

UNESCO IOC CARIBE EWS/NWS

Caribbean Pilot Project for the Regional Implementation of the *TsunamiReady* Program

Guidelines for being designated TsunamiReady are given in the following table. Each guideline is fully discussed following the table. The guidelines are based on four population-based categories.

Guidelines	Population			
	< 2,500	2,500 - 14,999	15,000 - 40,000	> 40,000
<u>Guideline 1: Communications and Coordination</u>				
Established 24-hour Warning Point (WP)	X*	X*	X	X
Established Emergency Operations Center (EOC)	X*	X*	X	X
<u>Guideline 2: Tsunami Warning Reception</u>				
Number of ways for EOC/WP to receive Tsunami Warning Center tsunami messages.	3	4	4	4
<u>Guideline 3: Local Warning Dissemination</u>				
Number of ways EOC/WP can disseminate warnings to public	1	2	3	4
Emergency Alert Systems in public facilities	X	X	X	X
<u>Guideline 4: Community Preparedness</u>				
Number of annual tsunami awareness programs	1	2	3	4
Designate/establish tsunami shelter/area in safe zone	X	X	X	X
Designate tsunami evacuation areas and evacuation routes, and install evacuation route signs	X	X	X	X
Provide written, locally specific, tsunami hazard response material to public (eg. evacuation map)	X	X	X	X
Schools: Encourage tsunami hazard curriculum, practice evacuations (if in hazard zone), and provide safety material to staff and students.	X	X	X	X
<u>Guideline 5: Administrative</u>				
Formal tsunami hazard operations plan	X	X	X	X
Key Emergency Management and Warning Point personnel complete COMET on line Community Preparedness and Tsunami Warning Systems training module (https://www.meted.ucar.edu).	X	X	X	X
Visit by NWS official to community at least every other year	X	X	X	X

* For cities or towns with less than 15,000 people, a 24-hour warning point and EOC are required; however, another jurisdiction within the county may provide that resource.

Guideline 1: Communications and Coordination Center

A key to effective hazards management is effective communication. This is especially true in tsunami emergencies, since wave arrival times may be measured in just minutes. Such a “short fused” event requires an immediate but careful response. To ensure such a proper response, communities must have set up the following:

1. **24-Hour Warning Point.** To receive recognition under the TsunamiReady program, an agency needs to have a 24-hour Warning Point (WP) able to receive Tsunami Warning Center information and provide local reports and advice. Typically, this might be a law enforcement or fire department dispatching point. For cities or towns without a local dispatching point, a county/borough agency could act for them in that capacity. The warning point needs to have:
 - 24 hour operations
 - Warning reception capability
 - Warning communication/dissemination capability
 - Ability and authority to activate local warning system(s)
2. **Emergency Operations Center.** Agencies serving jurisdictions of more than 2,500 people will need an emergency operations center (EOC). It must be staffed during tsunami events to execute the warning point's tsunami warning functions. Summarized below are tsunami-related roles of an EOC:
 - Activate based on predetermined guidelines related to Tsunami Warning Center information and/or tsunami events
 - Staffed by emergency management director or designee
 - Possess warning reception/dissemination capabilities equal to or better than the warning point
 - Ability to communicate with adjacent EOCs/Warning Points.
 - Capability to communicate with Tsunami Warning Center.

Guideline 2: Tsunami Warning Reception

Warning points and EOCs each need multiple ways to receive Tsunami Warning Center alert products. TsunamiReady guidelines to receive Tsunami Warning Center warnings/advisories/watches/information statements in an EOC/WP require a combination of the following, based on population:

- Emergency Management Weather Information Network (EMWIN) receiver: Satellite feed and/or VHF radio transmission of Tsunami Warning Center products
- State/Territory/Nationwide Telecommunications System: Automatic relay of Tsunami Warning Center products on statewide emergency management or law enforcement system
- State/Territory/Nationwide Warning Fan-out System: Authorized system of passing message throughout warning area
- E-mail from Tsunami Warning Center: Direct e-mail from Warning Center to emergency manager

- Pager Message from Tsunami Warning Center: Page issued from Warning Center directly to EOC/WP
- Radio/TV via Emergency Alert System: Local radio/TV or cable TV
- US Coast Guard Broadcasts: WP/EOC monitoring of USCG marine channels

Guideline 3: Warning Dissemination

1. Upon receipt of Tsunami Warning Center warnings/advisories/watches or other reliable information suggesting a Tsunami is imminent, local emergency officials should communicate the threat to as much of the population as possible. Receiving TsunamiReady recognition requires having one or more of the following means of ensuring timely warning dissemination to citizens (based on population):
 - Outdoor warning sirens
 - Television audio/video overrides
 - Phone messaging (dial-down) systems
 - Other locally-controlled methods, e.g., local broadcast system or emergency vehicle sirens.
2. Once Tsunami Warning Center products are received, or local information suggests an imminent tsunami threat, the local emergency officials should communicate with as much of the population as possible. To be recognized as TsunamiReady, a community must have an emergency notification system in the following facilities:

Required Locations:

- 24 hour Warning Point
- Emergency Operations Center
- City Hall
- School superintendent office or equivalent

Recommended Locations:

- Courthouses
- Public libraries
- Hospitals
- All schools
- Fairgrounds
- Parks and recreation areas
- Public utilities
- Sports arenas
- Transportation departments
- Nursing Homes/Assisted Living
- Harbors
- Beaches

In addition, recognition will be contingent on having one or more of the following means (based on population) of ensuring timely warning dissemination to citizens:

- Cable television audio/video overrides.
 - Local Flood warning systems with no single point of failure.
 - Other locally-controlled methods like a local broadcast system or sirens on emergency vehicles.
 - Outdoor warning sirens.
3. **Counties/Boroughs Only:** A county/borough-wide communications network ensuring the flow of information among all cities and towns within its borders. This would include provision of a warning point for the smaller towns, and fanning out of the message as required by state policy. Critical public access buildings should be defined by each community's tsunami warning plan.

Guideline 4: Awareness

Public education is vital in preparing citizens to respond properly to Tsunami threats. An educated public is more likely to take steps to receive tsunami warnings, recognize potentially threatening Tsunami events, and respond appropriately to those events. Communities seeking recognition in the TsunamiReady program must:

1. Conduct or sponsor Tsunami awareness programs. Possible locations may include schools, hospitals, fairs, workshops, and community meetings (number of presentations per year is based on population).
2. Define Tsunami evacuation areas and evacuation routes, and install evacuation route signs.
3. Designate a Tsunami shelter/area outside the hazard zone.
4. Provide written Tsunami hazard information to the populace, including:
 - Hazard zone maps
 - Evacuation routes
 - Basic tsunami information

These instructions can be distributed through mailings, i.e, utility bills, within phone books, and posted at common meeting points such as libraries and public buildings throughout the community.

5. Local schools must meet the following criteria:
 - Encourage the inclusion of Tsunami information in primary and secondary school curriculums. NOAA NWS Tsunami Program and CARIBE EWS can provide these materials.
 - Provide an opportunity biennially for a Tsunami awareness presentation by the NOAA NWS or the local Emergency Manager.
 - Schools within the defined hazard zone must have Tsunami evacuation drills at least biennially.
 - Written safety material should be provided to all staff and students.
 - Have an earthquake plan, in the case of earthquake hazard.

Guideline 5: Administrative

No program can be successful without formal planning and a pro-active administration. To be recognized in the TsunamiReady Program:

1. A Tsunami warning plan must be in place and approved by the local governing body. This plan must address the following:
 - Warning point procedures
 - EOC activation criteria and procedures
 - Warning point and EOC personnel specification
 - Hazard zone map with evacuation routes
 - Procedures for canceling an emergency for those less-than-destructive Tsunamis
 - Criteria and procedures for activation of sirens, cable television override, and/or local systems activation in accordance with state Emergency Alert System (EAS) plans, and warning fan-out procedures, if necessary
 - Annual exercises.
2. Key Emergency Management and Warning Point personnel complete COMET on line Community Preparedness and Tsunami Warning Systems training module (<https://www.meted.ucar.edu>).

NWS Officials (eg. San Juan Forecast Office, Caribbean Tsunami Warning Program, TsunamiReady Program Leads, Tsunami Warning Center personnel) will commit to visit recognized communities, at least every other year, to tour EOCs/Warning points and meet with key officials.