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## JOINT NEWS RELEASE

Office of the Governor

21-22 Kongens Gade | Charlotte Amalie | St. Thomas VI 00802

Virgin Islands Territorial Emergency Management Agency

2881 Estate Nisky | St. Thomas, VI 00802



May 7, 2014

### For Immediate Release

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**UNESCO Intergovernmental Coordinating Group on Tsunami  
to Hold its First Conference on US Soil in St. Thomas;  
NOAA to Recognize USVI as TsunamiReady During Opening Ceremony**

On May 13 – 15, 2014, the Virgin Islands will host the Ninth Session of the UNESCO IOC ICG/CARIBE EWS, an intergovernmental coordinating group of international scientists and emergency managers working collaboratively to establish a Caribbean Tsunami Warning System. The group's ultimate goal is to reduce the loss of life and livelihoods due to coastal hazards.

The conference will be held at the Sugar Bay Resort & Spa on St. Thomas, and this is the group's first meeting on U.S. soil since its inception in 2005. UNESCO IOC ICG/CARIBE EWS stands for United Nations Educational, Scientific and Cultural Organization-Intergovernmental Oceanographic Commission Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions.

More than 50 participants are expected to attend the conference, representing 17 countries, including; Barbados, Colombia, Curacao, Dominican Republic, France, Haiti, Mexico, Netherlands, Panama, Saint Lucia, Sint Maarten, the United Kingdom, the United States and Venezuela.

In addition, organizations represented will include the Puerto Rico Seismic Network, UNAVCO and the Caribbean Tsunami Information Center.

“We are honored to both host and be a part of the US delegation to this conference,” said VITEMA Director Elton Lewis. “All of the organizations and countries represented in the 9<sup>th</sup> Session of the ICG/CARIBE EWS are contributing significantly to evaluating risks and building tsunami programs that reduce the loss of life and the negative impact on economies.”

The United States delegation attending the conference comprises officials from National Weather Service/National Oceanic and Atmospheric Administration National Weather Service(NWS/NOAA), the Puerto Rico Seismic Network, the Puerto Rico Emergency Management Agency, VITEMA Director and Roy Watlington, St. Thomas native and scientist.

Christa von Hillebrandt-Andrade, manager of the NOAA Caribbean Tsunami Warning Program at Mayaguez, P.R., chairs the ICG/CARIBE EWS.

“We are delighted and appreciative that the 9<sup>th</sup> Session of the ICG is being hosted by the USVI,” Von Hillebrandt-Andrade said. “There have been significant advances and activities over the past year in the region and look forward to the input of the Member States to continue strengthening our Tsunami Warning System.”

In February 2013, Governor John P. de Jongh Jr. accepted UNESCO’s request for the USVI to host the conference and tasked VITEMA with preparing for the arrival of international guests to the Territory. The committee included officials from the Office of the Governor, the Department of Tourism, the Department of Property and Procurement, Bureau of Information Technology, the VI Police Department, the VI Hotel and Tourism Association as well representatives of Innovative and Choice Communications. Watlington served as an advisor to the committee.

Bernardo Aliaga of the UNESCO IOC Secretariat and Governor John P. De Jongh Jr. will deliver the welcome and opening remarks at the opening ceremony which scheduled to begin 9 a.m. on Tuesday, May 13<sup>th</sup>.

### **TsunamiReady Recognition Ceremony**

During the conference’s opening ceremony, Steven Cooper, Acting Director for NOAA’s Southern Region, Michael Angove, NOAA Tsunami Program Manager, and von Hillebrandt-Andrade, will officially recognize the US Virgin Islands’ as TsunamiReady. Earlier this year, VITEMA submitted applications for the US Virgin Islands – St. Croix, St. John, St. Thomas and Water Island – to be recognized as a TsunamiReady jurisdiction.

TsunamiReady is granted by the NWS/NOAA once certain requirements are met such as establishing an emergency operations center and a 24-hour warning point to receive tsunami information.

The British Virgin Islands will also receive TsunamiReady recognition at the ceremony.

###

# Welcome, Tsunami Ready Recognition and Opening Ceremony

**9 a.m. Welcome**

Bernardo Aliaga, UNESCO Secretariat  
Christa von Hillebrandt-Andrade, UNESCO IOC ICG CARIBE EWS Chair &  
Manager NOAA Caribbean Tsunami Warning Program

**9:15 a.m. TsunamiReady Recognition Ceremony**

Michael Angove, NOAA Tsunami Program Director  
Alison Brome, Interim Director Caribbean Tsunami Information Center

**TsunamiReady Recognition (BVI)**

Remarks  
BVI Department of Disaster Management Director Sharleen DaBreo

**Tsunami Ready Recognition (USVI)**

Remarks  
VITEMA Director Elton Lewis

Steven Cooper  
Acting Director, Southern Region, NWS/NOAA

**9:40 Opening**

Governor John P. de Jongh Jr.

**9:45 a.m. Session Break/ Press Q&A**

**10 a.m. Group Photo**

## ABOUT THE UNESCO IOC TSUNAMI PROGRAM



**T**he IOC Tsunami Program aims at reducing the loss of lives and livelihoods that could be produced worldwide by tsunamis. In order to accomplish this, the IOC Tsunami Unit supports IOC Member States in assessing tsunami risk, implementing Tsunami Early Warning Systems (EWS) and in educating communities at risk about preparedness measures.

In order to implement effective preventive measures, communities need to be aware of the risk they face. Tsunami risk assessment includes the evaluation of the hazard and the levels of vulnerability of coastal communities. Hazard assessment encompasses the identification of the probability of occurrence of a tsunami based on, the identification of possible tsunami sources and the evaluation of historical data. On the other hand, vulnerability assessment aims at identifying the pre-existing physical, social, economic and environmental conditions that make a zone susceptible of suffering important losses and damages. This information is essential for setting up disaster management strategies.

Tsunami early warning systems are based on observation networks of seismometers and sea level measuring stations, which send real time data to national and regional warning centers (TWCs). Based on these observations, TWCs are able to confirm or cancel a tsunami watch or warning. When a potentially destructive tsunami is detected, national authorities should decide if a tsunami warning and an evacuation order must be issued to the public.

It is essential that communities at risk know the actions that need to be undertaken in case of eminent danger. Public awareness campaigns and Standard Operating Protocols must be designed; evacuation routes need to be identified and evacuation drills must be organized. Community-based approaches must be taken into consideration in order to take advantage of traditional coping mechanisms and ensure that all the needs and concerns of individuals at risks are considered.

The IOC Tsunami Programme, through the coordination of regional meetings, capacity building activities and the support of national and regional projects is a key stakeholder for tsunami risk reduction at global level. Four Intergovernmental Coordination Groups (ICGs) corresponding to the regions Pacific, Caribbean, Indian Ocean and Mediterranean have been established to address particular regional needs. The IOC Tsunami Unit is compounded by the Technical Secretariats of these four regional systems, the Head of the Unit, the International Tsunami Information Centre (ITIC) and technical and professional staff. Operational tsunami warning centers provide tsunami advisories, watches and warnings to the four regions. Additionally, each ICG counts on the strategic advisory of specialized Working Groups whose members are professionals from key disaster management and research institutions.

## ORGANIZATION OF THE UNESCO IOC ICG CARIBE EWS

In 2005, the UNESCO IOC established the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS) as a subsidiary body, with the purpose of providing efficient assistance on tsunami risk reduction to Member States in the Caribbean region, after the lessons learnt from the 2004 Indian Ocean tsunami.

To prevent loss of life and destruction of property, and to mitigate catastrophic economic impacts, the people of the Caribbean region have an immediate need for an early warning system against coastal hazards. This will be the responsibility of the (ICG/CARIBE EWS). The purpose of the early warning system will be to provide timely and accurate forecasts and warnings of coastal flooding and associated due to tsunamis, storm surge and hurricanes. It will be linked to the Global Earth Observation System of Systems (GEOSS).

The guidelines for the ICG/CARIBE EWS activities are compiled in the [CARIBE EWS Implementation Plan](#).

### OFFICERS

#### Chairperson

**Ms. Christa von Hillebrandt-Andrade** (NOAA Caribbean Tsunami Warning Program, Puerto Rico, USA)

#### Vice-chairpersons

**LCL Philippe SARRON**

(France)

**Ms. A.L. Dawn FRENCH**

(National Emergency Management Organisation, Saint Lucia)

**Mr. Víctor H. CANO PACHECHO**

(República Bolivariana de Venezuela)

#### Working Groups

The Intergovernmental Coordination Group meets regularly to establish and implement working plans in the Caribbean region. To address specific technical issues it has formed four working groups:

**Working Group 1** – Monitoring and Detection Systems, - Chair: Mr. Jean-Marie Saurel (Observatoire Volcanologique et Sismologique de Martinique), Vice-chair for sea level : Mr. Sebastien Deroussi (Observatoire Volcanologique et Sismologique de la Guadeloupe, France), Vice-chair for seismology: Mr. Miguel Palma (Venezuela).

**Working Group 2** – Hazard Assessment-Chair: Mr. Narcisse Zahibo (Université des Antilles et de la Guyane, France); Vice-chair: Mr. Alberto Lopez (University of Mayaguez)

**Working Group 3** – Tsunami Services (Terms of Reference under development)

**Working Group 4** – Public Awareness, Education and Resilience – Chair: Ms. Kerry Hinds (Barbados), Vice chair (Public awareness): Ms. Stacey Edwards (Seismic Research Center); Vice-chair (Resilience); Mr. Juan Salado (ONAMET, Dominican Republic)

## 9<sup>th</sup> Session UNESCO IOC ICG CARIBE EWS Participants

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United States Delegation  
to the  
9<sup>TH</sup> Session of the UNESCO IOC  
ICG CARIBE EWS



**Michael D. Angove**  
Tsunami Program Manager  
National Weather Service  
National Oceanic and Atmospheric Administration



Mike Angove is from Spokane, Washington. He graduated from Eastern Washington University in 1985 with a Bachelor of Science Degree in Geology. He retired from the US Navy with the rank of Captain (O-6) in May of 2012 after 26 years of active commissioned service.

Mr. Angove holds two Masters Degrees: (1) Meteorology and Physical Oceanography from the Naval Postgraduate School and (2) National Security Affairs from the Naval War College in Newport, Rhode Island. During his naval career Mr. Angove served as forecaster, deputy director and finally commanding officer of the Joint Typhoon Warning Center, and made a total of 7 overseas deployments on three different ships. He was twice named as the Commander, Naval Surface Forces Pacific Junior Officer Shiphandler of the Year, and was awarded the Franklin Reinauer II Defense Economics Essay Prize while at the Naval War College. His decorations include the Legion of Merit (two awards), Defense Meritorious Service Medal, Navy Meritorious Service Medal, and the Navy and Marine Corps Commendation Medal.

Mr. Angove has served as the NOAA/NWS National Tsunami Program Manager since August of 2012.



**Christa G. von Hillebrandt-Andrade**  
Manager, Caribbean Tsunami Warning Program  
National Weather Service  
National Oceanic and Atmospheric Administration

Chair, UNESCO IOC ICG/CARIBR EWS

Internationally renowned expert in seismology and tsunamis, Christa G. von Hillebrandt-Andrade is the Manager of the National Weather Service's Caribbean Tsunami Warning Program (CTWP) located at the University of Puerto Rico at Mayaguez. The Caribbean Tsunami Warning Program was established in 2010 as the first step of a phased approach for the potential establishment of a Caribbean Tsunami Warning Center (CTWC).

The priorities of von Hillebrandt-Andrade include improving research, education, warning and forecasting capabilities. While some improvements have been made in tsunami preparedness and warnings since the December 2004 Indian Ocean Tsunami, von Hillebrandt-Andrade believes much more is needed to protect the millions of residents and visitors populating island coastlines throughout the Caribbean region, one of the most seismically active regions in the world.

The Caribbean Tsunami Warning Program currently provides support and guidance for tsunami observations, including seismic and sea level systems, tsunami forecasting, communications and

education and preparedness. It works closely with the [Pacific Tsunami Warning Center](#) and the [National Tsunami Warning Center](#) which are currently providing tsunami warning and guidance to the Caribbean.

She is the current Chairwoman of the UNESCO Intergovernmental Oceanographic Commission's Intergovernmental Coordination Group for Tsunamis and Other Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions. She was elected to this position after serving as Vice Chair and Chair of the Monitoring and Detection Systems Working Group.

During her tenure at the Seismic Network (1990-2010) and as a member of the University of Puerto Rico's Geology Department, von Hillebrandt-Andrade provided key leadership in the modernization, restructuring, staffing and funding of the seismic network to provide earthquake and tsunami monitoring, warning and education services.

From 2011-2013 von Hillebrandt-Andrade, served as the president of the Seismological Society of America (SSA). She was the first Caribbean scientist and only the second woman elected to the prestigious post in the organization's 105-year history. Her leadership helped to strengthen its interaction and involvement with Latin American seismologists and also led the development of the Strategic Plan for the Society which was adopted in 2012. The Seismological Society members twice elected her as a director (2007 and 2010) and as Vice President of the Society (2009).

The author and co-author of more than 60 journal papers and abstracts on earthquakes and tsunamis, von Hillebrandt-Andrade has also served on the Puerto Rico Earthquake Safety Commission and the Puerto Rico Tsunami Technical Review Committee. She is a member of the Seismological Society of America, the Earthquake Engineering Research Institute, the American Geophysical Union and Geological Society of Puerto Rico.

Upon graduation as a geologist of the University of Delaware, von Hillebrandt-Andrade went to Quito, Ecuador as a Fulbright Scholar (1984-1986) and received a master's degree in Geology from the Escuela Politécnica Nacional. She played an important role in monitoring the active volcanoes of this Andean county and co-authored its first volcanic hazard maps as a Research Engineer with the Nacional's Geophysical Institute (1987-1990).



### **Dr. Víctor Huérfano**

Interim Director, Puerto Rico Seismic Network



Victor Huerfano earned a PhD in Physical Oceanography, with a specialization in Tsunami Science, and a Masters in Physics with specialization in geophysics from the University of Puerto Rico at Mayagüez.

He also holds a Bachelor of Science degree in Physics from the National University of Education of Colombia, and studied Surveying and Geodesy Engineering at the District University Francisco José de Caldas in Bogotá, Colombia.

Dr. Huerfano's areas of specialty are:

- Generation, propagation and inundation of tsunamis.
- Near Field Seismology (crustal structure, local faults and sources).
- Real-Time Monitoring.
- For several years he served as Associate Director and Operations Coordinator of the Puerto Rico Seismic Network.



**BG Elton Lewis, CEM  
Director, VITEMA**



Elton Lewis was nominated by Governor John P. de Jongh, Jr., for the position of Director of the Virgin Islands Territorial Emergency Management Agency (VITEMA) on November 23, 2010, and on December 6, 2010, he was appointed Acting Director, assuming the duties and responsibilities of this office. Lewis was sworn in as Director on May 3, 2011, following his confirmation by the 29th Legislature of the US Virgin Islands. He also serves as Homeland Security Advisor to the Governor. In this most critical capacity, Director Lewis assists the Governor with his most important responsibility, that of protecting citizens, property, and businesses from the threat of terrorism and natural and man-made disasters.

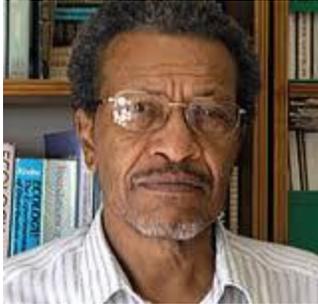
Most recently, Gov. de Jongh appointed Lewis to serve as the State Coordinator for the 1033 Law Enforcement Support Program, which is administered through the Defense Logistics Agency (DLA). As the State Coordinator, Lewis is charged with facilitating the process of law enforcement agencies acquiring military surplus equipment. The Law Enforcement Support program also provides general equipment, such as file cabinets, copiers, and fax machines that agencies may need to function but perhaps are unable to afford.

Prior to his appointment as VITEMA Director, Lewis worked as the Director of the Joint Staff for the Virgin Islands National Guard (VING) and served as Commissioner of the Virgin Islands Police Department (VIPD) from March 2003 to January 2007. He is a member of the VING where he holds the rank of Brigadier General (BG) and serves as the Assistant Adjutant General.

Lewis received his Associate of Arts Degree in General Studies at Central Texas College in 1982 while serving in the U.S. Army and later received his undergraduate degree in Criminal Justice from Roger Williams University. He has a graduate certificate from Central Michigan University in Leadership. In April 2012, Lewis was awarded a certificate of completion for the General and Flag Officer Homeland Security Executive Seminar, Harvard University, John F. Kennedy School of Government, Executive Education.

He is a graduate of the FBI National Academy, 154th Session; the U.S. Army Command and General Staff College; the U.S. Army Protective Service; and has completed the U.S. Army War College as a senior fellow with the U.S. Drug Enforcement Administration (DEA). He served as a security specialist with the U.S. Department of Homeland Security-(FEMA) as well as on numerous special projects, task forces and commissions. He has participated in the following professional development and training courses: Terrorism Planning Course: Incident Command System Training; National Incident Management System Training Program; and special training in a National Response Plan. He is a graduate of the Homeland Security Executive Leaders Program (ELP), at the Naval Postgraduate School (NPS). Lewis has been awarded the designation as a Certified Emergency Manager (CEM) by the International Association of Emergency Managers (IAEM) and completed State Coordinating Officer (SCO) training at FEMA's Emergency Management Institute at Emmitsburg, Va.

He is a member of the National Guard Association (NGAUS), the Association of Caribbean Commissioners of Police (ACCP), Military Police Regimental Association - Life Member; Association of the United States Army (AUSA) - Life Member; American Federal Contract Investigators Association (AFCIA); International Association of Emergency Managers (IAEM); National Emergency Management Association (NEMA), Association of Certified Background Investigators (ACBI) and a member of the American Legion, Post 85.



**Roy A. Watlington**  
**Scientist**

A native St. Thomian, Roy Watlington retired from the University of the Virgin Islands after 27 years serving as tenured professor of physics, researcher and occasional administrator. As chief scientist of UVI's Anegada Climate Tracers Study, he organized 13 deep water expeditions to study indicators of climate change in ocean water.

Watlington has published refereed scientific papers include one on Kick-`em-Jenny submarine volcano, and he is co-author of *Disaster and Disruption in 1867; Hurricane, Earthquake and Tsunami in the Danish West Indies*. In 1997 he convened a meeting in St. John of global tsunami experts who would begin advancement of tsunami hazard awareness in the Caribbean and support the development of intergovernmental tsunami preparedness efforts in the region. During the Second Session of the ICG/CARIBE EWS he served as chair of Working Group 3 — Warning Dissemination & Communication. He serves as an elected member to the Stakeholders' Council of the Caribbean Ocean Observing System and as consultant for oceanographic research and development.



**Steven Cooper**  
Acting Director, Southern Region  
National Weather Service  
National Oceanic and Atmospheric Administration



Steven Cooper is the Acting Director of the National Weather Service (NWS) Southern Region, headquartered in Fort Worth, TX. The Southern Region encompasses approximately one quarter of the contiguous United States including Texas, New Mexico, Oklahoma, Arkansas, Louisiana, Tennessee, Mississippi, Alabama, Georgia, and Florida, as well as Puerto Rico and the U.S. Virgin Islands.

Mr. Cooper has 33 years of experience in the NWS and most recently served as the Acting NWS Deputy Director in Silver Spring. Since 2004, he served as the Deputy Regional Director of the NWS Southern Region where he was responsible for the day-to-day operations of the region including all administrative, financial, personnel, and management functions.

Prior to becoming the Deputy Regional Director, Mr. Cooper served as the meteorologist-in-charge at two local National Weather Service offices in Bristol, TN, and Amarillo, TX. Cooper began his NWS career as a Meteorological Intern in Albuquerque, NM.

Mr. Cooper also led the Meteorological Services Division at NWS Southern Region in the successful implementation of NWS modernization and restructuring across the southern United States during the mid-1990s. He co-developed an innovative Southern Region leadership development program called BLAST (Building Leaders for A Solid Tomorrow).

Mr. Cooper was instrumental in launching the highly successful Turn Around, Don't Drown® flood safety program, earning him and his team a NOAA Administrator's Award in 2004 and a National Weather Association Public Education Award in 2006. He was also one of the principle developers of JetStream - a web-based educational program designed to help people learn about various weather phenomena and how to be prepared when hazardous weather threatens.

Mr. Cooper has worked with the Weather-Ready Nation Roadmap and pilot projects, Deepwater Horizon response, and the NOAA Operations Center.

Mr. Cooper received a bachelor's degree in Meteorology from Florida State University (1980) and a master's degree in Geography (Climatology) from the University of New Mexico (1985).

Mr. Cooper is a member of the American Meteorological Society and the National Weather Association. He has received many awards for his contributions and leadership.



**Bernardo Aliaga**  
**UNESCO IOC Secretariat**



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## KEY EXPERIENCE

- Contributed to the task of helping Indian Ocean Member States to build an Indian Ocean Tsunami Warning and Mitigation System
- Contributed to the development of tsunami community preparedness in Thailand
- Contributes to strengthen National Tsunami Warning and Mitigation Systems in Colombia, Chile, Peru and Ecuador
- Contributes to put in place national capabilities for coastal hazards including tsunami in Haiti and Dominican Republic
- Contributes to develop a National Multi Hazard Early Warning System in Oman
- Currently Technical Secretary for the Intergovernmental Coordination Group for the Caribbean Sea and Adjacent Region Tsunami Warning and Mitigation System (CARIBE EWS)
- Currently Technical Secretary for the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (PTWS)
- Trained in the development of Standard Operating Procedures (SOPs) for tsunami emergencies
- More than 10 years experience in fisheries management at university and government level
- 8 years experience on Tsunami Warning Systems
- Experienced in Results Based Management tools and strategic planning
- Strong background on fisheries economics, GIS tools, coastal planning, early warning systems and intergovernmental processes.
- Experienced on negotiation processes at municipal, regional, national and international levels.

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## ACADEMIC AND PROFESSIONAL QUALIFICATIONS

- 1984 BSc, Marine Biology, University of Concepcion, Chile  
1989 DESS Exploitation of Coastal Living Resources, University of Caen, France  
1991 DEA Latin American Studies (economics option), Sorbonne University, Paris, France

## PROFESSIONAL RECORD

- 2001 – Present **Intergovernmental Oceanographic Commission of UNESCO**  
Programme Specialist, ADG/IOC Office and then Tsunami Unit, based at the headquarters of UNESCO IOC, Paris, France
- 2000 - 2001 **Deutsche Gesellschaft fur Technische (GTZ)**  
Project Consultant: "Territorial Planning of the Coastal Zone of the Bio-Bio Region"
- 1998 - 2000 **National Environment Commission (CONAMA), Chile**  
Environmental Impact Assessment specialist
- 1997 - 1998 **University of Concepcion, Chile**  
Research Associate, Applied research on fisheries economics & bio-economic modelling.
- 1993 - 1996 **Under Secretariat of Fisheries, Ministry of Economy, Chile**  
Head of Cabinet, Small Scale Fisheries Advisor.
- 1991 - 1993 **National Artisanal Fish Workers Union, Chile**  
Principal Advisor.

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# NWS-NOAA TSUNAMI-READY FACTSHEET



# Frequently Asked Questions About TsunamiReady

## What is TsunamiReady?

- A National Weather Service (NWS) initiative that promotes tsunami hazard preparedness as an active collaboration among Federal, state and local emergency management agencies, the public, and the NWS tsunami warning system. This collaboration supports better and more consistent tsunami awareness and mitigation efforts among communities at risk. The TsunamiReady program is based on the NWS StormReady model.
- The main goal is improvement of public safety during tsunami emergencies.

## Who is TsunamiReady For?

- Coastal communities which are at risk of a tsunami.

## What makes a community TsunamiReady?

- Establishing an Emergency Operations Center.
- Ability to disseminate a Tsunami Warning (sirens, local media).
- Tsunami Hazard Plan.
- Community awareness program.
- Multiple ways to receive NWS tsunami warnings.
  1. Emergency Management Weather Information Network (EMWIN) receiver
  2. NOAA Weather Radio (NWR)
  3. NOAA Weather Wire drop

## Can a community become TsunamiReady without being StormReady?

- Since the new combined Storm/TsunamiReady application form was issued in 2002, communities being certified for TsunamiReady also must pass all StormReady criteria.
- StormReady requires access to local weather monitoring equipment (Guideline 3) and some further administrative requirements (Guideline 6). Other than that, the requirements are the same.

## Why do we need a TsunamiReady Program?

- Create minimum standard guidelines for a community to follow for adequate tsunami readiness.
- Encourage consistency in educational materials and response among communities and states.
- Recognize communities that have adopted TsunamiReady guidelines.
- Increase public awareness and understanding of the tsunami hazard.
- Improve community pre-planning for tsunami disasters.

### **Who decides if a community is TsunamiReady?**

- Oversight of the TsunamiReady program is accomplished within the NWS by the National StormReady Board (the Board).
- The Board is responsible for changes in community recognition criteria. Proposed criteria changes shall be directed to the Board for action.
- Local boards decide if a community has attained Storm/TsunamiReady status. The local board consists of the local NWS office meteorologist-in-charge and warning coordination meteorologist, the Tsunami Warning Center geophysicist-in-charge, a representative from the state department of emergency services, and a representative from the National Tsunami Hazard Mitigation Program.

### **Does it cost anything to become a TsunamiReady Community?**

- There may be costs involved with upgrading the reception and dissemination infrastructure of the local community to meet the criteria.

### **Do we get money for being TsunamiReady?**

- The National Weather Service does not provide funding to communities. However, participating in this program would improve positioning to receive State and Federal funds. It is the community's responsibility to obtain funding.

### **What are the benefits for being TsunamiReady?**

- Community is more prepared to SAVE LIVES.
- Increase contacts with experts (emergency managers, researchers, NWS personnel).
- Identify community readiness resource needs.
- Enhances core infrastructure to support other community concerns.

### **Where can I get more information on TsunamiReady?**

- The West Coast & Alaska Tsunami Warning Center's web page: <http://wcatwc.arh.noaa.gov>.
- The Warning Coordination Meteorologist at your local National Weather Service office.
- The National Weather Service's StormReady Program web page: <http://www.nws.noaa.gov/stormready>.



## Tsunami Early Warning System and Mass Notification System

Between 2011 and 2014, VITEMA installed 24 (twenty-four) sirens as part of an Early Warning System throughout the territory – 12 (twelve) on the island of St. Thomas, 10 (ten) on St. Croix and two on St. John. The omni-directional outdoor warning sirens deliver both voice messages and tone alerts and are activated through VITEMA’s 911 Emergency Communications Centers. and purchased \$663,000 tsunami warning siren system which is being installed in two phases. This created a redundancy in how we notify the public of an imminent threat. With funding in place, VITEMA completed a contract for Phase Two of the All-Hazards Warning System Installation Project. Fourteen new warning sirens are currently in the Territory and are ready to be installed once utility poles have been purchased.

### **ST. CROIX**

D.C. Canegata Ball Park  
 Christiansted Government Parking Lot  
 Divi Carina Bay  
 Cramer’s Park  
 Estate Sion Farm  
 William’s Delight  
 La Vallee  
 Sprat Hall  
 Frederiksted Government Parking Lot  
 Fisher Street, Frederiksted

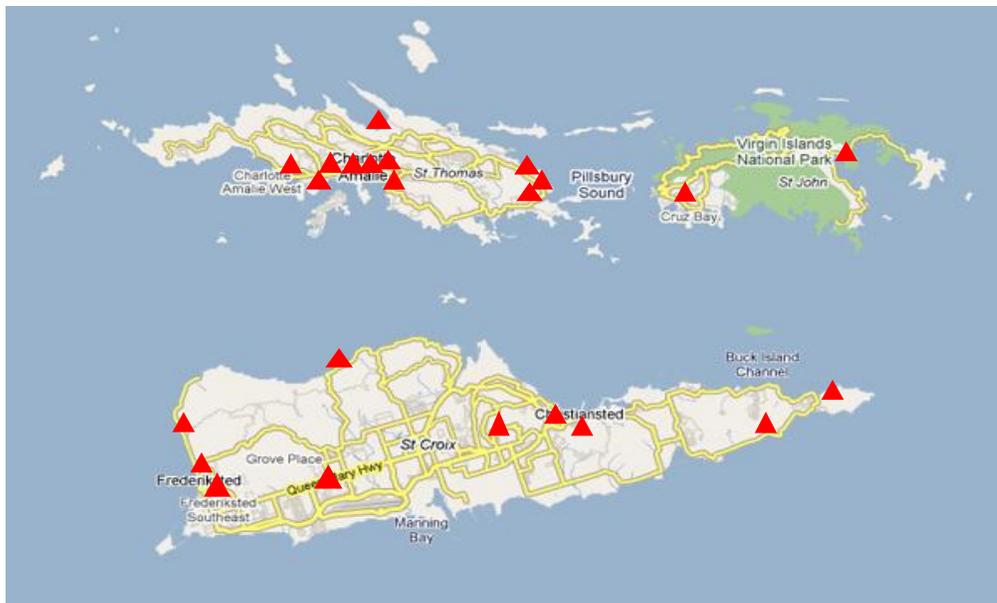
### **ST. JOHN**

Cruz Bay  
 Coral Bay

### **ST. THOMAS**

Crown Bay  
 Addelita Cancryn Junior High School  
 Lucinda Millin Home  
 Beltjen Road  
 Red Hook  
 Independent Boat Yard  
 Coki Point Beach  
 Megan’s Bay Beach

Tsunami Siren Locations



## VI Alert

In 2010, VITEMA partnered with the State of New York Office of Homeland Security and Emergency Services to replicate their mass alerting system in the Virgin Islands, known today as *VI Alert*. The system is a portal for agencies that issue life-safety information to deliver instantaneous alerts via text message, email, fax or voicemail. The *VI Alert* system issues instant tsunami information, advisories and warning disseminated from the National Tsunami Warning Center at Palmer, Alaska. Issuing timely public alerts was a significant gap in how VITEMA managed major incidents. As an emergency management agency, VITEMA relied heavily on local media to fill this void which left our communities at risk during a no-notice event. With our mass alert and notification system, VI Alert, in place and the installation of an All-Hazards Warning System, today the Territory's public warning capabilities are far more advanced.

## NOAA Weather Radios

In addition to the Early Warning System and the VI Alert System, VITEMA has delivered NOAA Weather Radios to all public schools in the Territory. The NOAA radios have been pre-programmed NOAA Weather Radios were distributed to schools territory-wide by VITEMA communications staff.

## **Tsunami Hazard Zone and Evacuation Route Signs**

VITEMA installed 100 tsunami hazard zone and evacuation route signs at high-risk areas throughout the Territory including downtown Charlotte Amalie, Red Hook and Crown Bay on St. Thomas; downtown Christiansted and Frederiksted, and Gallows Bay on St. Croix, and at Cruz Bay and Coral Bay on St. John. The signs identify these areas as a tsunami hazard zone and guide pedestrians toward safe areas.



## **Tsunami Incident Annex**

The devastation a tsunami can cause, makes planning for it one of the highest priorities today in emergency management. The impact is often sudden and results in numerous casualties and evacuees. It can strain and overwhelm our resources and capabilities and require us to seek life support from outside the Territory.

In February 2012, Governor John P. De Jongh Jr. approved the USVI's first tsunami response plan. The *Tsunami Incident Annex* establishes guidelines for a coordinated response to a tsunami. The Annex serves as addendum to the *USVI Territorial Emergency Operations Plan*.

The objective of the *Tsunami Incident Annex* is to coordinate emergency response efforts to save lives, reduce injuries, and preserve property. Although the Tsunami Incident Annex addresses emergency issues before and after an emergency, its primary goal is to assemble, mobilize and coordinate a team of responders and coordinators to manage a tsunami incident.

The Annex outlines the activities of the Government of the Virgin Islands' response agencies in the event a tsunami threatens or impacts the Territory. It also embraces the capabilities and resources in the broader emergency management community that includes individuals, businesses, nongovernmental organizations and the federal government.

The 94-page document is divided into five main sections including: 1. Introduction, which gives the history of tsunami in the Virgin Islands and the wider Caribbean area; 2. Operations, which prescribes the sequence of operational activities to protect life, property and livelihoods; 3. Organization – Roles and Responsibilities, which details the function of support and primary response agencies; 4. Plan Maintenance and Testing, Training and Exercise, a brief directive for management of the plan; and 5. Authorities and References used to establish and develop the plan. Appendices within the Annex illustrate tsunami inundation maps, potential tsunami evacuation sites, a list of populated places above an 80-foot elevation and provide recommendations for public education.

## Community Outreach & Education Campaign

In 2009, VITEMA launched its first education campaign to raise awareness about earthquake and tsunami with an Earthquake/Tsunami Public Service Announcement (PSA) that featured students of the Evelyn Marcelli Elementary School on St. Thomas. Since then, VITEMA has produced three tsunami awareness PSAs featuring the winners of Tsunami Youth PSA competition for high school students, a simulation of tsunami impact on the VI and the announcement of the VI Evacuation Maps and the tsunami evacuation zone signs. VITEMA also held a tsunami simulation model competition for elementary and junior high school students, and provided numerous tsunami awareness courses for the public and private sectors and the general public. VITEMA has also conducted annual tsunami drills and exercises to test its lines of operation, including activation of the Early Warning Siren System. VITEMA has also spread the tsunami awareness message during major public events including the 2014 Carnival parade on St. Thomas.



VITEMA's/NOAA Tsunami Preparedness Awareness Float  
May 3, 2014