


From: Steve Waterman k4cjsx@comcast.net 
Subject: Fwd: [Non-DoD Source] October 19, Great SHAKEOUT Exercise Detail
Date: February 6, 2024 at 9:49 PM
To:



From: Monette, Donnie <Donnie.Monette@fema.dhs.gov>

Sent: Tuesday, September 26, 2023 5:13 AM

Subject: Winlink Exercise

Importance: High

All,

Our primary aim of participating in the October 19th SHAKEOUT “Did You Feel It” (DYFI) exercise is to underscore the remarkable proficiency of Winlink. The United States Geological Survey (USGS) will use this Winlink “Did You Feel It” ground truth data to contribute to the calculations of their earthquake intensity assessments when modeling the Modified Mercalli (MMIS) Intensity Scale, a standard index used for earthquake severity (see Figure 1). This data will contribute to event response products, like PAGER, a system that provides fatality and economic loss impact estimates following significant earthquakes, worldwide, and is used by governments, agencies, NGOs, private companies and citizens.

A secondary and extremely important purpose for emergency management at all levels to participate in this exercise is to illustrate the capabilities of the Winlink system to provide situational awareness ground truth regardless of the specific information gathered.

When we talk about the Winlink Radio-Email System, we're addressing its several services: CISA SHARES, Amateur Radio and Part 90 Public Safety LMR. These services all come together to play a pivotal role in gathering information. In addition to bridging to the Internet email system over radio for uninterrupted email delivery, the strength of Winlink lies in its ability to promptly deliver precise and near real-time situational data from the ground, regardless of the circumstances or the subject of data being sourced.

Let's take a step back and look at our experience from last year's FEMA R4/REMA R6 Cyber Attack exercise. Please see figures 2 & 3 below from this exercise. During that period, our focus was the data pertinent to a large-scale cyber-attack that impacted four major metropolitan areas. The scenarios painted a grim and chaotic picture, and in such times, the need for reliable communication channels becomes paramount. Winlink rose to the occasion, showcasing its efficacy in a crisis situation.

Now, as we look ahead to this year, we're shifting our attention to another potential disaster: a significant earthquake. Earthquakes bring their own unique set of challenges, from disrupted communication lines to wide-scale infrastructural damage. Yet, the overarching theme remains consistent: the necessity for trustworthy and actionable data from the field.

Again, It's not just about these specific scenarios, though. The broader message we aim to impart is the interoperability, adaptability and versatility of Winlink. In any crisis, whether we're

impacts the interoperability, adaptability, and resiliency of Winlink in any case, whether we're talking about a cyber-attack, an earthquake, or some unforeseen future event, the Winlink system's ability to send and receive email independent of local internet or the gathering and distributing of crucial information remains unchanged. The bottom line is that with the right tools and approach, we can harness any data required, ensuring that decisions are informed, timely, and effective.

For this October 19, Great SHAKEOUT exercise, the winlink system uses the same report information that USGS provides on their website. So, if you send the DYFI report from Winlink via radio or Telnet (Internet), it gets the same critical data to USGS. However, unlike the DYFI questionnaire on the USGS website, USGS has added fields for exercises. Also, if you wish to put this on your agency's external GIS system to illustrate location intensity of the data, the incoming data can be added to the USGS recipient email address as email or a Winlink address, depending on how they wish to receive the data. If received via Winlink on Winlink Express, a CSV file is updated with every entry.

Look on the front page of the Winlink Website for more "how to" info. <https://winlink.org/content/shakeout>. It is a good place to send potential participants who wish to participate in the Great SHAKEOUT exercise.

Detailed Instructions for this exercise will be mailed separately to the Amateur Radio and SHARES communities. Your proactive support will certainly assist in making this exercise a success.

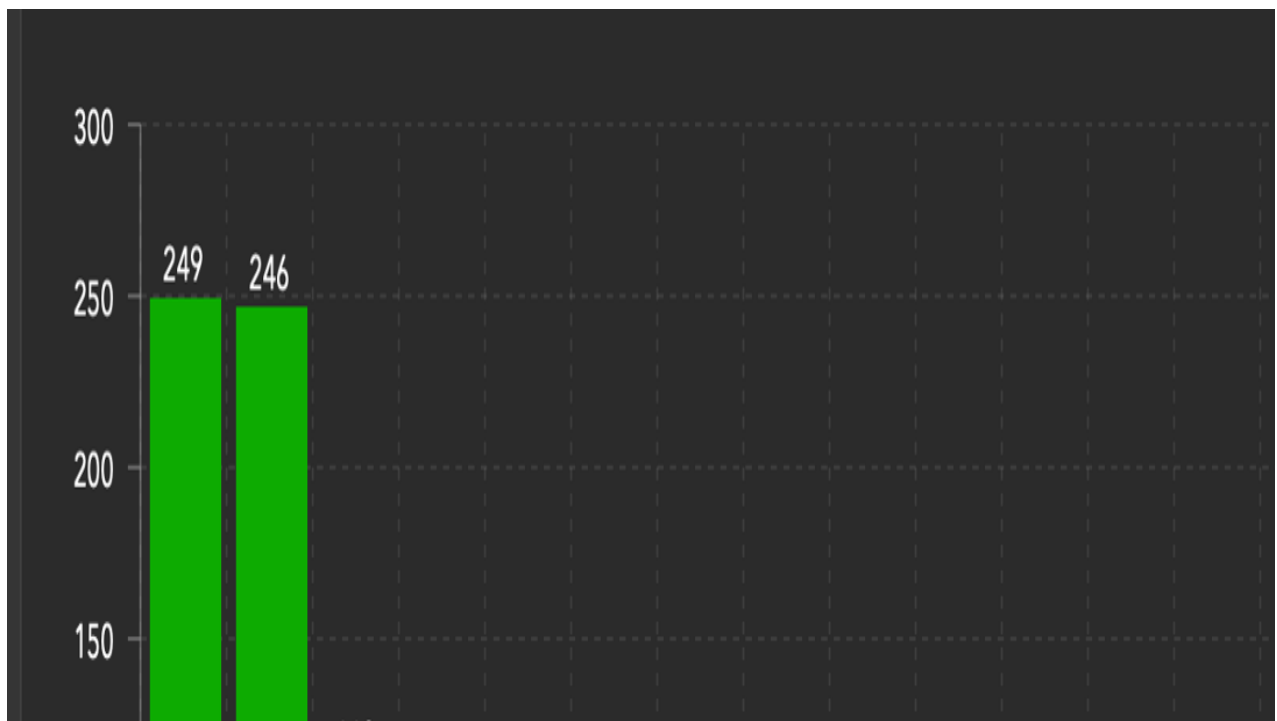
Figure 1 - the Modified Mercalli (MMIS) Intensity Scale

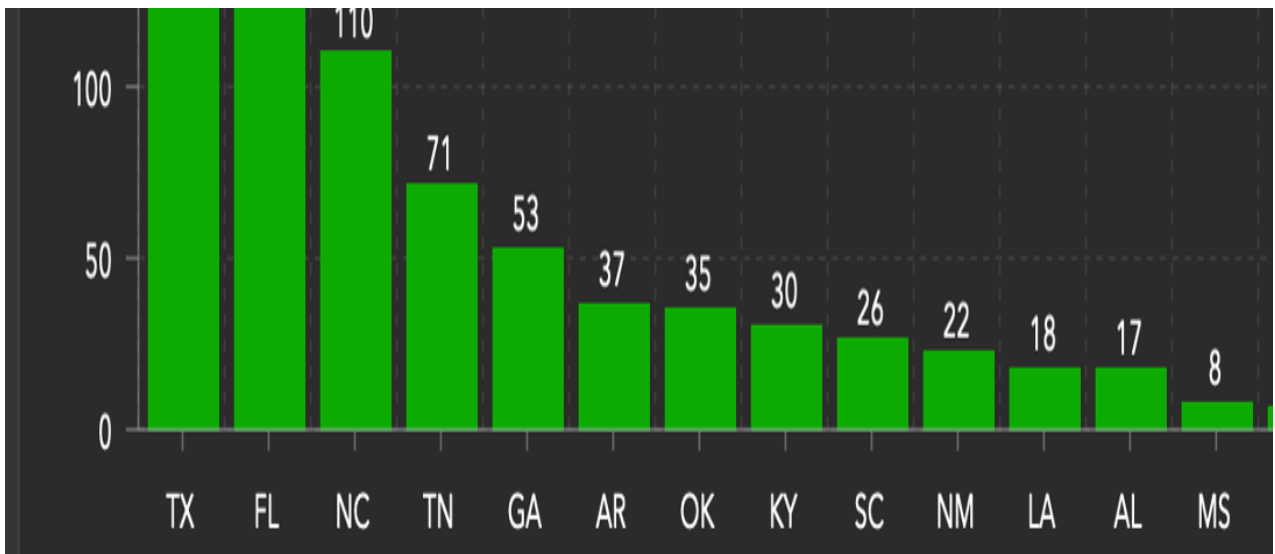
Modified Mercalli Intensity		
Table below shows the Modified Mercalli Intensity scale, which describes the intensity of earthquake shaking and the effects of that shaking at a given place.		
Modified Mercalli Intensity (MMI) is based on human perception and traditionally designated by Roman numerals (for example, IV, V, and VI), however the ShakeAlert system uses instrumental measurements to estimate "instrumental intensity and uses Arabic numbers for example, 4, 5 and 6		
Intensity	Shaking	Description
I	Not Felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck Duration estimated.
		Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed, walls make cracking sound Sensation like heavy truck striking building. Standing motor cars

IV	Light	rocked noticeably
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight
VII	Very Strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures, considerable damage in poorly built or badly designed structures, some chimneys broken
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapseDamage great in poorly built structures Fall of chimneys, factory stacks, columns, monuments, wallsHeavy furniture overturned
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildingswith partial collapseBuildings shifted off foundations
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundationsRails bent.

Figure 2 - FEMA Region 4 & Region 6 2022 Annual Exercise Winlink component.

Figure 3 - FEMA Regin 4 & Region 6 2022 Annual Exercise Winlink component





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