



# FEMA

Sharing Information  
Enhancing Preparedness  
Strengthening Homeland Security

**Lessons Learned  
Information Sharing**  
[LLIS.gov](http://LLIS.gov)

## GOOD STORY

### Debris Management: The American Samoa Joint Field Office's Formation of the Interagency Debris Management Task Force

#### SUMMARY

The American Samoa Joint Field Office (JFO) established an interagency debris management task force to develop and execute an island-wide debris removal and cleanup plan after a tsunami struck the island in 2009. The task force collaborated with the American Samoa Government (ASG) to optimize island-wide debris management strategies, including reducing impacts to limited landfill capacity; identifying resource gaps, authorities, and capabilities; engaging the public to help segregate roadside debris; reducing the burning of pressure-treated wood; dealing with submerged cars and boats; and maximizing recycling of debris.

#### BACKGROUND

##### *The American Samoa Tsunami*

On Tuesday, September 29, 2009, at 6:48 a.m. Samoa Standard Time (SST), an earthquake with an 8.1 magnitude struck in the Pacific Ocean approximately 120 miles from the Samoan islands. The earthquake generated tsunami waves, the first of which struck the American Samoan island of Tutuila at 7:08 a.m. SST. The tsunami flooding resulted in 34 deaths, and 131 people reported to hospitals or clinics with injuries. Critical infrastructure throughout American Samoa suffered major damage due to tsunami wave inundation. In addition, thousands of people were left without shelter or food, while more than 40,000 cubic yards of debris were strewn across the islands. The highest concentrations of debris were located in the villages of Alao, Amanave, Asili, Auma, Leone, Poloa, Nua Seetaga, and Tula, as well as the Pago Pago Harbor. Debris included boats, cars, construction and demolition material, electronic waste, hazardous and toxic waste (HTW) and household hazardous waste (HHW), home appliances, metals, small motorized equipment, soil/rock material associated with landslides, tires, and vegetation.

American Samoa is an unincorporated territory of the United States. It has a total land area of 77 square miles and a population of approximately 65,000 people. American Samoa is located in the South Pacific Ocean 2,400 miles from Hilo, Hawaii, and 4,500 miles from San Diego, California.



**Tsunami Debris in Poloa**

### ***The Federal Response to the Tsunami***

The Federal response began immediately after the earthquake in American Samoa, before the National Oceanic and Atmospheric Administration's (NOAA) Pacific Tsunami Warning Center issued the first tsunami warning. Federal Emergency Management Agency (FEMA) Region IX activated its Regional Response Coordination Center to level 1 at 6:57 a.m. SST (11:57 a.m. Pacific Daylight Time). The National Response Coordination Center also activated to level 1 with selected emergency support functions (ESFs). FEMA Region IX worked with American Samoa Governor Togiola Tulafono to submit an expedited request for a major disaster declaration. President Barack Obama issued the declaration (FEMA-1859-DR) hours after the tsunami on September 29, 2009. U.S. Army Corps of Engineers (USACE) personnel deployed to American Samoa soon after the disaster to lead ESF #3 (Public Works and Engineering) and to conduct debris and power restoration, among other missions. In addition, a USACE staffer served as the lead debris subject matter expert (SME).

### ***Assessing the Debris Mission***

Upon arrival on American Samoa, the ESF #3 lead conducted an initial analysis of the debris mission, which included estimating the total volume of the debris, assessing the types of debris, developing planning strategies, and determining landfill locations and equipment availability. The ESF #3 lead recognized the complexity of the debris mission in American Samoa: the island had a large volume of debris but limited landfill and other land to store the collected debris. Cultural norms and maritime debris presented additional challenges for the mission. The ESF #3 lead concluded that a debris management task force should be established to develop and execute an island-wide debris removal and cleanup plan. On October 1, 2010, he requested the formation of the interagency debris management task force.



**Tsunami-Swept Vehicles behind Satala Power Plant**

### **GOALS**

The interagency debris management task force provided a venue for government agencies, private sector organizations, and non-governmental organizations to improve debris management operations on American Samoa after the tsunami. The task force fostered an interagency approach to the cleanup effort; identified authorities and agency capabilities; provided a platform for reducing impediments; and reduced overlap among debris removal efforts.

### **DESCRIPTION**

#### ***Interagency Debris Management Task Force***

The interagency debris management task force consisted of Federal, ASG, and private sector representatives from the following organizations:

- FEMA Region IX;
- JFO;
- National Park Service;

- Natural Resources Conservation Service (NRCS);
- NOAA;
- U.S. Coast Guard (USCG);
- U.S. Department of Transportation;
- U.S. Environmental Protection Agency;
- USACE;
- ASG Attorney General Office;
- ASG Department of Homeland Security;
- ASG Department of Commerce Coastal Management Program;
- ASG Department of Marine and Wildlife;
- ASG Department of Port Administration;
- ASG Department of Public Works;
- ASG Environmental Protection Agency;
- American Samoa National Guard; and
- American Samoa Power Authority (ASPA) Solid Waste Division.

The interagency debris management task force held its first meeting on October 2, 2010. Directed by the FEMA Region IX Deputy Infrastructure Branch Chief Lead, the task force met daily to discuss issues, identify capability and resource gaps, assign mission responsibilities, and bridge communication/information shortfalls. These meetings helped determine several critical debris removal responsibilities. The task force assigned USCG as the lead to develop a strategy for removing boats, cars, and other debris from Pago Pago Harbor. It identified NOAA as the authority for debris removal from coral reefs. Further, it clarified the American Samoa Environmental Protection Agency’s roles and responsibilities for HTW and HHW. Finally, the task force meetings allowed regulatory agencies to provide consultation regarding requirements for private property debris removal.

### **Cleanup Effort**

Almost half of the tsunami debris mission had been completed by November 8, 2009. In addition, the prompt formation of the interagency debris management task force helped facilitate a \$500,000 grant from the NRCS to the ASG for debris removal in streams. Participation on the task force enabled NRCS personnel to understand cleanup requirements and offer funds and resources. Finally, the task force garnered participation in roadside debris segregation from the public, fostered safe handling of hazardous materials, and maximized recycling of tires and metal.

### **Public Information Campaign**

#### **“Don’t CHEAT”**

The ESF #3 lead worked with ASPA Solid Waste and ASG Public Affairs during task force meetings to develop public service announcements that encouraged citizens to push debris into the right-of-way and to segregate it into different debris streams. To that end, ESF #3 and ASG public information officers implemented the “Don’t ‘CHEAT’ the Environment” slogan to communicate the importance of debris segregation to the American Samoan public. CHEAT is an acronym

for “Construction and demolition, Hazardous materials, Electronic waste, Appliances, and



**Tafuna Scrap Metal Yard**

Trees/vegetation.” USACE had utilized the “Don’t CHEAT” campaign during several prior disasters to foster more efficient and environmentally friendly debris management practices.

The public information campaign resonated with citizens and significantly improved their participation in debris removal operations. Citizens segregated pristine scrap metal from other debris, which enabled public works personnel to quickly transport the metal to the scrap yard without a trip to a landfill. USACE noted that strong relationships built during the interagency debris management task force meetings were critical to the success of public service announcements.

### **Pressure-Treated Wood Burning**

The JFO and ASG personnel observed that many American Samoans performed open air burning to reduce debris. This is an American Samoan cultural norm, but after the tsunami, the public had difficulty distinguishing between vegetative debris and pressure-treated wood. To address this issue, ESF #3 worked with the ASG to educate citizens about the importance of segregating the various types of debris, including pressure-treated wood, as well as to discourage them from burning pressure-treated wood. Public service announcements focused on the health hazards associated with burning pressure treated wood. The governor disseminated the announcements to village elders and ASG agencies for further distribution. The announcements contributed to a reduction in the amount of pressure-treated wood burned by the public, although it did not eliminate such burning completely.

Chromated Copper Arsenate is a preservative used to pressure treat wood. When burned, this preservative can present a significant health hazard.

The success of the debris public information campaigns can be attributed, in part, to the fact that in the American Samoan culture the community owns village land. Consequently, villages took active roles in debris removal operations and facilitated strong partnerships with FEMA, ESF #3, and other debris management stakeholders.

## **REQUIREMENTS**

### ***Interagency Participation***

Interagency participation enabled the task force to assign debris removal responsibilities and reduce overlap in assignments. Task force participation helped improve communication and information sharing among stakeholders. Further, involving all debris stakeholders in task force meetings helped them identify cleanup authorities that may have been overlooked had agencies acted independently.

### ***Prompt Formation of the Task Force***

The prompt formation of the interagency debris management task force ensured that the debris mission began immediately following the tsunami. It also facilitated a \$500,000 grant from the NRCS to the ASG for debris removal in streams.

## **REFERENCES**

Federal Emergency Management Agency. *The American Samoa Earthquake, Tsunami, and Flooding (FEMA-1859-DR) Joint Field Office and Pan-Pacific Regional Response Coordination Center After Action Report/Improvement Plan*. 09 Sep 2010.

Wingate, Mark. Disaster Program Manager, U.S. Army Corps of Engineers, South Pacific Division. Interview with *Lessons Learned Information Sharing*, 05 May 2011.

**DISCLAIMER**

*Lessons Learned Information Sharing (LLIS.gov)* is the Department of Homeland Security/Federal Emergency Management Agency's national online network of lessons learned, best practices, and innovative ideas for the emergency management and homeland security communities. The Web site and its contents are provided for informational purposes only, without warranty or guarantee of any kind, and do not represent the official positions of the Department of Homeland Security. For more information on *LLIS.gov*, please email [feedback@llis.dhs.gov](mailto:feedback@llis.dhs.gov) or visit [www.llis.gov](http://www.llis.gov).