



USVI Tsunami Walks: Building Community Resilience Through Grassroots Preparedness

By Regina Browne (VITEMA), and J’Lisa Martinez (VITEMA and Consult Universal LLC)

IN THIS ISSUE:

USVI Tsunami Walks: Building Community Resilience Through Grassroots Preparedness	1
CLiP and CRESCENT Launch 2025-26 Webinars	2
The Puerto Rico Ports Authority: Strategic Hub and Tsunami Preparedness	4
CoPes Tsunami Model Updates	5
NCEI Natural Hazards Image Database Photo Feature	6
How 30 Years of NOAA Research Led to One Very Accurate and Timely Tsunami Forecast	7
Updates from the American Samoa NTHMP	10
New Research	12
NTHMP Related Events	12

The Virgin Islands Territorial Emergency Management Agency (VITEMA) has successfully completed a series of Tsunami Walks across the territory, marking a significant milestone in community-driven disaster preparedness. These educational events brought together residents, emergency responders, students, and community organizations to practice evacuation routes and strengthen the territory's tsunami response capabilities.



The Tsunami Walk series launched on Friday, September 19th in Cruz Bay, St. John, where participants gathered at 5:30 PM at the Cruz Bay Welcome Center. The following day, Saturday, September 20th, residents of St. Thomas met at 8:00 AM at the Fort Christian parking lot to walk their designated evacuation routes. Most recently, on Saturday, October 4th, the St. Croix community came together at 8:00 AM at the Frederiksted Fish Market to practice reaching higher ground. The series will conclude with a Tsunami Walk on Water Island, scheduled for early November during the USVI Tsunami Awareness Week.

From Survey to Action

The development of these walks was made possible through valuable community feedback gathered by VITEMA's vendor, Consult Universal LLC. Their comprehensive survey provided crucial insights into community preparedness needs and concerns, enabling VITEMA to return to fundamentals and design practical, community-focused events. This grassroots approach has proven instrumental in building a stronger, more resilient community from the ground up.

Under the leadership of VITEMA Director Daryl Jaschen, the agency has prioritized these practical, boots-on-the-ground preparedness initiatives. Each walk provided participants with hands-on experience navigating evacuation paths from waterfront areas to safe assembly points outside tsunami inundation zones. Importantly, all walks were completed in 15 minutes or less, demonstrating that reaching safety is achievable within the critical time window following a tsunami warning. Community members learned to recognize natural warning signs of tsunamis, understand proper evacuation procedures, and identify the quickest routes to safety from their

TsuInfo Alert

Prepared and published bimonthly by the Washington State Department of Natural Resources, Washington Geological Survey, on behalf of the National Tsunami Hazard Mitigation Program (NTHMP), a state/federal partnership led by the National Oceanic and Atmospheric Administration (NOAA).

This publication is free upon request and is available in print by mail and online at:

<http://www.dnr.wa.gov/programs-and-services/geology/geologic-hazards/tsunamis/tsuinfo-alert>

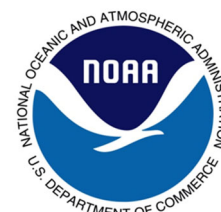
Assembled and edited by **Stephanie Earls**,
Librarian, Washington Geological Survey
Washington Dept. of Natural Resources

1111 Washington St. SE, MS 47007

Olympia, WA 98504-7007

360-902-1473 (p) 360-902-1785 (f)

stephanie.earls@dnr.wa.gov



NATIONAL TSUNAMI HAZARD MITIGATION PROGRAM LIBRARY CATALOG:

<http://d92019.eos-intl.net/D92019/OPAC/Index.aspx>

The views expressed herein are those of the authors and not necessarily those of NOAA, the Washington Department of Natural Resources, or other sponsors of TsuInfo Alert.

CLiP and CRESCENT Launch 2025-26 Season of Seismic Resilience Themed Webinars

The [Cascadia Lifelines Program](#) (CLiP) conducts research that will allow lifeline providers to implement value- and cost-informed decisions to mitigate damage to Pacific Northwest infrastructure as the result of Cascadia subduction zone earthquakes.

The [Cascadia Region Earthquake Science Center](#) (CRESCENT) partners with CLiP to offer a [free monthly webinar series](#) that showcases advances in seismic hazard assessment, infrastructure design, and earthquake resilience initiatives. Find presentation topics and registration information for the 2025-26 series [here](#).

View the most recent webinar from 10/23/25 that featured Kelly Missett from Oregon Hazards Lab here: "[Because Seconds Matter: ShakeAlert Earthquake Early Warning for Lifeline Infrastructure](#)"

CLiP CASCADIA LIFELINES PROGRAM

CRESCENT CASCADIA REGION EARTHQUAKE SCIENCE CENTER

WEBINAR SERIES

Fall 2025 - Spring 2026

1:00-2:00 pm (PST)

09/25/2025
10/23/2025
11/20/2025
12/18/2025
01/29/2026
02/26/2026
03/19/2026
04/23/2026
05/21/2026

REGISTER NOW

<https://cascadia.engineering.oregonstate.edu/webinar-series/>

NTHMP PARTNER UPDATES

USVI Tsunami Walks: Building Community Resilience Through Grassroots Preparedness

By Regina Browne (VITEMA), and J'Lisa Martinez (VITEMA and Consult Universal LLC)

(Continued from page 1)

coastal locations. The events served dual purposes as both educational opportunities and practical drills, ensuring that residents and visitors alike know how to respond quickly and effectively should a real tsunami threat occur.

Outstanding Multi-Agency Collaboration

The success of these events was amplified by exceptional participation from numerous local agencies and community organizations. Representatives from the Virgin Islands Water and Power Authority (WAPA), Virgin Islands Police Department (VIPD), Department of Property and Procurement (P&P), Department of Health (DOH), and FEMA joined forces to support the walks. The Bureau of School Construction participated alongside high school and junior high students, demonstrating the territory's commitment to educating the next generation about disaster preparedness.



Community Emergency Response Team (CERT) members and Love City Strong volunteers also attended, showing strong community engagement. Roe FM contributed their support to help spread awareness, and local tsunami expert Roy Watlington provided invaluable knowledge to participants, sharing his expertise on the specific tsunami risks facing the Virgin Islands and how to respond appropriately.



Building Resilience Together

Living in the Caribbean presents unique tsunami risks from various sources, including regional seismic activity. These community walks represent a proactive approach to public safety, transforming abstract emergency plans into practiced, familiar routines. By participating in these events, USVI residents are not only protecting themselves and their families but also contributing to a more resilient and prepared community overall.

The collaborative nature of these walks, bringing together government agencies, students, community organizations, and residents, exemplifies the power of collective action in disaster preparedness. As the series concludes with the Water Island Walk during USVI Tsunami Awareness Week, VITEMA continues to demonstrate that effective emergency management starts with listening to communities and empowering them with the knowledge and practice they need to stay safe.

NTHMP PARTNER UPDATES

The Puerto Rico Ports Authority: Strategic Hub and Tsunami Preparedness

By Wildaomaris González Ruiz, Puerto Rico Emergency Management Bureau (PREMB)

The Ports Authority is a government agency that manages the primary ports of entry and exit for passengers, consumer products, and raw materials. This agency operates and oversees transportation for both airports and seaports, including the Port of San Juan, one of the island's most important hubs. Approximately 80% of the food consumed in Puerto Rico is imported, and most of it is received through the Port of San Juan. Furthermore, this port is considered to handle the largest volume of cargo in the Caribbean. However, the buildings administered by the Ports Authority in San Juan, along with their roughly 190 employees and the daily influx of visitors, are exposed to being affected by a tsunami at any moment. It's noteworthy that, so far this year, over 2,200 earthquakes have occurred in Puerto Rico, of which 409 were of magnitude 3.5 or greater. This high seismicity makes preparing for the eventuality of a tsunami a vital concern.

For this reason, in August, the Ports Authority earned the TsunamiReady Supporter recognition for its San Juan facilities. This was achieved by strengthening tsunami preparedness among its employees through several key actions:

- Conducting training led by the Puerto Rico Emergency Management Bureau (NMEAD).
- Performing an evacuation drill where employees moved away from the coast and determined a designated assembly point in case of a Tsunami Warning for Puerto Rico or a major earthquake.
- Placing tsunami evacuation maps at various points throughout its facilities.
- Reinforcing methods for receiving and disseminating tsunami alerts.
- Painting the evacuation route to follow in case of a tsunami on the exits of each building (Figure 1).

The recognition event was attended by key figures in port operations and emergency management, including the Ports Authority Executive Director, Licenciado Norberto Negrón, and Air Rescue Supervisor, Carmen E. Reyes Cobián, in addition to personnel from the Puerto Rico Tsunami Program: Dr. Víctor Huérfano (PRSN), Ernesto Morales (NWS), and Wildaomaris González Ruiz (PREMB) (Figure 2).



Figure 1: Tsunami floor Signage at the San Juan Ports Authority.



Figure 2: TsunamiReady Supporter Recognition for the Ports Authority in San Juan. (From left to right: Dr. Víctor Huérfano (PRSN), Esq. Norberto Negrón (Ports Authority), Ernesto Morales (NWS), Wildaomaris González (PREMB), and Carmen Reyes (Ports Authority)).

NTHMP PARTNER UPDATES

Tsunami Model Updates

By Dr. Randy LeVeque, Dr. Yong Wei, and Dr. Loyce Adams

The CoPes Hub tsunami modeling teams are gearing up to do more extensive site-specific tsunami modeling based on the new ground motions scenarios for a potential CSZ earthquake. The GeoClaw tsunami model that is used by the UW modeling group is still being actively developed, and version 5.13.0 was recently released as part of the open source Clawpack project. A GeoClaw hackathon was held at the University of Colorado in May 2025 with 11 participants, immediately following the NSF-funded Community Surface Dynamics Modeling System (CSDMS) Annual Meeting. Another hackathon took place on October 6-8, 2025 at UW, following the SIAM Pacific Northwest Section meeting of the Society for Industrial and Applied Mathematics, which included several talks and posters on tsunami modeling.

Recent GeoClaw developments include: Incorporation of a dispersive fluid dynamics model (a form of "Boussinesq equations") in addition to the "shallow water equations" that are often used for tsunami modeling, providing more accurate models of short-wavelength phenomena. This implementation is described in a recent paper (Berger and LeVeque, 2024). Better coordination with D-Claw, an extension of GeoClaw developed for modeling debris flows and landslides (primarily by Dave George and Katy Barnhart at USGS). This code has recently been used for several landslide-generated tsunami hazard assessments. D-Claw results were presented at a USGS workshop on this topic in February, 2025, where Yong Wei also presented results using the NHWAVE code. Companion tsunami simulations based on the new ground motion scenarios are also being conducted using the MOST (Method of Splitting Tsunamis) model by the UW CICOES (Cooperative Institute for Climate, Ocean, and Ecosystem Studies) tsunami group led by Yong Wei. MOST is a depth-integrated shallow-water model developed by the NOAA Center for Tsunami Research (NCTR) at NOAA's Pacific Marine Environmental Laboratory (PMEL). Leveraging the GPU technology, MOST is the operational backbone of the SIFT (Short-term Inundation Forecast of Tsunamis) system used for real-time tsunami model forecast at NOAA's Tsunami Warning Centers (TWCs). A most recent highlight of this model is the successful forecast of the tsunami generated by the July 29, 2025 Mw 8.8 Kamchatka earthquake.

Other recent CICOES tsunami model developments and applications include: Development of a shallow-water-based model TSUNER (Tsunami with Nonlinear Erosion and Runup) that incorporates sediment transport to address tsunami inundation influenced by morphodynamics changes. A journal paper describing the formulation, methods, and model validation has been published in *Ocean Modeling* (Guerrero-Fernandez et al., 2024). Comparative studies to investigate tsunami impact on PNW coastlines influenced by static vs kinematic rupture processes, dispersive vs non-dispersive effects, and grid resolutions using different tsunami modeling codes (MOST, GeoClaw, NEOWAVE) New tutorials on using GeoClaw are now being developed and should be available this fall, and several other Hub members are planning to start doing their own modeling using this software. Some existing resources are listed on the GeoClaw website. Additionally, a training workshop on the Community Model Interface of Tsunami (ComMIT, Titov et al., 2011) is currently being planned this fall for Hub members who are interested in using the MOST model.

Publications:

- Berger, M.J., and LeVeque, R.J. (2024), Implicit Adaptive Mesh Refinement for Dispersive. Tsunami Propagation, *SIAM J. Sci. Comput.* 46, B554 - B578, <https://doi.org/10.1137/23M1585210>.
- Fernandez, E.G., Diaz, M.J.C., Wei, Y., and Moore, C. (2024): Modeling sediment movement in the shallow-water framework: a morpho-hydrodynamic approach with numerical simulations and experimental validation, *Ocean Modeling*, 192, 102445, <https://doi.org/10.1016/j.ocemod.2024.102445>.
- Titov, V.V., C. Moore, D.J.M. Greenslade, C. Pattiaratchi, R. Badal, C.E. Synolakis, and U. Kânoğlu (2011): A new tool for inundation modeling: Community Modeling Interface for Tsunamis (ComMIT). *Pure Appl. Geophys.*, 168(11), <https://doi.org/10.1007/s00024-011-0292-4>.

Link to CoPes Hub Quarterly Newsletter:

<https://cascadiacopeshub.org/wp-content/uploads/2025/09/Summer-2025-Quarterly-Newsletter.pdf>

NCEI NATURAL HAZARDS IMAGE DATABASE

EVENT: October 11, 1918 Puerto Rico Earthquake and Tsunami—A powerful magnitude 7.1-7.3 Mw earthquake struck northwest of Puerto Rico on October 11, 1918, generating a local tsunami of up to 20 feet (6 meters). The devastating events caused an estimated \$4 million (~\$78 million today) in damages, with an official death toll of 116 that is considered an underestimate because many people were unaccounted for. A landslide deposit found near the submarine cable damaged in 1918 was proposed in 2008 as the tsunami's source, but recent coring has since disproven this connection.



PHOTO DETAILS: House washed away by the waves on the coast (Mayaguez, Puerto Rico). Image courtesy of Puerto Rico Seismic Network and Historical Archive of Puerto Rico. Puerto Rico Ilustrado: YEAR IX. San Juan P.R. October 19, 1918. Num. 451. <https://www.ngdc.noaa.gov/hazardimages/#!/tsunami/273>

More images from this event are available in the [NCEI Natural Hazards Image Database](#). Any parties interested in contributing photographs to this free and public resource may contact NCEI for submission requirements at haz.info@noaa.gov or Lindsey Wright at lindsey.m.wright@noaa.gov.

Link to NCEI Natural Hazards Image Database: <https://www.ngdc.noaa.gov/hazardimages/#!/>

NTHMP PARTNER UPDATES

How 30 Years of NOAA Research Led to One Very Accurate and Timely Tsunami Forecast

By Vasily Titov, NOAA Pacific Marine Environmental Laboratory

When an 8.8 magnitude megathrust earthquake ripped along more than 360 miles of a subduction zone fault 85 miles offshore of Kamchatka, Russia, on July 29, 2025, scientists and emergency response officials had every reason to fear a major tsunami had been unleashed on the Pacific Ocean.

Twenty-six minutes later, tsunami waves racing outward from the epicenter at more than 400 miles per hour arrived at the first [DART](#) tsunami detection system, a moored buoy above a pressure sensor on the ocean floor that's part of a network run by NOAA's National Weather Service (NWS) through the [National Data Buoy Center \(NDBC\)](#). The most significant wave lifted the buoy almost 3 feet, the second-largest displacement ever recorded by the DART buoy system behind the 2011 Tohoku quake.

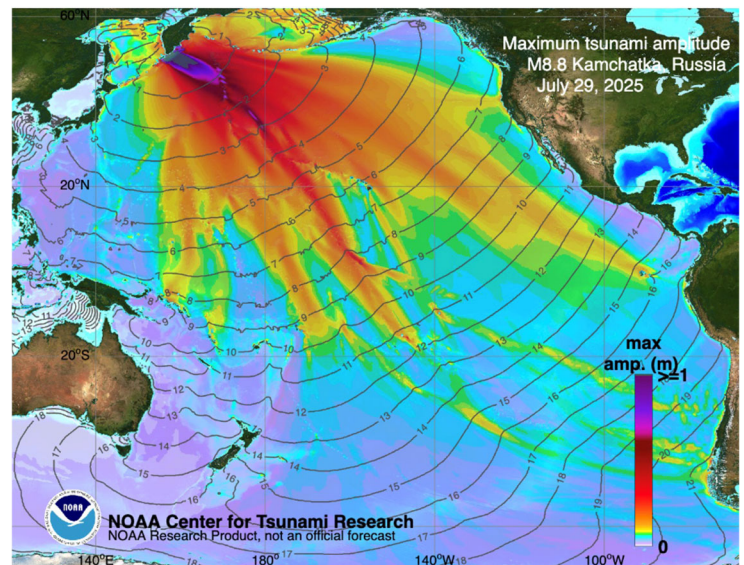
"We knew then that a catastrophic tsunami was propagating in the ocean," said Vasily Titov, a senior tsunami modeler at NOAA's Center for Tsunami Research (NCTR) based at NOAA's Pacific Marine Environmental Laboratory (PMEL).

The two [NWS Tsunami Warning Centers \(TWC\)](#) are NOAA's official source of tsunami information. The backbone of their forecast systems was developed over the past 30 years by the scientists at NCTR. When a quake strikes, researchers independently monitor seismic, water level sensor, and model outputs to confirm that they're running properly. They can then use the information to improve new system features that are under development.

A complicated forecast

The Kamchatka earthquake's location and intensity made tsunami forecasters' job – predicting when and where the waves would strike land, how high they would be, and how much shoreline the waves would inundate – a challenging task, Titov said.

"We did get a bit lucky because the tsunami didn't hit populated areas with its main force," Titov said. Most of the energy of the tsunami went south of Hawaii." Some of the biggest waves hit mostly unpopulated areas of Kamchatka, but very high wave run-ups along the steep cliffs along the coastline were observed, he added.



The energy of a tsunami does not move outward in all directions with the same momentum. That concept is illustrated here showing peak tsunami amplitudes based on DART data using NOAA forecast method with the MOST model. Credit: PMEL's NOAA Center for Tsunami Research.

(Continues on page 8)

NTHMP PARTNER UPDATES

How 30 Years of NOAA Research Led to One Very Accurate and Timely Tsunami Forecast

By Vasily Titov, NOAA Pacific Marine Environmental Laboratory

(Continued from page 7)

“This is the first time that a tsunami of such an ocean-wide scale did not cause direct deaths,” said Titov, who has been studying tsunamis since the 1990s. “All other tsunamis from similar strength earthquakes killed at least hundreds, often thousands of people. In light of this, the Kamchatka tsunami may be an important milestone. There are several factors that contributed, and the successful forecast is definitely one of them.”

“The model results were extremely accurate,” he said.

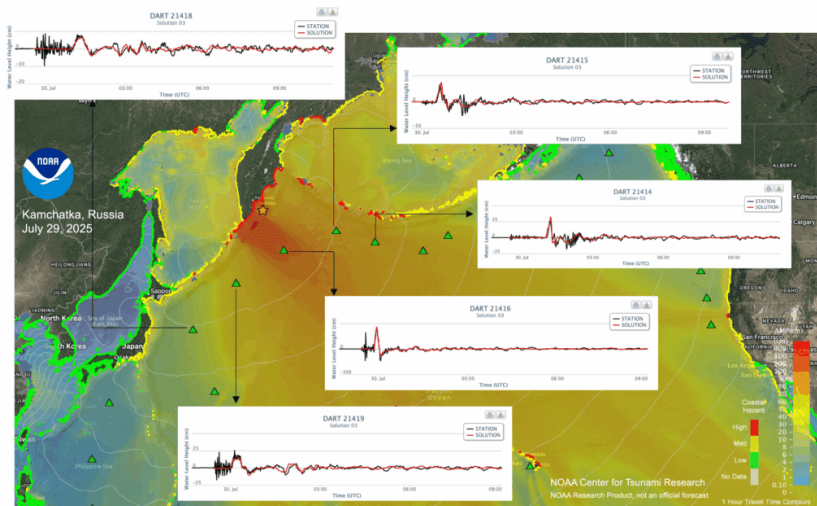
How does the forecast system work?

The tsunami forecasting system developed by NCTR scientists is built around two primary tools: a PMEL-designed Deep-ocean Assessment and Reporting of Tsunamis ([DART](#)) sensor that captures measurements of a tsunami wave as it passes, and a coupled numerical modeling capability, the Method of Splitting Tsunamis ([MOST](#)) model which predicts tsunami amplitudes and currents to guide tsunami warnings, advisories, and watches. Both components are combined into one forecast system named Short-term Inundation Forecast for Tsunamis ([SIFT](#)).

When a tsunami passes over a DART station, the bottom pressure recorder measures changes in water pressure, which are then transmitted to the surface buoy and relayed to tsunami warning centers via satellite. The DART data is combined with models to estimate the tsunami’s source, the area of the ocean floor displacement that generated the tsunami. This is done by comparing the observed wave characteristics, arrival time, height and period, with pre-computed tsunami simulations to produce the model source that best fits the DART data.

The estimated tsunami source is then used to initialize or update the MOST model, which simulates three processes of tsunami evolution: earthquake, transoceanic propagation, and inundation of dry land. The MOST model maps the forecast propagation of the tsunami wave across the ocean, suggesting its arrival time and height at numerous coastal locations. By incorporating DART data and refining the tsunami source, the MOST model can generate accurate and timely predictions of tsunami inundation and wave heights at specific coastal areas.

That detection and modeling process is combined into the SIFT system. SIFT uses the MOST model, earthquake information, real-time data from DART buoy networks, pre-computed scenarios from MOST, and real-time computations of high-resolution models to produce forecasts of arrival times, wave heights, current speeds, and potential inundation areas.



Summary of the tsunami propagation forecast in North Pacific showing predicted offshore peak amplitudes of propagating tsunami and potential coastal hazard levels in the background image. The insert plots show comparisons of this propagation model with 5 DART records that are closest to the tsunami source. The good comparison provides confidence in the accuracy of the forecast. Credit: NOAA Center for Tsunami Research.

(Continues on page 9)

NTHMP PARTNER UPDATES

How 30 Years of NOAA Research Led to One Very Accurate and Timely Tsunami Forecast

By Vasily Titov, NOAA Pacific Marine Environmental Laboratory

(Continued from page 8)

In essence, DART buoys capture actual measurements of wave energy, MOST provides the detailed tsunami simulations, and SIFT is the operational system that combines those simulations and real-time data for tsunami warning centers to analyze and forecast tsunami impacts to emergency managers.

How did the system perform?

Tsunami data from three of the DART buoys became available within about an hour of the earthquake. As more data came in and forecasters ran successive model iterations, it became apparent that the overall impact of tsunami waves on populated areas would be less severe than initially feared based on earthquake parameters alone. The first tsunami waves reached Alaska two hours after the earthquake, Hawaii six hours after the earthquake, Washington State eight hours after the earthquake, and nine hours to reach San Diego, California.

Measurements of the water displaced by the tsunami and its direction were also captured by new instruments on the [Surface Water and Ocean Topography satellite](#), jointly operated by NASA and the French national space agency [Centre national d'études spatiales](#). “That showed us that NOAA’s tsunami forecast was right on the money,” said Josh Willis, an oceanographer with NASA’s Jet Propulsion Laboratory.

Accurate tsunami forecasts not only help prepare vulnerable communities for impacts, PMEL Director Michelle McClure said, they also help avoid overestimates of impacts. “An accurate forecasting system also gives emergency managers the confidence to cancel evacuation orders earlier,” said McClure. “Will it be safe in two hours or in 12 hours?”

What’s in the research pipeline?

NCTR Director Christopher Moore said scientists are working on a next-generation forecast system, termed the Common Analytic System (CAS). Its main objective is to produce faster, more accurate, actionable forecast systems for the NWS Tsunami Warning Centers. The CAS will enable the two warning centers to collaborate more seamlessly during a tsunami event, produce joint forecasts, and allow one to back up the other more easily in case of an outage.

To achieve that goal, the CAS system will employ large-scale automation with AI components seamlessly characterizing the tsunami from its source through numerical modeling, Moore said. This process will ensure the TWC forecasters can have practical tools to analyze, predict, and deliver helpful decision support to coastal emergency managers during an impactful tsunami event.

“The new system will save precious minutes during tsunami forecast and warning operations, allowing more time to make life-saving warning decisions,” he said.

For more information, contact Theo Stein, NOAA Communications: theo.stein@noaa.gov.

Watch the tsunami propagate across the Pacific Basin in this PMEL video:

https://www.pmel.noaa.gov/public/pmel/videos/Kamchatka29Jul2025_global_animation.mp4.

Link to original article:

<https://research.noaa.gov/how-30-years-of-noaa-research-led-to-one-very-accurate-and-timely-tsunami-forecast/>

NTHMP PARTNER UPDATES

Updates from the American Samoa NTHMP

By Aukusitino Steffany, Program Liaison, American Samoa Department of Homeland Security

In a proactive move to enhance tsunami preparedness across the schools in American Samoa, the Department of Education (DOE) invited the Territorial Emergency Management Coordination Office (TEMCO)/American Samoa Tsunami Team to participate in its 2-day Teacher Orientation Workshop that was held in August 2025. The DOE Annual Orientation welcomed not only all public-school teachers, but also extended the invitation to private school educators, making this an inclusive initiative for schools across Tutuila, Anu'u and Manu'a. The first day of the orientation focused on elementary school teachers from thirty schools, while the second day was dedicated to High School educators from nine schools. Throughout both days, the TEMCO/ American Samoa Tsunami Team conducted outreach activities aimed at improving tsunami awareness, preparedness, and evacuation planning at the school level. Additionally, the event provided an opportune moment to address the recent 8.8 magnitude earthquake in Kamchatka, Russia which triggered a Tsunami Advisory for American Samoa. This also provided us the opportunity to expand on the importance of alert levels and the need for all school personnel to enhance their understanding of the procedures and communications issued during such events.



Opening Ceremony for Teacher's Orientation



Guest Speaker, TEMCO Assistant Administrator Mrs. Tina Tapuai - Day 2 of the Amerika Samoa 4th Annual Disaster Resilience Summit

September 9-11, 2025, was the Amerika Samoa 4th Annual Disaster Resilience Summit hosted by the Office of Disaster Assistance and Petroleum Management (ODAPM) bringing together key local, regional, and federal partners for three days of leadership engagement, emergency management training, and public outreach. The summit served as a vital platform for strengthening collaboration among emergency response agencies and enhancing preparedness across all sectors, specifically tailored to encourage youth participation in public safety and recovery efforts. The success of this event is largely dependent on the unwavering dedication and commitment of our Emergency Support Function (ESF) agencies, supported by leadership, participating departments and agencies, and our broader community. TEMCO personnel participated in months worth of planning meetings to ensure the success of this event. One of our very

own, TEMCO Assistant Administrator Mrs. Tina Tapuai, was a guest speaker for Day 2 of the ODAPM Summit. Mrs. Tina Tapuai shared her experiences in Emergency Management in American Samoa highlighting the critical role of professionals working in the emergency management field. She also provided an overview of the Emergency Operations Center (EOC) operations and expanded on the recent activation due to Adverse Weather Events that occurred in July and August, as well as the July 29 Kamchatka event which led to the full activation of the EOC. This was also a great opportunity for her to show the role that TEMCO plays during natural disasters. Tina Tapuai also presented information from the United States Geological Survey (USGS) Team on the underwater volcano known as Vailulu'u located on the Manu'a Islands. TEMCO participation in this summit included a presentation, tsunami exercise and outreach booth.

(Continues on page 11)

NTHMP PARTNER UPDATES

Updates from the American Samoa NTHMP

By Aukusitino Steffany, Program Liaison, American Samoa Department of Homeland Security

(Continued from page 10)

As part of this year's National Preparedness Month (NPM), TEMCO staff participated in several key events. Early in the month, the American Samoa Department of Homeland Security (ASDHS) collaborated with the Weather Service Office (WSO) Pago Pago and United States Geological Survey (USGS) Hawaiian Volcano Observatory in conducting outreach on the types of volcanoes in American Samoa and the data USGS has collected over the years in the Manu'a Islands. WSO Pago Pago staff and USGS personnel traveled to the Manua Islands on September 2-5, 2025 and met with our TEMCO personnel that are stationed there. On the Island of Ofu, the Team conducted outreach for the Olosega Elementary School and the residents of Ofu and Olosega. Afterwards, the team traveled by boat to the Island of Ta'u to conduct outreach for Manu'a High School and residents of Faleasao and Fitiuta on Ta'u Island.

On September 5, 2025, Dr. Laura Kong, Director of the International Tsunami Information Center (ITIC), and Dr. Dave Walsh of the Pacific Tsunami Warning Center (PTWC) hosted a workshop for TEMCO and WSO Pago Pago personnel. Their visit to American Samoa also included an outreach effort to share to the public their expertise and discuss data collected from Kamchatka, Russia tsunami event.

After returning from the Manu'a Islands, Dr. Natalia Deligne and Jefferson Chang of USGS provided an informational workshop for personnel from WSO Pago Pago and TEMCO on the volcanic activity in American Samoa specifically the Vailulu'u Volcano on the Manu'a Islands. The team also spoke on the data received from seismometers and GPS installed on Manu'a Islands after the 2022 Vailulu'u activities.

Another event that took place during NPM was the Resource Fair hosted by the Army Reserve 9th Mission Support Command. The goal of this event was to assist Army Reserve Soldiers and families in securing meaningful employment with our local government. It also served as a valuable platform for sharing disaster preparedness resources and information.

The Tsunami Awareness and Preparedness Week started on September 22-26, 2025. We kicked off with an "Awareness Wave." All of our stakeholders and partners participated in this effort to help raise tsunami awareness. GIS Analyst Joesph Meredith also presented the Tsunami Evacuation Maps Project for Four Coastal Villages (Fagaalu, Fagatogo, Fagaitua and Alofau). These maps have been in the works since the start of the year and are solely funded through the NTHMP. Maps were presented to the Village Council members of the four villages. The goal was to provide the village mayors with a comprehensive understanding of the maps, so they can guide their communities on how to use them effectively once they are publicly available. Mayors were given an in-depth briefing on the layout of the maps, which are designed to help residents quickly identify evacuation routes and safe zones in the event of a tsunami. This also provided an opportunity for the mayors to identify any potential gaps in their village evacuation maps or suggest changes that may be needed before the final versions of the maps becomes available. The last day of Tsunami Awareness and Preparedness Week was the presentation of the Adopt-A-Village project for the villages of Fagatogo, Fagaalu, Fagaitua and Alofau. The goal of this project is to empower these coastal villages, particularly the village council and 'aumaga, to take a more proactive role in their community's tsunami preparedness efforts. This includes the development and enhancement of evacuation routes, raising awareness of tsunami hazards, and creating and exercising tsunami evacuation plans. This presentation was a collaborative effort between the Governor's Office, Weather Service Office-Pago Pago, American Samoa Department of Homeland Security, Office of Samoan Affairs and Department of Legal Affairs.

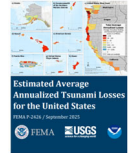


Tsunami Awareness Wave

NEW RESEARCH & TSUNAMI EVENTS/CONFERENCES

RESEARCH

Federal Emergency Management Agency, 2025, Estimated average annualized tsunami losses for the United States: FEMA P-2426, 158 p. https://www.fema.gov/sites/default/files/documents/fema_hazus_p-2426_estimated-average-annualized-tsunami-losses-united-states_092025.pdf



Sheehan, A.; Yeager, C.; Wood, N.; Bausch, D.; McDougall, A.; Johnson, D.; Peters, J.; Zuzak, C., 2025, Data associated with the national assessment of potential average annualized losses from tsunamis in the United States: U.S. Geological Survey data release. <https://doi.org/10.5066/P1IAVNAE>



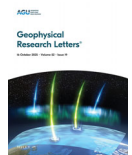
Song, Min-Jong; Cho, Yong-Sik, 2025, Prediction of maximum tsunami height and arrival time using machine learning and inverse variance weighting: Ocean Engineering, v. 342, Part 1, article 122807. <https://doi.org/10.1016/j.oceaneng.2025.122807>



Sunny, R.C.; Horrillo, J.; Cheng, Wei; Liu, Yibin; Fritz, H.M., 2025, Three-dimensional submarine-volcano-generated tsunamis: Numerical and physical model comparisons: Applied Ocean Research, v. 164, article 104769. <http://dx.doi.org/10.1016/j.apor.2025.104769>



Tan, Long; Zhou, Yang; Song, Chuanhui; Xing, Lei; Zhu, Longhai; Wang, Nan; Jia, Yonggang; Su, Zhe; Qiu, Qiang; Wu, Baojin; McHugh, Cecilia; Bao, Rui, 2025, A 400-Year Sediment Record of Tsunamis in Qi'ao Island, Centered at Guangdong-Hong Kong-Macao Greater Bay Area: Geophysical Research Letters, v. 52, no. 19, article e2025GLI17291. <https://doi.org/10.1029/2025GLI17291>



Wood N.; Sheehan, A.; Bausch, D.; Yeager, C.G.; Zuzak, C.; Sims, J.; Hoke, A., 2025, Estimated annualized losses from potential building damage and fatalities due to earthquake-generated tsunamis in the United States: International Journal of Disaster Risk Reduction, v. 130, article 105838. <https://doi.org/10.1016/j.ijdrr.2025.105838>



UPCOMING NTHMP & RELATED EVENTS

- ◆ November 5, 2025—World Tsunami Awareness Day <https://tsunamiday.undrr.org/>
- ◆ November 12-14, 2025—International Tsunami Symposium (Hyderabad, India) <https://its2025.incois.gov.in>
- ◆ December 15-19, 2025—AGU Fall Meeting (New Orleans, LA) <https://www.agu.org/annual-meeting>
- ◆ March 2026—CARIBE WAVE 26 Tsunami Exercise <https://www.weather.gov/itic-car/caribewave>
- ◆ April 14-18, 2026—Seismological Society of America Meeting (Pasadena, CA) <https://meetings.seismosoc.org/>

