within the coastal zone, as regulated by the ASCMP. As a result, the Proposed Action would have the potential to affect coastal waters through erosion pollutant runoff and erosion and sedimentation reaching the nearby bay. As noted above, ASDOE would require the contractor to prepare and implement an erosion control plan and employ appropriate required and recommended construction BMPs to ensure project construction does not affect nearby waters. With implementation of these measures, the Proposed Action would not result in an adverse effect on coastal waters. ASDOE would be responsible for coordinating with and obtaining a federal consistency determination from the ASCMP to comply with the CZMA.

#### 4.4 Biological Resources

Biodiversity of terrestrial species on Tutuila is low due to the island's volcanic origin and remote location (Craig 2005). The main vegetation type is that of a tropical rainforest, but many nonnative plants have outcompeted the native plants in disturbed environments (Whistler 1994). The proposed site is characterized by a mixture of native and nonnative vegetation (Image 6).



Image 6: View of on-site secondary forest vegetation community.

On April 14 and April 18, 2012, a natural resource reconnaissance survey was conducted by AECOM for the project area. During this survey, large portions of the site were noted as supporting secondary forest vegetation community type, defined by abandoned plantation lands in the vicinity of villages on American Samoa. Plant species that make up secondary forest vegetation include subsistence crops, such as coconut trees [*niu*] (*Cocos nucifera*), breadfruit [*'ulu*] (*Artocarpus* sp.), banana trees [*fa'i*] (*Musa paradisiaca*), and taro plants (*Colocasia esculenta*). Immediately surrounding the patches of the subsistence crop plantings are invasive grasses and other weedy species, which have colonized the areas adjacent to the food plants. Examples of nonnative weedy species include para grass (*Brachiaria mutica*), coix [*sanasana*] (*Coix lacryma-jobi*), and wild yam [*soi*] (*Dioscorea bulbifera*), as well as many other weedy species (Image 6).

Based on the site's vegetation and regional location, wildlife resources expected to be associated with the proposed site include a variety of introduced and native bird species. Common nonnative bird species known from the region include jungle myna (*Acridotheres fuscus*), red junglefowl (*Gallus gallus*), and red-vented bulbul [*manu palagi*] (*Pycnonotus cafer*). Resident bird species known from the area include species such as white-tailed tropicbird [*tava'esina*] (*Phaethon rubricauda*), and gray-backed tern [*gogosina*] (*Sterna lunata*). The site is

also expected to support nonnative wildlife such as the nonnative cane toad [*lane*] (*Bufo marinus*), and Polynesian rat (*Rattus exulans*).

A narrow ring around Tutuila contains shallow coastal habitats that support coral reef ecosystems. Deepwater habitats around the island reach depths of 2,000 feet and are located between 0.5 and 2 miles from the coast (Craig 2005). Being wholly on land, the proposed site does not contain either coral reef or deepwater habitat.

#### 4.4.1 Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (ESA) (16 U.S.C. § 1536(a)(2)) requires federal agencies to determine whether projects they propose to carry out or fund have any potential to affect species listed or proposed for listing as threatened or endangered or designated critical habitat.

FEMA obtained a list of species that are listed as endangered, threatened, or proposed for listing as endangered or threatened under the ESA that may occur in the project vicinity (U.S. Fish and Wildlife Service [USFWS] 2011a and USFWS 2011b).

Based on the data compilation, FEMA and AECOM, as a consultant to FEMA, conducted biological investigations of the project site. As a result of the field visit and background review, FEMA made the initial determination that the project area is in proximity to habitats suitable to support four federally listed or proposed wildlife species regulated by USFWS and National Marine Fisheries Services (NMFS) under the ESA, as follows:

**Hawksbill sea turtle** [*laumei uga*] (*Eretmochelys imbricata*) (Endangered): Hawksbill sea turtles are distributed worldwide in tropical seas. The species has been documented throughout the Pacific, frequently associated with deepwater coral and seagrass beds. The sandy beaches on American Samoa provide nesting habitat for the hawksbill sea turtle, including approximately 16 kilometers of sandy beaches on Tutuila Island (Tuato'o-Bartley et al. 1993). Tutuila supports an estimated 50 nesting female hawksbill sea turtles per year (NMFS and USFWS 1998a).

**Green sea turtle** [*laumei ena'ena* or *fonu*] (*Chelonia mydas*) (Threatened – Pacific Population): The green sea turtle nests on the sandy beaches of American Samoa, and forages in the open ocean and coastal waters associated with deepwater coral and seagrass beds. Green sea turtles occur in the waters off Tutuila, with an estimated low nesting population on the island (NMFS and USFWS 1998b).

**Leatherback sea turtle** (*Dermochelys coriacea*) (Endangered): The leatherback sea turtle has the widest distributional range of all sea turtles. However, the species does not nest on

American Samoa. One juvenile leatherback sea turtle has been documented in the waters off of American Samoa, south of Swains Island, caught by a scientific research longline fishing vessel in 1994 (NMFS and USFWS 1998c).

**Loggerhead sea turtle** (*Caretta caretta*) (Threatened): Loggerhead sea turtles are circumglobal, inhabiting bays, lagoons, and open seas of the Atlantic, Pacific, and Indian oceans. No documented observations of this species have been made on the beaches of American Samoa, or in the waters surrounding the islands (NMFS and USFWS 1998d).

None of these species was observed during biological surveys of the project area. Furthermore, these marine species would not be expected to occur on the site due to its elevation above and distance from the ocean.

**Alternative 1: No Action**

Under the No Action Alternative, no activities would occur and therefore no effects would occur to federally listed or species proposed for federal listing under the ESA.

**Alternative 2: Proposed Action**

No suitable sea turtle nesting beaches are located within the project area or near the village of Fagali'i. However, potential nesting beaches do occur along the coast, downstream from the proposed Taputapu campus. No designated critical habitat for the hawksbill sea turtle, green sea turtle, or leatherback sea turtle is located in or near the proposed site. Neither NMFS nor USFWS has designated or proposed critical habitat for the loggerhead sea turtle.

To avoid any indirect effects on sea turtle foraging habitat, ASDOE would require incorporation of standard BMPs into the project design and construction drawings, including implementation of erosion control measures to prevent construction-related sediment transport into the ocean. Standard BMPs would follow ASEPA's American Samoa Erosion & Sediment Control Field Guide (ASEPA and ASCMP 2011) and the ASEPA Guidance Manual for Runoff Control (ASG and ASEPA 2001) as described in Sections 4.2.2 and 4.6.1 of this document.

Pursuant to the LUP conditions dictated by ASG and the Proposed Action's NPDES General Permit, ASDOE would be required to consult with ASEPA on project-specific BMPs. With the implementation of BMP measures to avoid indirect effects, the Proposed Action would not affect any federally listed or proposed threatened or endangered species or designated or proposed critical habitat.

#### 4.4.2 Invasive Species

EO 13112, Invasive Species of 1999, requires federal agencies to prevent the introduction of invasive species; provide for their control; and minimize the economic, ecological, and human health effects that invasive species cause. 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 of the action(s) outweigh the potential harm caused by invasive species, and that all feasible and prudent measures to minimize harm caused by invasive species will be implemented in conjunction with the action(s).

##### **Alternative 1: No Action**

Under the No Action Alternative, no ground-disturbing activities would occur; therefore, there would be no introduction or spread of invasive species on the proposed site.

##### **Alternative 2: Proposed Action**

The Proposed Action has limited potential to contribute to the spread of invasive species on the proposed site. The majority of the proposed activities occur in or adjacent to land that has been previously used for passively cultivating subsistence crops. The vegetation between and adjacent to the subsistence crops is dominated by nonnative weedy species, interspersed with native vegetation, such as bishopwood [‘o’a] (*Bischofia javanica*). This vegetation would be cleared prior to commencement of project grading. ASDOE would take measures to prevent the introduction of invasive weeds at the construction site, including cleaning all equipment before accessing the site and using only certified weed-free erosion control materials (Image 7).



Image 7: View of on-site secondary forest vegetation community with nonnative ground cover.

On completion of construction, any temporarily cleared areas that would be revegetated would use appropriate native species, including bishopwood, thus decreasing the amount of invasive species in the project area. Bishopwood has been documented as being very well suited for erosion control in coastal ecosystems (Samoa Ministry of Natural Resources and Environment 2012). ASDOE would ensure that any imported fill or other construction materials would be certified as being free of invasive species. Exceptions to this requirement would include areas intended for playgrounds or activity fields for the school grounds, which can be vegetated with turf grass.

The potential for the Proposed Action to contribute to the spread of invasive species exists. However, with the incorporation of the measures outlined above, this alternative would comply with EO 13112. Therefore, the Proposed Action would result in negligible short-term direct and indirect effects due to invasive species.

#### 4.4.3 Protection of Wetlands

EO 11990 requires federal agencies to take action to minimize the destruction or modification of wetlands by considering both direct and indirect effects on wetlands that may result from federally funded actions. FEMA's regulations for complying with EO 11990 are found in 44 CFR Part 9, Floodplain Management and Protection of Wetlands.

A review of the wetlands database compiled by the ASDOC Geographic Information System (GIS) (ASDOC 2012) indicated that no wetlands occur within or adjacent to the project area, and no wetlands were observed during the site reconnaissance within the proposed Taputapu campus. The American Samoa Watershed Protection Plan identifies several unnamed drainages within the Fagali'i watershed, including one feature located west of the proposed site that intersects with the new road.

**Alternative 1: No Action**

Under the No Action Alternative, no ground-disturbing activities would occur; therefore, no effects to wetlands would occur.

**Alternative 2: Proposed Action**

The Proposed Action would result in grading within approximately 500 feet of an unnamed stream that is classified as waters of the United States. The Proposed Action does not propose earthwork in the stream and would not otherwise divert the stream; implementation of BMPs following ASEPA's American Samoa Erosion & Sediment Control Field Guide (ASEPA and ASCMP 2011) and the ASEPA Guidance Manual for Runoff Control (ASG and ASEPA 2001) as described in Sections 4.2.2 and 4.6.1 of this document would prevent sedimentation of the feature during construction. Preliminary plans do not anticipate that project-related grading would result in any dredge or fill in the unnamed stream. If subsequent refinements in project plans indicate that the stream would be directly affected by grading, then the Proposed Action would be required to acquire a permit from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, and would require a Water Quality Certification pursuant to Section 401 of the Clean Water Act. The Proposed Action would not result in the direct or indirect impact of wetlands, or in the permanent loss of jurisdictional waters. Therefore, the project would comply with EO 11990.

**4.4.4 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. The island of Tutuila is surrounded by a fringing coral reef. Coral reefs surrounding Tutuila are impacted by poor water quality (USEPA 2007). Natural phenomena such as hurricanes 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, effects come from sediments eroded from agricultural and construction operations, sewage, and other effluents. The Coral Reef Ecosystem Monitoring Report for American Samoa documents a relatively healthy coral reef system in the coastal waters off of the village of Poloa, while the same study indicated a lack of live coral reef off of the coast at the village of Fagali'i (Brainard 2008).

**Alternative 1: No Action**

Under the No Action Alternative, no ground-disturbing activities would occur; therefore, no direct effects would occur to coral reefs.

**Alternative 2: Proposed Action**

The Proposed Action would occur on land; thus, a distance away from any documented coral reefs. As such, no direct effects are anticipated to occur. To avoid any indirect effects to coral reefs, including discharge of sediment from eroded soil during construction, ASDOE would require incorporation of BMPs into the project design and construction drawings, including the implementation of erosion control measures to prevent construction-related sediment transport into the ocean.

These BMPs would be identified in compliance with the Proposed Action's LUP process and NPDES permit, and would follow ASEPA's American Samoa Erosion & Sediment Control Field Guide (ASEPA and ASCMP 2011) and the ASEPA Guidance Manual for Runoff Control (ASG and ASEPA 2001) as described in Sections 4.2.2 and 4.6.1 of this document.

With the effective implementation, enforcement, and monitoring of the proposed BMPs to avoid indirect effects, the Proposed Action would not affect any coral reefs. To minimize sedimentation into the ocean, ASDOE would be responsible for implementing the erosion control project features referenced in this EA. ASDOE would also ensure that coral is not a component of fill materials or used in the concrete mixture for the Proposed Action. Therefore, the Proposed Action is expected to comply with EO 13089 and not result in direct or indirect effects on coral reefs.

#### 4.4.5 Protection of Fisheries Resources

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 as amended (MSA) (16 U.S.C. 1801 et seq.) provides for the conservation and management of sustainable fisheries within the United States' coastal waters. In 1996, the MSA was amended to require the identification and management of Essential Fish Habitat (EFH) for managed species (16 U.S.C. §305[b]). EFH is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The MSA mandates that federal action agencies which fund, permit, or carry out activities that may adversely affect EFH of federally managed fish species to consult with the National Marine Fisheries Service (NMFS). For the waters surrounding Tutuila, American Samoa EFH has been designated by the Western Pacific Regional Fishery Management Council as the water column and bottom habitat from the shoreline to the outer boundary of the Exclusive Economic Zone to a depth of 50 fathoms (Blyth-Skyrme et al).

**Alternative 1: No Action**

Under the No Action Alternative, no ground-disturbing activities would occur; therefore, no direct impacts would occur to EFH.

**Alternative 2: Proposed Action**

The Proposed Action would occur on land, approximately 700 feet from the shoreline and a distance from any EFH. In order to protect the EFH within downstream ocean waters, ASDOE would be required to effectively implement, enforce, and monitor the water quality BMPs described herein, in accordance with their LUP and NPDES permit, which would minimize any project-related effects to EFH.

With the effective implementation of the proposed impact avoidance and minimization measures described in Section 4.2.2, there will be no discharge or run-off of sediment to the marine environment due to this project. Therefore, the Proposed Action would not affect EFH. If ASDOE cannot for any reason implement the Proposed Action without adversely affecting EFH, work must halt and ASDOE must immediately notify TOFR and FEMA, so that FEMA can consult with NMFS pursuant to MSA.

**4.4.6 Wildlife and Vegetation**

The primary special-status biological resources actively monitored on Tutuila by the American Samoa Department of Marine and Wildlife Resources (ASDMWR) include colonies of fruit bat [pe'a], including Samoan fruit bat [pe'a vao] (*Pteropus samoensis*), and white-naped fruit bat [pe'a fanua] (*Pteropus tonganus*), as well as the declining populations of several species of endemic land snails. The natural habitat for the fruit bat is the rainforest, roosting in trees during the day, and foraging from dusk until dawn. Populations of several species of endemic land snails also inhabit the rainforest and can be found in other wet, moist habitats such as marshes or other wetlands. No fruit bat colonies or populations of endemic land snails have been documented in the area.

**Alternative 1: No Action**

Under the No Action Alternative, no ground-disturbing activities would occur; therefore, no direct or indirect effects would occur to wildlife or vegetation.

**Alternative 2: Proposed Action**

The Proposed Action may disturb wildlife in the vicinity of the project due to vegetation clearing, earthwork, and construction activity. Clearing and grading would result in animal species experiencing both permanent and short-term loss of habitat. Permanent loss of a small amount of habitat would be associated with the construction of the new school facilities. Temporary

effects would be associated with the harassment of wildlife from noise and dust from construction equipment movement. Because no fruit bat colonies or populations of endemic land snails have been documented in the area, no effects on these species are expected to occur.

Several bird species, including jungle myna, red junglefowl, and red-vented bulbul have the potential to occur within and adjacent to the project area. The federal Migratory Bird Treaty Act of 1918 (16 U.S.C. §§ 703–712) (MBTA) affords protection to a wide variety of both resident and migratory birds. ASDOE would be responsible for complying with the MBTA for all construction-related activities, by minimizing the potential for “take” of MBTA-covered species during the migratory bird breeding season (generally accepted as starting on February 15 and ending on September 15).

Impact minimization measures would include scheduling construction outside of the bird nesting season (i.e., avoiding the period from February 15 through September 15). If construction cannot be avoided during the nesting season, pre-construction nesting bird surveys would be required to determine if birds are nesting within the project area and within a 500-foot buffer around the campus boundaries. If nesting is documented, a qualified biologist would be required to monitor any active nests and to coordinate with ASDOE and the construction manager to minimize any potentially adverse effects to MBTA-covered species. The minimization measure would require establishing a nondisturbance buffer around the nest (the size of which will be dependent upon the species, but not greater than 500 feet) until nesting activity has been completed at that location.

The proposed action would result in direct permanent effects to wildlife habitat and vegetation within a narrow band on the north side of the campus, where the existing concrete pad would be extended. Since the loss of wildlife habitat and vegetation is relatively minor in acreage; the vegetation is composed primarily of nonnative, ornamental, and agricultural species; and ASDOE would ensure compliance with the MBTA and minimization measures, this impact would be negligible.

#### 4.5 Cultural Resources

In addition to review under NEPA, consideration of effects on cultural resources is mandated under Section 106 of the National Historic Preservation Act of 1966, as amended and specified in the 36 CFR Part 800 regulations. The Proposed Action is an “Undertaking,” per 36 Code of Federal Regulations (CFR) 800.16(y). Requirements include identifying historic properties that may be affected by a federal undertaking and mitigating adverse effects to those resources. The cultural resources investigation for the Proposed Action was conducted by AECOM, as a

consultant to FEMA, to identify and evaluate historic properties. The investigation included consultation with American Samoa Preservation Office (ASHPO), background and archival research as well as an archaeological survey. The Cultural Resources Inventory Report (FEMA 2013) details the investigation results is referenced as Appendix D of this EA.

The archaeological survey of the 1.56-acre area of potential effects (APE) was conducted on April 14, and April 18, 2012. At the time the archaeological survey was conducted, the leasehold on the relocation site had not been finalized. Therefore, additional areas adjacent to the 1.56-acre APE were included in the survey as a precaution in case the configuration of the leasehold area changed; it did not. The actual area surveyed included the 1.56-acre APE (coincident with the leasehold area) plus adjacent areas for a total of 3.35 acres.

An existing modern shade structure was identified on the proposed site. It was determined to not be of sufficient age to be evaluated as a potential historic property and would be demolished as part of site grading for the school facilities (Image 8). During the cultural resources investigation, no historic properties were identified within the APE.



Image 8: Modern shade structure is not of sufficient age to be evaluated as a potential historic property.

#### **Alternative 1: No Action**

Under the No Action Alternative, no construction or ground disturbance would occur; therefore, no effects on cultural resources would occur.

**Alternative 2: Proposed Action**

No historic properties were identified during the cultural resources inventory of the APE; therefore, the Proposed Action would not remove or affect any known resources. Consequently, FEMA determined that implementation of the Proposed Action would result in a finding of “no historic properties affected” under 36 CFR 800.4(d). As documented in the correspondence in Appendix A of this EA, FEMA consulted with ASHPO regarding the findings and determination regarding the implementation of the Proposed Action.

Unexpected subsurface historic properties could be discovered during ground-disturbing activities. Since visibility was limited by dense vegetation during the archaeological survey, the vegetation clearing and initial ground disturbance within the APE would be monitored by an archaeologist to facilitate identification of any discoveries. ASDOE (including its contractors and agents) would be responsible for halting work in the event of an unanticipated discovery during construction, and notifying TOFR and FEMA as soon as practicable. If FEMA determines that the discovery has the potential to be a significant historical property, FEMA would require ASDOE to stop all construction in the vicinity of the discovery and to take all reasonable measures to avoid or minimize harm to the property until FEMA concludes consultation with ASHPO, pursuant to 36 CFR Part 800.13(b). If the property is determined eligible for the National Register of Historic Places and cannot be avoided, a Memorandum of Agreement with ASHPO would be required.

## 4.6 Geology, Soils, and Seismicity

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 with small amounts of andesite and trachyte. The mountains extend approximately 20 miles from east to west. The highest peak is approximately 2,142 feet, and the land slopes steeply from the tops of the mountain ridges down to the ocean (FEMA 2008).

### 4.6.1 Geology and Soils

Geologic hazards on Tutuila include landslides, volcanic eruptions, earthquakes, cyclones, and tsunamis. 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 (FEMA 2008).

The only active volcano in the American Samoa region is the volcanic seamount Vanilulu'u located approximately 100 miles east of Tutuila. The Ofu-Olosega volcano last erupted in 1866, and other volcanoes in the region have been silent for thousands of years. No active volcanoes exist on the island; however, many craters are still visible on the landscape (FEMA 2008).

Earthquakes in American Samoa mainly originate from the Tonga Trench, approximately 120 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 (FEMA 2008). Tsunamis (huge water waves) that affect Tutuila are generated by earthquakes from fault movements along the Tonga Trench, the Pacific Rim in the Aleutian Islands, South America, and other locations.

In 1868 and 1960, tsunamis originating in Chile caused damage in the Samoan Islands. The tsunami that hit Tutuila in 2009, as a result of an earthquake that occurred along the Tonga Trench, resulted in widespread destruction including complete destruction of the existing Taputapu Elementary School campus. The National Oceanic and Atmospheric Administration and National Weather Service operate the Pacific Tsunami Warning Center, which monitors sudden earth movements throughout the Pacific Basin. Warnings are broadcast by the news media on radio and television (FEMA 2008).

U.S. Soil Conservation Service (National Resources Conservation Service) identified two soil classifications within the Fagali'i watershed—Fagasa-Ofu silty clays and Fagasa family-Lithic Hapludolls-Rock outcrop association. The proposed school site is characterized by Fagasa-Ofu silty clays. This soil ranges between 20 to 40 inches in depth and the permeability is moderately rapid (2 to 6 inches per hour). The potential for surface runoff from these soils is considered moderate to rapid, and the potential for erosion is moderate to severe (ASEPA and ASCMP 2000). The proposed Taputapu campus is shown on ASDOC landslide risk maps as having medium risks for landslides.

#### **Alternative 1: No Action**

Under the No Action Alternative, geologic conditions on the project site would remain the same as they are under existing conditions; therefore, no project-related effects would occur. Additionally, no ground-disturbing activities would occur as a result of the No Action Alternative; therefore, the No Action Alternative would have no direct effects on existing soils.

**Alternative 2: Proposed Action**

The Proposed Action would entail soil disturbance through grading and vegetation removal in an area that has been identified as having moderate to severe potential for erosion. Construction activities could leave on-site soils exposed and susceptible to water and wind erosion.

The proposed site slopes from the main road easterly up to the mountain side. Due to the existing topography of the site, substantial cut and fill is anticipated during site preparation to prepare the proposed site for construction of the new campus facilities. Though detailed grading plans have not yet been prepared, it is anticipated that the cut and fill would be fairly balanced and little material export would be required.

ASDOE would require preparation of an engineering-level geotechnical investigation prior to final project design to identify any unforeseen geological conditions such as expansive soils that would affect the Proposed Action. The geotechnical investigation will identify engineering measures in the foundation and structural design needed to account for the presence of erodible soils. ASDOE would require the project architect and civil engineer to design the site to mitigate any adverse geological or soil conditions identified in the geotechnical report.

To minimize potential erosion caused by construction activities, ASDOE would require the contractor to prepare and implement an erosion control plan. The erosion control plan would include phased construction to minimize the amount of exposed soil at any given time and would require all work to cease during heavy rains. The plan would require that all soil stockpiled on-site for use as fill, or that has been excavated from the action area, be covered and surrounded by a sediment barrier to prevent sediment loss.

Additionally, the plan would include a debris disposal plan to ensure that all excavated material is transferred to a designated and preapproved debris disposal site as described in ASEPA's American Samoa Erosion & Sediment Control Field Guide (ASEPA and ASCMP 2011) and the ASEPA Guidance Manual for Runoff Control (ASG and ASEPA 2001). ASDOE would also implement permanent erosion control measures as described in the American Samoa Erosion & Sediment Control Field Guide, where appropriate, when construction is completed (ASEPA and ASCMP 2011).

The Proposed Action has the potential to result in adverse effects due to soil erosion and other soils-related conditions that may be identified in the geotechnical investigation. Adherence to the erosion control plan during construction and implementation of engineering recommendations identified in the geotechnical report would ensure that the Proposed Action would not result in any adverse effects on the geology or soils of the project site.

#### 4.6.2 Seismicity

FEMA classifies the island of Tutuila as Seismic Zone 3, meaning it will experience earthquake ground shaking of approximately 0.2g 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 0.2g 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 (Territorial Emergency Management Coordinating Office 2008).

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. This EO applies to the construction of new buildings, which are defined as structures used or intended for sheltering persons or property.

##### **Alternative 1: No Action**

Under the No Action Alternative, no construction would occur and existing site conditions would remain the same as they are under existing conditions; therefore, no effects would occur.

##### **Alternative 2: Proposed Action**

Under the Proposed Action, the potential for volcanic eruptions and earthquakes in the project area would remain unchanged. An earthquake of 0.2g is unlikely to affect the proposed site. In addition, the proposed structures would be appropriately designed and constructed to current building standards set by the National Earthquake Hazard Reduction Program for local site conditions (including soil type). The proposed structure would be constructed to adhere to the relevant local building codes with respect to seismic safety to minimize potential effects due to strong ground shaking.

### 4.7 Land Use and Planning

American Samoa's 2003 Territorial General Plan presents a policy agenda for development, but it does not provide geographically specific land uses or prescribe geographically specific land use zones in the manner of a typical 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). A major 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 use of land within his/her village.

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 LUP Application be submitted for review under the PNRS, which is the land use permitting process for the territory. 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 (FEMA 2010).

The proposed site was previously cleared and otherwise disturbed for purposes of establishing subsistence crops such as coconut trees [*niu*], breadfruit [*'ulu*], banana trees [*fa'i*], and taro plants. One existing structure—a small shade structure—is located at the highpoint of the site. Surrounding land uses include scattered residences located west, north, and east of the site.

#### **Alternative 1: No Action**

Under the No Action Alternative, the proposed site would remain unchanged. No new facilities would be built and the existing shade structure on the site would remain. The informal subsistence agricultural use would continue; therefore, no effects on land use would occur and a PNRS review would not be required.

#### **Alternative 2: Proposed Action**

The Proposed Action would include grading the site to create a level pad for installation of the building foundations, construction of the new school facilities, and long-term operation of the school on the new site. The school would be located near existing residences, including some as close as 100 feet from the proposed campus. This would constitute a change in land use, but would not be considered an adverse effect. The proposed replacement school would be a small-scale community facility that would not be incompatible with the surrounding residential land uses.

ASDOE would be responsible for initiating and facilitating the PNSR approval process and would coordinate with the village *matai* to obtain written agreement from all landowners directly affected by the Proposed Action. Implementation of the Proposed Action would not modify existing land use around the project area. In addition, ASDOE would be responsible for applying for and obtaining PNRS approval.

## 4.8 Transportation

A new road borders the project area to the north and east (Image 9). A new gravel driveway would be constructed to provide vehicular access into the proposed campus (Figure 3.1).



Image 9: View facing north to new road from proposed Taputapu Elementary School site.

### **Alternative 1: No Action**

Under the No Action Alternative, no construction would occur; therefore, no effects would occur to the existing transportation system.

### **Alternative 2: Proposed Action**

Implementation of the Proposed Action would result in temporary, minor effects on transportation during the construction of the new school campus. The Proposed Action would result in temporary increases in vehicle trips on the new road due to construction-related traffic.

Access to the construction site and proposed campus would be provided by a driveway from the new road. The selection of the point at which the driveway intersects the road would need to take into consideration adequate sight distance to ensure safe visibility between vehicles exiting the driveway and vehicles approaching the driveway from the south around the curve in the roadway. Given the low traffic volume and the low posted speed limit on the road, this can be readily accomplished.

To minimize potential adverse impacts to traffic and circulation during construction, ASDOE would require the contractor to implement the following mitigation measures:

- ASDOE would stage construction equipment, materials, and vehicles to minimize hindrances to traffic flow.
- ASDOE would provide advance written notice of the construction schedule to all residents who would have limited access to their homes or driveways during construction. The written notification would identify a local contact person with ASDOE.
- ASDOE would review traffic patterns to determine if and when traffic restrictions are required during construction.

The Proposed Action would result in a permanent increase in vehicular traffic on the new road as students, teachers, and administrators access the proposed campus. However, the increase in traffic would be minor due to the small size of the school, and this would not result in adverse effects on the new road or on existing traffic conditions.

#### 4.9 Noise

The proposed campus site currently experiences a minor amount of occasional noise from the new road and from scattered residences in the vicinity of the proposed campus site, including sound generated by vehicular traffic, human voices, and equipment operation. There are no major noise-generating sources in the project area.

##### **Alternative 1: No Action**

Under the No Action Alternative, no construction would occur and noise would remain at current levels; therefore, no effects would occur to existing noise-sensitive receptors.

##### **Alternative 2: Proposed Action**

Implementation of the Proposed Action would result in temporary construction noise that could adversely affect nearby sensitive receptors, including residents located adjacent to and near the site. However, the noise would be temporary and limited to the duration of project construction, which would occur over a period of approximately 10 months. Construction activity would generally occur between the 7:00 a.m. and 5:00 p.m. Monday through Friday, though some work outside those times may be necessary. Any deviation from this schedule would require ASDOE to contact the *matai* of the village of Fagali'i and nearby residents within 24 hours of this work to notify them of the anticipated construction schedule.

To reduce the temporary impacts from construction-related noise, ASDOE would require the contractor to implement the following measures to reduce noise levels to the extent practicable:

- All noise-producing project equipment and vehicles using internal combustion engines (including haul trucks) would be fitted with mufflers; air-inlet silencers, where appropriate; and any other appropriate shrouds, shields, or other noise-reducing features. These devices would be maintained in good operating condition to meet or exceed original factory specifications. Mobile or fixed “package” equipment (e.g., arc welders or air compressors) would be equipped with the shrouds and noise control features that are readily available for that type of equipment.
- All mobile or fixed noise-producing equipment used on the project site that is regulated for noise output by a local, territorial, or federal agency would comply with such regulation while used in the course of project activity.
- At least 20 days prior to the commencement of construction, ASDOE would provide written notification to property owners and residents within 500 feet of the project area and to the *matai* of the village of Fagali'i. A notice would also be posted at the construction site. The notice would provide a construction schedule, the required noise mitigation measures for the project, and the name and telephone number of the project manager who can address questions and problems that may arise during construction.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, would be for safety warning purposes only.

Noise levels would generally return to pre-construction levels following construction. However, the Proposed Action would introduce a new noise source to the project site and surrounding areas by introducing a school in the vicinity of existing residences. Residences to the west, north, and east of the proposed site would receive a small amount of noise from routine school-related sources such as children playing and equipment operation.

The new road would act as a buffer between the existing residential villages to the north and west of the project site and the proposed campus. In addition, the school is proposed at a higher elevation than the existing residences, which would reduce noise levels received by these residences. Noise conditions and their effect on nearby residences should be considered in further design and planning of the campus.

The Proposed Action would therefore result in short-term construction impacts that would be minimized by implementation of the construction measures listed above, and would result in a minor amount of long-term operational noise that would be minimized by topographic conditions and distance between the source and receivers, as well as campus design and planning. As a result, the Proposed Action would result in minor adverse effects with respect to noise.

## 4.10 Utilities

Utility connections, including electricity and water, are provided to the residences near the proposed site by the American Samoa Power Authority (ASPA). Conduit for water, electrical, and telecommunications was installed within the right-of-way concurrent with the construction of new road in 2012 in the vicinity of the proposed campus site. The water supply for the proposed school would be the recently constructed tank in Fagali'i, located east of the proposed site.

### **Alternative 1: No Action**

Under the No Action Alternative, no construction would occur; therefore, no effects would occur to existing public services and utilities.

### **Alternative 2: Proposed Action**

As part of the Proposed Action, all utilities, including electricity, telecommunications, and water, would be provided via connection points along the road. The Proposed Action would result in an increase in local demand for these services because the school would be a new use in the area. However, overall demand for electrical service would not increase because the old campus would no longer operate and the Proposed Action would have similar electrical demands to the pre-disaster condition. The water tank in Fagali'i has adequate capacity and service distribution line size to serve the replacement campus. The replacement campus will use an on-site septic system. Therefore, the Proposed Action would not result in adverse effects on existing utilities.

## 4.11 Socioeconomics/Environmental Justice and Public Safety

The 2010 Census of American Samoa (U.S. Census Bureau 2012) lists the population of the village of Poloa as 193, which is approximately 0.3 percent of the total population of American Samoa (55,519). The Census indicates that 38.9 percent (75) of the village population is male, and 97.9 percent (189) is ethnic Samoan (one ethnicity). The median age is 24.2 years, and 50.8 percent of the members of the village population aged 16 or older (64 people) are employed. The village has 35 households, and the average household size is 5.51 people. The median household income is \$20,625 (U.S. Census Bureau 2012).

According to the 2010 Census of American Samoa (U.S. Census Bureau 2012), the population of the village of Fagali'i is 247, which is approximately 0.4 percent of the population of American Samoa (55,519). The Census indicates that 46.6 percent (154) of the village population is male, and 95.1 percent (235) is ethnic Samoan (one ethnicity). The median age is 23.3 years, and 154 members of the village population aged 16 or older are employed. The village has 39 households, and the average household size is 6.33 people. The median household income is \$23,750 (U.S. Census Bureau 2012).

Following the destruction in 2009 of the Taputapu campus in Poloa, the school's students have been accommodated at other ASDOE schools in nearby villages. Under existing conditions, students are bused to these alternate facilities. Because of the increased enrollment from the displaced Taputapu students, the alternate facilities are operating beyond their intended capacity. As a result, the student population served by ASDOE is experiencing adverse socioeconomic effects under existing conditions.

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 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 of its programs, policies, and activities on minority and low-income populations (FEMA 2008). The population of American Samoa is generally highly homogeneous regarding ethnicity and income levels.

Potential public safety hazards include hazardous, explosive, reactive, or other dangerous materials that pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of or otherwise managed. The Resource Conservation and Recovery Act (RCRA) provides USEPA the authority to control hazardous wastes from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous wastes. In addition, the Hazardous Materials Branch of ASEPA regulates the importation, storage and disposal of hazardous materials and waste. In addition, ASEPA may prohibit such generation, transportation, storage or disposal if it is determined that these activities will endanger public health and safety or the environment, or where such activities are not performed in accordance with the regulations set forth in Title 24 of the American Samoa Code Annotated (ASEPA 2011).

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.

#### **Alternative 1: No Action**

Under the No Action Alternative, no construction activities would occur and conditions at the proposed site would remain the same as they are under existing conditions; therefore, there would be no effects on minority or low-income populations and no changes to the social or economic character of the community. In addition, no impacts would occur as a result of public safety hazards.

However, the No Action Alternative would not construct a replacement campus for the Taputapu School, and the students who had been or would be served by the old campus would continue to be housed in alternate ASDOE facilities. These alternate facilities would either continue to operate beyond their intended capacity, adversely impacting the educational experience for students and placing an additional burden on faculty and staff. Therefore, the No Action Alternative would result in an adverse socioeconomic effect on ASDOE and its students.

**Alternative 2: Proposed Action**

Implementation of the Proposed Action would establish a replacement campus in the vicinity of a small residential village, but this would not result in substantial changes to the socioeconomic character of the community. The Proposed Action would relocate the Taputapu school campus to a nearby site approximately 0.6 mile to the northeast and continue to accommodate the students that were served by the original campus. The proposed campus would return the school to its pre-disaster capacity and, therefore, would not foster growth in the vicinity of the proposed site or nearby villages. The Proposed Action would remove the existing campus from the village of Poloa, which would increase the commute time for the limited number of students residing in the village within walking distance of the pre-disaster school location. This would not be considered an adverse socioeconomic effect because the replacement campus is located near the existing campus and because the replacement campus would be considerably safer for students and school property. The Proposed Action would not permanently increase the number of residents in the project vicinity and would not generate additional demand for housing or jobs. Additionally, the Proposed Action would not have disproportionately high and adverse effects on minority or low-income populations. Thus, the Proposed Action would comply with EO 12898 and would not result in long-term adverse socioeconomic and public safety impacts.

Construction activities would involve the limited transportation, storage, usage and disposal of hazardous, explosive, reactive, or other dangerous materials on a temporary basis. Small quantities of these materials, such as gasoline and diesel fuel, would be used to power equipment during construction and maintenance activities. All construction activities involving the transportation, usage, and disposal of regulated materials would be subject to federal and local health and safety requirements. ASDOE would require the construction contractor to prepare a Minor Spill Response Plan that presents the procedures and protocols utilized in the event of a spill resulting from the activities associated with the construction and installation of the proposed school facilities. The plan would be reviewed and approved by the Hazardous Materials Branch of the ASEPA prior to notice to proceed for project construction. Adherence to this plan would ensure that the Proposed Action would not result in an adverse public safety effect due to hazardous or other regulated dangerous materials.

## 4.12 Visual Resources

The proposed Taputapu campus is located on densely vegetated hilly land approximately 700 feet east of the Pacific Ocean. The site is currently undeveloped and is surrounded by dense vegetation and hills. A small number of residential buildings are scattered to the west, north, and east of the project site.

In general, the site is located in a dramatically scenic area that features hillsides covered in lush vegetation and affords views toward the ocean (Image 10). However, such areas are typical throughout the western portion of the island and views of or from the project site are not uniquely distinctive compared to views in the greater vicinity.



Image 10: View facing northeast from the proposed Taputapu Elementary School property.

Existing viewers of the project area consist primarily of the nearby residents and visitors to the village and motorists on the new road. Residences in the vicinity of the proposed site are generally located at lower elevations than the site and some may have direct views of the site, though intervening vegetation and topography reduce this visibility to these receptors

### **Alternative 1: No Action**

Under the No Action Alternative, no construction would occur and no new facilities would be built; therefore, no adverse effects would occur to existing visual resources.

### **Alternative 2: Proposed Action**

The Proposed Action would have temporary impacts on the visual character of the project area. Construction activities would be visible from nearby residences and the new road. The viewers who would be directly affected by the short-term construction activities would be the small number of residents and their house guests located north and east of the project area and motorists on the new road.

The Proposed Action would introduce new visible features to the project site, replacing an undeveloped and heavily vegetated parcel with school buildings constructed on a graded pad. As a result, visible changes in the environment would include landform alteration, vegetation clearing, and erection of single-story or two-story buildings.

A detailed viewshed analysis of the project site has not been conducted and the number and location of residences directly affected by the Proposed Action are unknown. Intervening vegetation and topography generally limits the visibility of the site to most surrounding residences and other areas. ASDOE would ensure that further design of the campus would consider its effect on the visual landscape and incorporate measures to avoid adverse effects on existing views. With this proper design, implementation of the Proposed Action would not have a considerable adverse effect on existing visual resources.

### **4.13 Cumulative Impacts**

CEQ defines a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions...” (40 CFR Part 1508.7). The pace of growth and development in American Samoa has historically been very slow. There are no known development projects that have been proposed or approved for the village of Fagali’i.

Two additional tsunami-related reconstruction efforts elsewhere on the island are proposed for FEMA funding. These include a partial school reconstruction project located in the village of Fagasa, approximately 7 miles east of the Proposed Action, and reconstruction of the Satala power plant at one of five alternative sites along of Pago Pago Harbor, ranging from approximately 7 miles east of the Proposed Action to approximately 10 miles northeast of the Proposed Action. Due to the distance and geographical separation of these cumulative projects from the proposed Taputapu campus, there are no cumulative impacts to consider.

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## 5.0 Public Participation and Agency Coordination

FEMA is the federal agency responsible for conducting the NEPA compliance process for the proposed project. It is the federal agency's responsibility to expedite the preparation and review of NEPA documents in a way that is responsive to the needs of the villages of Poloa and Fagali'i, and the American Samoa residents, while meeting the spirit and intent of NEPA and complying with all NEPA provisions.

FEMA, with the assistance of ASDOE and TOFR, conducted an informal scoping program at the beginning of the NEPA review process. ASDOE and FEMA met with representatives of the following PNRS agencies and organizations on April 19, 2012, to gather their input on this project: ASPA, ASEPA, ASHPO, ASDPW, and ASDMWR.

TOFR, with support from FEMA, published (in both English and Samoan) a Public Scoping Notice in the *Samoa News* newspaper (with a circulation area covering all of American Samoa) on September 12 and 13, 2012. The Public Scoping Notice indicated a public comment period ending 30 days following publication of the notice. A copy of the published notice is provided in Appendix B. The Public Scoping Notice was also distributed to involved or interested representatives of the Federal Government, the American Samoa Government, and the private sector. A copy of the distribution list for the Public Scoping Notice is provided in Appendix B.

One comment was received by FEMA in response to the Public Scoping Notice during the 30-day public comment period. A copy of the correspondence is in Appendix B of this EA.

TOFR, with support from FEMA, published (in both English and Samoan) a Notice of Availability (NOA) of the Draft EA in the *Samoa News* on June 21, 2013. The NOA indicated a 14-day public comment period ending July 3, 2013. As detailed in the NOA, the Draft EA document was made available for public review and comment at two physical locations in American Samoa (TOFR's office on Ili'iili Road and ASDOE's office in Utulei). An electronic version of the Draft EA was made available on [FEMA's website at http://www.fema.gov/library/viewRecord.do?id=7623](http://www.fema.gov/library/viewRecord.do?id=7623). A copy of the published NOA is provided in Appendix C. The NOA was also distributed to involved or interested representatives of the Federal Government, the American Samoa Government, and the private sector. A copy of the distribution list for the NOA is included in Appendix C.

During the public comment period, FEMA solicited written comments on the Draft EA, which were to be addressed to:

FEMA EHP Taputapu, 1111 Broadway, Suite 1200, Oakland, California 94607 or  
[email to: fema-rix-ehp-documents@fema.dhs.gov](mailto:fema-rix-ehp-documents@fema.dhs.gov)

FEMA received one comment letter during the public review and comment period for the Draft EA, which was provided by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, Pacific Islands Regional Office Habitat Conservation Division, American Samoa Field Office. This letter is included in Appendix C. At the end of the public review and comment period, FEMA reviewed all comments and prepared this Final EA specifically to address those comments as part of the decision-making process for the Proposed Action. This Final EA will be made available to all parties notified of the Draft EA (as listed in Appendix C); its availability will also be advertised in the *Samoa News*.

# 6.0 References

All photographs in this document are courtesy of AECOM, 2011, 2012 and 2013 except where otherwise noted.

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# 7.0 List of Preparers

## 7.1 Federal Emergency Management Agency

Morgan Griffin, Deputy Regional Environmental Officer

Carl M. Nagata, P.E. Task Monitor

Samuel Ronveaux, Public Assistance Branch Chief

J.P. Henderson, Regional Counsel

Amy Weinhouse, Attorney/Advisor

## 7.2 AECOM

Douglas Bailey, Project Manager

Alex Hardy, Lead Environmental Planner

Lyndon Quon, Lead Biologist

Patrick McGinnis, Lead Archeologist

Trina Abbott, Environmental Planner

Jayna Morgan, Environmental Planner

Jane Chang, Environmental Analyst

Jeff Goodson, Environmental Engineer

Alan Avery, Graphics Coordinator

Dao Lee, GIS Specialist

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# Appendices

## Appendix A: Agency Consultation

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FEMA

April 8, 2013

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

Re: Taputapu Elementary School  
FEMA-1859-DR-AS, PW 197  
Subgrantee: American Samoa Department of Education

Dear Mr. Herdrich:

*David*

The Department of Homeland Security's Federal Emergency Management Agency (FEMA) proposes to provide financial assistance to the American Samoa Department of Education (ASDOE), through the Territorial Office of Fiscal Reform (TOFR), to restore the function of the entire Taputapu Elementary School and campus. ASDOE proposes to relocate the campus to a replacement site in Fagali'i, Tutuila, American Samoa (Undertaking). The entire Taputapu Elementary School was destroyed at its original location in the village of Paloa during the earthquake, tsunami, and flooding designated a Presidentially declared disaster (FEMA-1859-DR-AS). This letter, supported by the enclosed Cultural Resources Inventory Report, serves as FEMA's request for consultation with your office in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and its implementing regulations (36 CFR Part 800).

The Undertaking includes acquisition of a leasehold on the proposed 1.56-acre replacement site located in the village of Fagali'i, 1.3 miles north of the disaster-destroyed campus in Paloa. The Undertaking, as currently proposed, would also include construction of a 6,272-square-foot, two-story, classroom/administration building; a 1,960-square-foot, two-story, classroom/cafeteria building; a 1,568 square-foot, early childhood education building, and a 450-square-foot, restroom building. Additional site improvements would include construction of a 1,080-square-foot, gravel parking lot; a 1,000-square-foot, concrete playground; a 1,480-square-foot, gravel driveway; 2,028 square feet of concrete pedestrian walkways; a septic system; and connections to utility conduits adjacent to the site along the right-of-way of the road newly built in 2012. A detailed description of the Undertaking is provided in the enclosed Cultural Resources Inventory Report.

Mr. David Herdrich  
April 8, 2013  
Page 2

FEMA has determined that the area of potential effects (APE) is defined as a 1.56-acre area potentially subject to ground disturbance. The APE is coincident with the leasehold for the replacement site and is described in more detail in the enclosed Cultural Resources Inventory Report. The APE is shown in Figure 2 and Figure 3 of the enclosed Cultural Resources Inventory Report.

FEMA's archaeological consultant, AECOM, conducted background and archival research and an archaeological survey in an effort to identify and evaluate historic properties. No historic properties were identified in the APE. Methods and results are documented in the enclosed Cultural Resources Inventory Report.

Based on the results of its identification and evaluation effort, FEMA has determined that implementation of the Undertaking would result in "no historic properties affected". Unexpected subsurface historic properties could be discovered during ground-disturbing activities. Since visibility was limited by dense vegetation during the archaeological survey, ASDOE would be responsible for ensuring that a qualified, professional archaeologist monitors all vegetation clearing and initial ground disturbance within the APE as a condition of FEMA funding. ASDOE (including its contractors and agents) would be responsible for halting work in the event of an unanticipated discovery during vegetation clearing or ground disturbance and notifying TOFR and FEMA as soon as practicable. If FEMA determines that the discovery has the potential to be a significant historical property, FEMA would require ASDOE to stop all construction in the vicinity of the discovery and to take all reasonable measures to avoid or minimize harm to the property until FEMA concludes consultation with your office, pursuant to 36 CFR Part 800.13(b).

FEMA requests your review and concurrence regarding these findings. Unless your office objects to FEMA's determinations within 30 days of receipt of this request, FEMA may consider its responsibilities under Section 106 of the NHPA complete and fund the Undertaking. If you have any questions regarding this request or require additional information, please do not hesitate to contact me at (510) 627-7033, [morgan.griffin@fema.dhs.gov](mailto:morgan.griffin@fema.dhs.gov), or the letterhead address.

Sincerely,



G. Morgan Griffin  
Deputy Regional Environmental Officer

Enclosure

cc: Lima Fiatoa, TOFR

**Hon. Lolo Matalasi  
Moliga**  
Governor

**Lemanu Peleti Mauga**  
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: (684) 699-2276

May 15, 2013

69-13HP

Mr. G. Morgan Griffin  
Deputy Regional Environmental Officer  
U.S. Department of Homeland Security  
1111 Broadway, Suite 1200  
Oakland, CA 94607-4052

Re: Taputapu Elementary School  
FEMA-1859-DR-AS, PW 197  
Subgrantee: American Samoa Department of Education

Dear Mr. Griffin:

Thank you for your letter dated April 8, 2013 concerning the Federal Emergency Management Agency's (FEMA) proposal to provide financial assistance to the American Samoa Department of Education (ASDOE) through the Territorial Office of Fiscal Reform (TOFR) to relocate the Taputapu Elementary School and campus from Poloa village to a replacement site in Fagali'i, Tutuila, American Samoa (Undertaking). I have reviewed your letter, the attached AECOM Cultural Resources Inventory Report, and offer the following comments.

I concur with your determination of the area of potential effects (APE), as per the documentation included with your letter.

I also concur with your determination of "no effect on historic properties" because an archaeological survey documented in the Cultural Resources Inventory Report found no evidence of historic properties within the APE.

In addition, I concur with FEMA's recommendation to have ASDOE ensure that a qualified professional archaeologist monitor the all vegetation clearing and initial ground disturbance because the archaeological survey that was conducted by FEMA was limited by dense vegetation. It is understood that in the event of an unanticipated discovery during vegetation clearing or ground disturbance activities that ASDOE would halt the work and notify TOFR and FEMA as soon as practicable. It is further understood that if FEMA determines that the discovery has the potential to be a significant historic property that FEMA would require ASDOE to stop all construction in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the property until FEMA concludes consultation with the ASHPO pursuant to 36 CFR § 800.13(b)

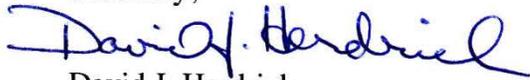
Thank you for your time and attention. This information has been provided upon the request of the Federal Emergency Management Agency in order to assist FEMA with its Section 106 responsibilities under the National Historic Preservation Act of 1966, as amended and specified in the 36 CFR § 800 regulations.

● Page 2

May 15, 2013

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

Sincerely,

A handwritten signature in blue ink that reads "David J. Herdrich". The signature is fluid and cursive, with the first name "David" being the most prominent.

David J. Herdrich  
Historic Preservation Officer

cc: Paula Falk Creech, American Samoa and Micronesia Program Manager, NPS  
Lima Fiatoa, TOFR

## Appendix B: Public Scoping Notices, Agency Distribution List, and Responses

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# PUBLIC SCOPING NOTICE

## ENVIRONMENTAL ASSESSMENT

### Taputapu Elementary School Replacement

#### FEMA-1859-DR-AS, PW 197

The American Samoa Department of Education's Taputapu Elementary School in Poloa Village was severely damaged by the earthquake, tsunami, and flooding that occurred on September 29, 2009, and was declared a Presidential disaster (FEMA-1859-DR-AS). The event destroyed all five buildings on the campus. To restore the function of the destroyed school, the American Samoa Department of Education (ASDOE) has requested financial assistance from the Department of Homeland Security's Federal Emergency Management Agency (FEMA). If approved, FEMA would provide financial assistance to ASDOE, through the Territorial Office of Fiscal Reform (TOFR), under the Public Assistance Program. ASDOE is considering a project to meet the need to replace the destroyed school by constructing new buildings and a new campus on a different site outside of the 100-year floodplain. The proposed site is located near Fagali'i Village, approximately 1.3 miles from the destroyed school site.

Before making any irreversible decisions regarding the project, FEMA must follow the appropriate environmental and historic preservation (EHP) review processes. These EHP reviews include ensuring that the project complies with the requirements of the National Environmental Policy Act (NEPA), the National Historic Preservation Act, Executive Order 11988 on Floodplain Management, and other laws, regulations and executive orders. To meet its NEPA compliance responsibilities, FEMA has initiated preparation of an Environmental Assessment (EA), which will evaluate potential effects to the environment resulting from the project and share this information with interested parties. Obtaining public input through the EA process is a critical element of FEMA's commitment to meeting its EHP compliance responsibilities. Thus, FEMA is providing other governmental agencies, nongovernmental organizations, businesses, and the public the opportunity to participate in the information gathering (scoping) process regarding this project. Specifically, FEMA is seeking input to determine the scope of the EA (including alternatives) and substantial issues to be analyzed in the EA.

Relevant issues identified during the scoping process will be addressed in a Draft EA. When complete, the Draft EA will be submitted for public review and comment. ASDOE, TOFR, and FEMA will review all comments on the Draft EA before making any irreversible decisions regarding the project.

**Comments on this Public Scoping Notice will be accepted until 5:00 p.m. local time on the 30th day following publication of this notice.** Comments may be delivered in the following ways:

<b>U.S. Mail and Express Delivery:</b>	U.S. Department of Homeland Security Federal Emergency Management Agency, Region IX Office of Environmental and Historic Preservation Attn: Taputapu ES EA 1111 Broadway, Suite 1200 Oakland, CA 94607-4052
<b>Email:</b>	fema-rix-ehp-documents@fema.dhs.gov
<b>Facsimile:</b>	(510) 627-7138
<b>Telephone:</b>	(510) 627-7027 (messages only)

## FA'ASILASILAGA FA'ALAUATELE

### FUAFUAGA FA'ATATAU I LE SIOSIOMAGA

### TOE FAUSIA O FALE A'OGA A TAPUTAPU

#### FEMA-1859-DR-AS, PW 197

O le A'oga tulaga nuamua a Taputapu i le afo'aga o Poloa o le 'Ofisa o A'oga o 'Amerika Samoa, na maua fa'aleagaina i le mafui'e, ma le galulolo, i le aso 29 Setema i le tausaga 2009, ma na fa'alauiloa ai o se fa'alavelave fa'afuase'i (FEMA-1859-DR-AS). Na 'avea lea ma mafua'aga na maua fa'aleagaina uma ai fale e lima sa i le lotoa o le a'oga. Mo le toe fausia o fale e lima sa fa'aleagaina, sa talosagaina 'e le vaega o A'oga a le malo o Amerika Samoa, se fesoasoani tau tupe e ala i le vaega a le Homeland Security's Federal Emergency Management Agency (FEMA). 'Afa'i e talia le talosaga, 'ona fa'atupaina lea 'e le FEMA le fesoasoani tau tupe ma tu'uina atu loa i le vega o A'oga a le malo o Amerika Samoa, e ala atu i le 'Ofisa o le Territorial Fiscal Reform (TOFR), i lalo o le polokalama o alaga manuia lautele. 'Ua fuafua 'e le 'Ofisa o A'oga ni falea'oga e talafeagai ma le mana'oga e sui ai fale e lima e ala i le toe fausia 'o ni fale fou, 'atoa ai ma se lotoa fou mo le a'oga i le ita i fa'o au e 100-tausaga vailolalo. 'O le ita fa'atalosagaina mo lenei galuega e tatalata ane i le alafafaga o Fagali'i, pe tusa o le 1.3 mila mai le nofoaga sa fa'aleagaina o le a'oga.

A 'o le i'faia se i'uga mauamautu o lenei fa'amoemoe, e tatau lava i le FEMA, 'ona amana'ia aialga ma fuafuaga 'ua fa'atulaga ma toe iloiloina 'e le vega o le Si'osi'omaga o Fanua Fa'asao mo Tala-fa'asolopito (EHP). 'O nei iloiloga e aofia ai le mau'ino o le fa'atutaina o lenei galuega, e tusa ma aialga fa'a-le-tulafono 'ua fa'atato 'e le 'Ofisa o le fa'atauraina o le Si'osi'omaga (NEPA), le vaega o Nofoga Fa'asao mo Tala-fa'asolopito (NHPA), le Fa'asinomaga Fa'alotoifale (1988) o Lau'eie'e Vailolalo, 'atoa ma isi tulafono ma aialga, 'ae maise feutaga'iga 'ua faia. 'Ina ia o gazasi ma fuafuaga ma tute o le Matagaluega (NEPA), 'ua taulamua le (FEMA) i le tapenaina ma fa'atulaga su'esu'ega mo le Si'osi'omaga (EA), e au'ili'ili ai a'afaga patino e mafua mai i lenei galuega, ma fa'asoa atu ia fa'amatalaga 'ia i latou e fia maua se malamalamaga i ia mata'upu. 'O le mau'ina o fesoasoani ma fuafuaga mai i le malo ma tagata lautele, e fa'ao' mai i le 'Ofisa o le (EA), o se vaega taua tele i fuafuaga fa'ata'oto'oto a le (FEMA), 'ina 'ia fetu'ai ma aialga ma le fa'atinoaga o le tautua a le 'Ofisa (EHP). Ma, 'ua fa'amatu'u atu 'e le (FEMA) ni avanoa tua i 'Ofisa o le malo, fa'alapotopotoga luma'oti, ma so 'o se pisinisi, 'ina ia 'auai i le tau sailia pea 'e le (FEMA) ni fuafuaga ma ni fesoasoani e fuafua ai se fa'atulagaga sologa lelei 'o iloiloga, fa'atasi ma ni suiga talafeagai i le au'ili'iliaga o su'esu'ega a le 'Ofisa.

O ni mata'upu talafeagai ma logoleleia e mafai 'ona fa'a'ailoa i le gasologa o le fa'amoemoe, 'o le 'a fa'alauiloa i le pepa o le iloiloga. 'A mae'a, 'ona tu'uina atu lea mo se toe iloiloga pe sasa'a fo'i i ai le tofa ma le utaga i le mamalu lautele o le atunuu, mo ni fuafuaga ma ni teuteuga. 'O le 'a iloiloga ma silasila toto 'a le matagaluega o A'oga, ASDOE, TOFR, ma le FEMA, i fuafuaga ma fesoasoani o le 'a fa'ao' mai, 'a 'o le'i tumau se fa'a'auga mo lenei fa'amoemoe.

O ni fa'amatalaga ma ni fuafuaga 'uma i lenei polokalama e peli 'ona fa'a'ailoa atu, o le 'a talia ma taulimaina, e 'amata mai i le taimi e fa'alauiloa ai lenei fa'amoemoe, se'ia fa'agata i le tutonuu o le lima (5:00pm) i le afa'i o le aso toluasefulu. E mafai ona tu'uina mai fa'amatalaga i auata ia ua ta'ua i lalo:

<b>Meli a le U.S.:</b>	U.S. Department of Homeland Security Federal Emergency Management Agency, Region IX Office of Environmental and Historic Preservation Attn: Taputapu ES EA 1111 Broadway, Suite 1200 Oakland, CA 94607-4052
<b>Imeli:</b>	fema-rix-ehp-documents@fema.dhs.gov
<b>Facsimile:</b>	(510) 627-7138
<b>Telefoni:</b>	(510) 627-7027 (na'o fa'amatalaga fa'aleo)



# PUBLIC SCOPING NOTICE

## ENVIRONMENTAL ASSESSMENT

### Taputapu Elementary School Replacement

#### FEMA-1859-DR-AS, PW 197

The American Samoa Department of Education's Taputapu Elementary School in Poloa Village was severely damaged by the earthquake, tsunami, and flooding that occurred on September 29, 2009, and was declared a Presidential disaster (FEMA-1859-DR-AS). The event destroyed all five buildings on the campus. To restore the function of the destroyed school, the American Samoa Department of Education (ASDOE) has requested financial assistance from the Department of Homeland Security's Federal Emergency Management Agency (FEMA). If approved, FEMA would provide financial assistance to ASDOE, through the Territorial Office of Fiscal Reform (TOFR), under the Public Assistance Program. ASDOE is considering a project to meet the need to replace the destroyed school by constructing new buildings and a new campus on a different site outside of the 100-year floodplain. The proposed site is located near Fagali'i Village, approximately 1.3 miles from the destroyed school site.

Before making any irreversible decisions regarding the project, FEMA must follow the appropriate environmental and historic preservation (EHP) review processes. These EHP reviews include ensuring that the project complies with the requirements of the National Environmental Policy Act (NEPA), the National Historic Preservation Act, Executive Order 11988 on Floodplain Management, and other laws, regulations and executive orders. To meet its NEPA compliance responsibilities, FEMA has initiated preparation of an Environmental Assessment (EA), which will evaluate potential effects to the environment resulting from the project and share this information with interested parties. Obtaining public input through the EA process is a critical element of FEMA's commitment to meeting its EHP compliance responsibilities. Thus, FEMA is providing other governmental agencies, nongovernmental organizations, businesses, and the public the opportunity to participate in the information gathering (scoping) process regarding this project. Specifically, FEMA is seeking input to determine the scope of the EA (including alternatives) and substantial issues to be analyzed in the EA.

Relevant issues identified during the scoping process will be addressed in a Draft EA. When complete, the Draft EA will be submitted for public review and comment. ASDOE, TOFR, and FEMA will review all comments on the Draft EA before making any irreversible decisions regarding the project.

**Comments on this Public Scoping Notice will be accepted until 5:00 p.m. local time on the 30th day following publication of this notice.** Comments may be delivered in the following ways:

**U.S. Mail and Express Delivery:** U.S. Department of Homeland Security  
Federal Emergency Management Agency, Region IX  
Office of Environmental and Historic Preservation  
Attn: Taputapu ES EA  
1111 Broadway, Suite 1200  
Oakland, CA 94607-4052

**Email:** fema-rix-ehp-documents@fema.dhs.gov  
**Facsimile:** (510) 627-7138  
**Telephone:** (510) 627-7027 (messages only)

## FA'ASILASILAGA FA'ALAUATELE

### FUAFUAGA FA'ATATAU I LE SIOSIOMAGA

### TOE FAUSIA O FALE A'OGA A TAPUTAPU

#### FEMA-1859-DR-AS, PW 197

O le A'oga tulaga muamua a Taputapu i le afio'aga o Poloa o le 'Ofisa o A'oga o Amerika Samoa, na matua fa'aleagaina i le mafai'e, na le galulolo, i le aso 29 Setema i le tausaga 2009, ma na fa'alauloia ai o se fa'alavelave fa'afuase'i (FEMA-1859-DR-AS). Na 'avea lea ma mafua'aga na matua fa'aleagaina uma ai fale o lima sa i le lotoa o le a'oga. Mo le toe fausia o fale e lima sa fa'aleagaina, sa talosagaina 'e le vaega o A'oga a le malo o Amerika Samoa, se fesoasoani tau tupe e ala i le vaega a le Homeland Security's Federal Emergency Management Agency (FEMA). 'Afa'i e talia le talosaga, 'ona fa'aupeina lea 'e le FEMA le fesoasoani tau tupe ma tu'uina atu loa i le vega o A'oga a le malo o Amerika Samoa, e ala au i le 'Ofisa o le Territorial Fiscal Reform (TOFR), i lalo o le polokalama o alaga manuia lautele. 'Ua fuafua 'e le 'Ofisa o A'oga ni falea'oga e talafeagai ma le mana'oga e sui ai fale e lima e ala i le toe fausia 'o ni fale fou, 'atoa ai ma se lotoa fou mo le a'oga i le itu i fano atu e 100-tausaga vailoloa. 'O le itu fa'atalosagaina mo lenei galuega e latalata ane i le alafalaga o Fagali'i, pe tusa o le 1.3 maila mai le nofoaga sa fa'aleagaina o le a'oga.

A 'o le'i faia se f'uga maumautu o lenei fa'amoemoe, e tatau lava i le FEMA, 'ona amana'ia aiaiga ma fuafuaga 'ua fa'atulaga ma toe iloiloina 'e le vega o le Si'osi'omaga o Fanua Fa'asao mo Tala-fa'asolopito (EHP). 'O nei iloiloga e aofia ai le ma'utinoa o le fa'atatau o lenei galuega, e tusa ma aiaiga fa'a-le-malafono 'ua fa'ataoto 'e le 'Ofisa o le fa'atauina o le Si'osi'omaga (NEPA), le vaega o Nofoaga Fa'asao mo Tala-fa'asolopito (NHPA), le Fa'asinomaga Fa'alotoifale (1988) o Lau'e'e Vailoloa, 'atoa ma isi tulafono ma aiaiga, 'e maise fentaga'iga 'ua faia. 'Ina ia o gatasi ma fuafuaga ma tiute o le Managaluega (NEPA), 'ua taulamua le (FEMA) i le tapenaina ma fa'atulaga su'esu'ega mo le Si'osi'omaga (EA), e au'il'i'i ai a'afiaga palino e mafua mai i lenei galuega, ma fa'asoa atu ia fa'amatalaga 'ia 'i latou e fia maua se malamalamaga i ia mata'upu. 'O le mauaina o fesoasoani ma fuafuaga mai i le malo ma tagata lautele, e fa'ao'o mai i le 'Ofisa o le (EA), o se vaega taua tele i fuafuaga fa'ata'oto'oto a le (FEMA), 'ina 'ia fetani ma aiaiga ma le fa'atinoga o le tautua a le 'Ofisa (EHP). Ma, 'ua fa'amatu'u atu 'e le (FEMA) ni avanoa taua i 'Ofisa o le malo, fa'alapotopotoga uma'oti, ma so 'o se pistinisi, 'ina ia 'anai i le tau sailia pea 'e le (FEMA) ni fuafuaga ma ni fesoasoani e fuafua ai se fa'amatalaga sologa lelei 'o iloiloga, fa'atasi ma ni suiga talafeagai i le au'il'i'iga o su'esu'ega a le 'Ofisa.

O ni mata'upu talafeagai ma logoleleia e mafai 'ona fa'ailoa i le gasolaga o le fa'amoemoe, 'o le 'a fa'alauloia i le pepa o le iloiloga. 'A mae'a, 'ona tu'uina atu lea mo se toe iloiloga pe sasa'a fo'i i ai le tofa ma le utaga i le mamalu lautele o le atunu'u, mo ni fuafuaga ma ni teuteuga. 'O le 'a iloiloma silasila toto'a le matagaluega o A'oga, ASDOE, TOFR, ma le FEMA, i fuafuaga ma fesoasoani o le 'a fa'ao'o mai, 'a 'o le'i tumau se fa'aiga mo lenei fa'amoemoe.

O ni fa'amatalaga ma ni fuafuaga 'uma i lenei polokalama e pei 'ona fa'ailoa atu, o le 'a talia ma taulimaina, e 'amata mai i le taimi e fa'alauloia ai lenei fa'amoemoe, se'ia fa'agata i le tutonuu o le lima (5:00pm) i le afiafi o le aso tolusefulu. E mafai ona tuuina mai fa'amatalaga i anula ia ua tu'ua i lalo:

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**Environmental Assessment Scoping Process**

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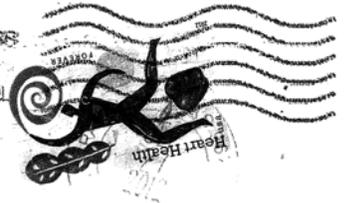
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Federal E. Management Agency, Region IX  
Office of Environmental & Historic Preservation  
Attn: TAPUTAU ES EA  
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Dakland, GA 30146

9/21/12

To whom it may concern,

2012-09-21 07:04

Hi, My name is APiseta.T. Pedro from the Village of POLOA. I read your Public Notice Article concerning about Taputapu E. Sch. was severely damaged by the earthquake, tsunami + flooding that occurred on Sept 29th, 2009 and you want some comments concerning about the sch. before making any decisions regarding about this Project. First of all, Thank you very much for concerning about this matter. In my own comment or my own personal opinion, its about time to build our school again. This a Public school of American Samoa not a private school.

\* Jema, thanks alot. Im telling you the truth. As a resident of POLOA for more than 30yrs, Nothing was done for my village was also damaged by the tsunami. No help from our government till now. They dont care + look down to us. but thank you very much for your care + concerning about our school. I loved this school cause this is the first sch ever built in my village under my father's leadership. He was the first principal in this sch. He worked hard + started this school for many yrs. He worked in the DOE for many yrs as a teacher + so thats the reason I want this sch back in remembrance of my father's hard working + care for this sch. So my personal comment is, please I want Taputapu E. Sch. to be build in our village (POLOA), the same place that was built before and move backwards + upwards to the mountains. As you know that some of the American Samoa's Elementary Schools now were near the ocean,

cont.

2/

So why not Taputapu? I know its not safe cause of the tsunami but when its on the mountains its not safe also cause of the earthquake. The other thing its too far for us (parents) to take our children to other schools or other things might happen. We never know. We want our children to be close to us always & forever. We care & love our children. So those are my personal feelings or comments about our school. I'm supporting my school to be build again in our Village. We also have many good lands for the sch to be build. Our village will work together about this matter. if you will make your decisions. So FEMA Please. Help us Build Taputapu Sch Again in POLOA. We had rules/laws from our Forefathers that passed away not written in papers but in their Hearts. Said, "Once the school built in one Village, it will remained forever. No matter what." But its up to you. God owns everything & he will help & guide you for your decisions. God bless!! There's a version from us. Marines says, Once a Marine, always a marine. So my version is: Once Taputapu was built before, Always Taputapu to be build again in POLOA!!

Thanks,  
Apsita Pedro  
Concerning Mother/Parent.

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## Appendix C: Notice of Availability of Draft Environmental Assessment, Distribution List, and Comments Received During Comment Period

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**TERRITORIAL OFFICE OF FISCAL REFORM  
OFFICE OF THE GOVERNOR  
AMERICAN SAMOA GOVERNMENT**

## **NOTICE OF AVAILABILITY**

### **Draft Environmental Assessment Taputapu Elementary School Replacement FEMA-1859-DR-AS, PW 197**

The American Samoa Department of Education's Taputapu Elementary School in Poloa Village was destroyed by the earthquake, tsunami, and flooding that occurred on September 29, 2009, and was declared a Presidential disaster (FEMA-1859-DR-AS). To restore the function of the destroyed school, the American Samoa Department of Education (ASDOE) has requested financial assistance from the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA). If approved, FEMA would provide financial assistance to ASDOE, through the Territorial Office of Fiscal Reform (TOFR), under FEMA's Public Assistance Program.

ASDOE proposes to construct a replacement Taputapu Elementary School campus on a site approximately 0.6 mile to the north of the pre-disaster school location, in the village of Fagali'i. The proposed site is approximately 1.56 acres in area and located at an average elevation of approximately 285 feet AMSL, outside the 500-year floodplain. The proposed site is adjacent to a new road that was opened in October 2012. All buildings on the proposed site of the campus would be constructed to current codes and standards.

FEMA has prepared a Draft Environmental Assessment (DEA) in compliance with the National Environmental Policy Act, as amended, and applicable implementing regulations. The DEA evaluates the environmental impacts of ASDOE's proposed project and alternatives. FEMA has made the DEA available for public review and comment at <http://www.fema.gov/library/viewRecord.do?id=7623> and the following locations: TOFR's office on Ili'ili Road (call 699-1330 for location information) and ASDOE's main office in Utulei (call 633-5237 for location information).

FEMA, TOFR, and ASDOE will consider all comments on the DEA before making decisions regarding ASDOE's proposed project. Comments relevant to the DEA should be provided in writing to FEMA Region IX, EHP / Taputapu ES DEA, 1111 Broadway, Suite 1200, Oakland, CA 94607-4052 or [fema-rix-ehp-documents@fema.dhs.gov](mailto:fema-rix-ehp-documents@fema.dhs.gov). Questions regarding the DEA or its availability can also be made by telephone at (510) 627-7027 (messages only). To be considered in the decision-making process, comments on the DEA must be received by midnight July 3, 2013.

## **AVANOA MO FA'ASILASILAGA FA'ALAU'ITELE**

### **Fuafuaga Fa'ata'ita'i mo le Si'osi'omaga Suiga Fou o le Fale A'oga a Taputapu Tulaga Muamua FEMA-1859-DR-AS, PW 197**

O le aoga tulaga muamua a Taputapu i le afo'aga o Poloa, o le Ofisa o A'oga a Amerika Samoa na matua fa'aleagaina i le mafui'e, galu lolo, ma lologa, i le aso 29, o Setema i le tausaga e 2009, sa fa'alauiloa ai o se fa'alavelave matautia i le poloaiga a le Peresetene, (FEMA-1859-DR-AS). I le toe fa'atamauina o auunaga o le fale a'oga ua fa'aleagaina, na talosagaina se fesoasoani tau tupe e le Matagaluega a le Ofisa o Aoga a Amerika Samoa mai le Ofisa o Fa'alavelave Tutupu Faafuase'i a le Matagaluega o le Saogalemu Fa'alotoifale a le malo tele o Amerika (FEMA). Afai e fa'amaonia ma talia, o le a'auina mai e le FEMA se fesoasoani mo le Ofisa o Aoga a Amerika Samoa, e taula mai i le Ofisa tau Tupe e toe fa'aleleia ai le Atunu'u/Territory (TOFR), i lalo o le Porokalame a le FEMA i le Fesoasoani mo Tagata Lautele.

O le Ofisa o Aoga a Amerika Samoa ua fuafua e toe fa'afuina fale aoga tulaga muamua a Taputapu i le lotoa e tusa lea ma le 0.6 maila i le itu i matu i le tulaga sa fa'aleagaina o le aoga, i le afo'aga o Fagali'i. O le tulaga fuafuaina e tusa lea ma le 1.56 eka ma o lo'o iai i le fua e tusa lona maualuga ma le 285 futu AMSL, i fafo atu o le 500-tausaga o laufanua o lologa. O le tulaga lea e feagai tonu ma le auala fou lea na tatalaina ia Oketopa 2012. O fale uma lava o lo'o fuafuaina i le tulaga lea o le lotoa o le a fausia lea i tulafono ma aiaiga uma o lo'o iai nei.

Ua saunia e le FEMA se Fuafuaga fa'ata'au o le Si'osi'omaga (DEA) ia mulimulita'i i tulafono ma aiaiga o Si'osi'omaga, na suia, ma fuafuaga fa'ata'au o tulafono. O Fuafuaga Fa'ata'au o Si'osi'omaga e iloiloina le malosiaga e tula'i mai a le Matagaluega a le Ofisa o Aoga mo fuafuaga o le porokalame ma isi tualumaga. Ua fa'avanoaina e le FEMA ia Fuafuaga Fa'ata'au o Si'osi'omaga mo iloiloiga, ma fautuaga mai le mamalu lautele o le atunu'u i le <http://www.fema.gov/library/viewRecord.do?id=7560> i nofoaga ua ta'ua: Ofisa o le TOFR i le ala i Iliili (vala'au le telefoni 699-1330 mo fa'amatalaga o lea nofoaga), faapea le ofisa 'auto o le Matagaluega o le Ofisa o Aoga a Amerika Samoa (ASDOE) i Utulei (vala'au le telefoni 633-5237 mo fa'amatalaga o lea foi nofoaga).

O le a iloiloina e le FEMA, TOFR, ma le ASDOE ia fautuaga uma mo Fuafuaga Fa'ata'au o le Si'osi'omaga ae le'i faia ni fa'a'iga e tusa ai ma le polokarame fuafuaina a le Matagaluega a le Ofisa o Aoga a Amerika Samoa. Fautuaga fetauti i le Fuafuaga Fa'ata'au o le Si'osi'omaga e tatau ona tu'uina atu i tusitusiga i le FEMA i le tuatusi o ta'ua atu: FEMA Region IX, EHP / Taputapu ES DEA, 1111 Broadway, Suite 1200, Oakland, CA 94607-4052 pe imeli [fema-rix-ehp-documents@fema.dhs.gov](mailto:fema-rix-ehp-documents@fema.dhs.gov). O ni fesili mo le Fuafuaga Fa'ata'au o le Si'osi'omaga po o se avanoa, e mafai ona faia i le telefoni lea (510) 627-7027 (na'o fa'amatalaga lava). Mo lou fia auai i tualumaga i le faia o fa'a'iga, o tima'iga mo Fuafuaga Fa'ata'au o le Si'osi'omaga e matua'i mo'omia lava ona mauaina i le vaeluaga o le po o Iulai 03, 2013.

**Distribution List**  
**Notice of Availability — Draft Environmental Assessment**  
**Taputapu Elementary School Replacement**  
**FEMA-1859-DR-AS, PW 197**

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**To:** FEMA-RIX-EHP-Documents  
**Cc:** \_NMFS PIR HCD EFH Consultation  
**Subject:** NMFS Comments on DEA for Taputapu Elementary School Replacement FEMA-1859-DR-AS, PW 197

Talofa FEMA Region IX, EHP/Taputapu ES DEA!

The Habitat Conservation Division of NOAA Fisheries Pacific Islands Regional Office (NMFS) has reviewed the Draft Environmental Assessment (DEA) for the Taputapu Elementary School Replacement project, FEMA-1859-DR-AS, PW 197, to construct a replacement Taputapu Elementary School campus on a site approximately 0.6 miles to the north of the pre-disaster school location, in the village of Fagali'i, Tutuila, American Samoa. NMFS appreciate the opportunity to provide the following comments pursuant to the Essential Fish Habitat (EFH) provision, §305(b) of the Magnuson Stevens Fishery Conservation and Management Act (MSA; 16 U.S.C. 1855(b)), the National Environmental Policy Act (42 U.S.C. 4321 et seq.), the Fish and Wildlife Coordination Act (16 U.S.C. § 662(a)), and the Clean Water Act (33 U.S.C. §1251 et seq.).

The Draft EA states that the project propose is to restore the function of the entire Taputapu Elementary School campus, including buildings and site improvements destroyed by the tsunami disaster.

The proposed site for the construction and replacement of Taputapu Elementary School campus is in Fagali'i village in an area of 1.56 acres located at an average elevation of about 285 feet above mean sea level (AMSL). It is stated that the proposed site for the project is not flat, thus it would require substantial cut and fill to establish building foundations. In addition, trenching is proposed for installation of the utility connections, including electricity, telephone, water, and solid-based sewer system connection.

We wish to provide the following comments on the DEA to avoid and minimize adverse effects to our trust resources:

- Implement Best Management Practices (BMPs) to control construction related pollutants from entering the marine environment, and to avoid turbidity and sedimentation in the lagoon and reef flat areas.
- Ensure that the contractor conducting the work is educated on the details of the BMP plan and is held accountable for ensuring that each of the BMP's are successfully implemented and effective throughout the construction period.

NMFS reiterates the importance of effective implementation, enforcement and monitoring of the proposed BMPs to ensure that there will be no discharge and run-off of sediment to the marine environment due to this project. If there will be discharge and impact to EFH, FEMA should consult with NMFS. The Magnuson-Stevens Fishery Conservation and Management Act mandates federal action agencies that fund, permit, or carry out activities that may adversely affect the Essential Fish Habitat (EFH) of federally managed fish species to consult with NOAA Fisheries regarding the potential adverse effects of their actions on EFH (Section 305 (b)(2)).

Thank you for the opportunity to provide comments on the DEA. Please feel free to contact us should you have any questions.

Fa'afetai!  
Fatima Sauafea-Le'au

NMFS-PIRO

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## Appendix D: Cultural Resources Inventory Report

Cultural Resources Inventory Report Bound Separately (RESTRICTED DISTRIBUTION)

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CULTURAL RESOURCES INVENTORY REPORT

# TAPUTAPU ELEMENTARY SCHOOL REPLACEMENT

TERRITORIAL OFFICE OF FISCAL REFORM  
AMERICAN SAMOA DEPARTMENT OF EDUCATION

FEMA-1859-DR-AS, PW 197

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KEYWORDS: TUTUILA EAST USGS 7.5' QUADRANGLE, TUTUILA WEST USGS 7.5' QUADRANGLE, 1.56  
ACRES, INTENSIVE PEDESTRIAN ARCHAEOLOGICAL SURVEY, TAPUTAPU, ELEMENTARY SCHOOL

COVER PHOTO: VIEW TO NORTH FROM PROJECT SITE

