The 2023 Tennessee Amateur Radio Emergency Service (TN ARES) simulated emergency training (SET) will be held in conjunction with the Great Shakeout Exercise sponsored by the Central United States Earthquake Consortium (CUSEC) 19OCT2023 1430Z. **Part One** of this exercise for TN ARES will be initiation and reinforcement of RELATIONSHIPS with our county **Authorities Having Jurisdiction (AHJ**). **Part Two** of the exercise will enable participants to satisfy the CUSEC requirement for reporting the Did-you-feel it? message via Winlink using a special template.

PART ONE

The primary **AHJ** for ARES is the emergency manager of the county in which we reside or to whom we are invited to render aid. The emergency management agency (EMA) Director is responsible for coordinating and supporting the efforts of all responding resources for an incident. Within that group of resources there are other potential service opportunities for ARES: State and local departments of health; healthcare coalitions representing a broad spectrum of healthcare providers; public safety entities and many others.

In the equation for communications interoperability success the multiplier is RELATIONSHIPS. Positive RELATIONSHIPS are best established before the occurrence of an emergent event requiring our communication services. The first step in establishing a RELATIONSHIP is identification of those individuals or organizations with whom we wish to collaborate and support. This exercise will provide an opportunity for you to take that first step with potential **AHJ**s in your county. Many of you have already taken the first step and have a good relationship with your served agencies but for those who haven't, this is your opportunity.

The goal of the following exercise step is to have the ARES Emergency Coordinator (EC) become aware of and acquainted with the potential **AHJ**s (customers) in their county, to retain the information gathered for future reference and to begin the establishment of a RELATIONSHIP with the appropriate entities. A Google form will be used to document contacts. Points will be given for completed contacts with the following as they provide a rough estimate of AHJ accessibility and openness to collaboration with ARES:

1. **Locate the EMA Director for your county at** https://www.tn.gov/tema

   Under Regions, select your Region, find your EMA Director's contact information and establish and document your contact with that individual.

   In Person: 20 pts, ZOOM, TEAMS, etc. 15 Phone: 10 pts, Email:10 pts, Text: 5 pts

   Sample script: Director [last name}, my name is [ARES member name], I am the Amateur Radio Emergency Service (ARES) Emergency Coordinator for [your county name]. My role and that of my group is to offer you auxiliary communications support, when requested, using our local ICS-trained amateur radio operators with access to a network of trained

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operators in surrounding counties. I am participating in the CUSIC 2023 Great Shakeout Exercise and one goal of TN ARES for the exercise is to contact my local EMA Director. After the exercise I would request a meeting with you at your convenience to learn more about your requirements for ICS-trained amateur radio operators and to describe the capabilities we have for provision of auxiliary communications and other volunteer services.

2. Locate the **Healthcare Coalition member(s)** in your county by contacting your Tennessee Regional Hospital Coordinator at:
    a. https://www.thca.org/files/2019/09/HCC-Contacts-2019.pdf
    b. The interactive map of Tennessee shows each of the State regional and local county health departments. Click on the graphic for your region to see the county health departments it includes. The organizations listed at the bottom of the page are Municipal Health Departments and report to their municipality while maintaining close collaboration with the State County Health Departments.
    c. Your Regional Healthcare Coalition is an excellent entry point for communicating your communications capabilities to the members of the healthcare communities in your county.
    In Person: 20 pts; ZOOM, TEAMS, etc. 15 pts; Phone: 10 pts; Email:10 pts; Text: 5 pts.
    Examples:
    The Knox/East Tennessee Regional Healthcare Coalition (K/ETRHC) uses the Middle East Tennessee Emergency Radio Service (METERS Inc.) as Net Manager for the Tennessee Department of Health (TDH) Region 16 Hospital Net on the last Friday of each month. The net serves to validate interoperability among the net control station and the hospitals and provides an operational readiness review for the amateur radio equipment at each site. ARES groups in counties around the region provide the operators.

    K/ETRHC partnered with the Lakeway Amateur Radio Club, an ARES affiliated club, to field a fully equipped communications trailer for use by coalition members across TDH Region 16. Many Coalitions have similar arrangements with ARES groups in their regions and have partnered with them to provide communication resources.

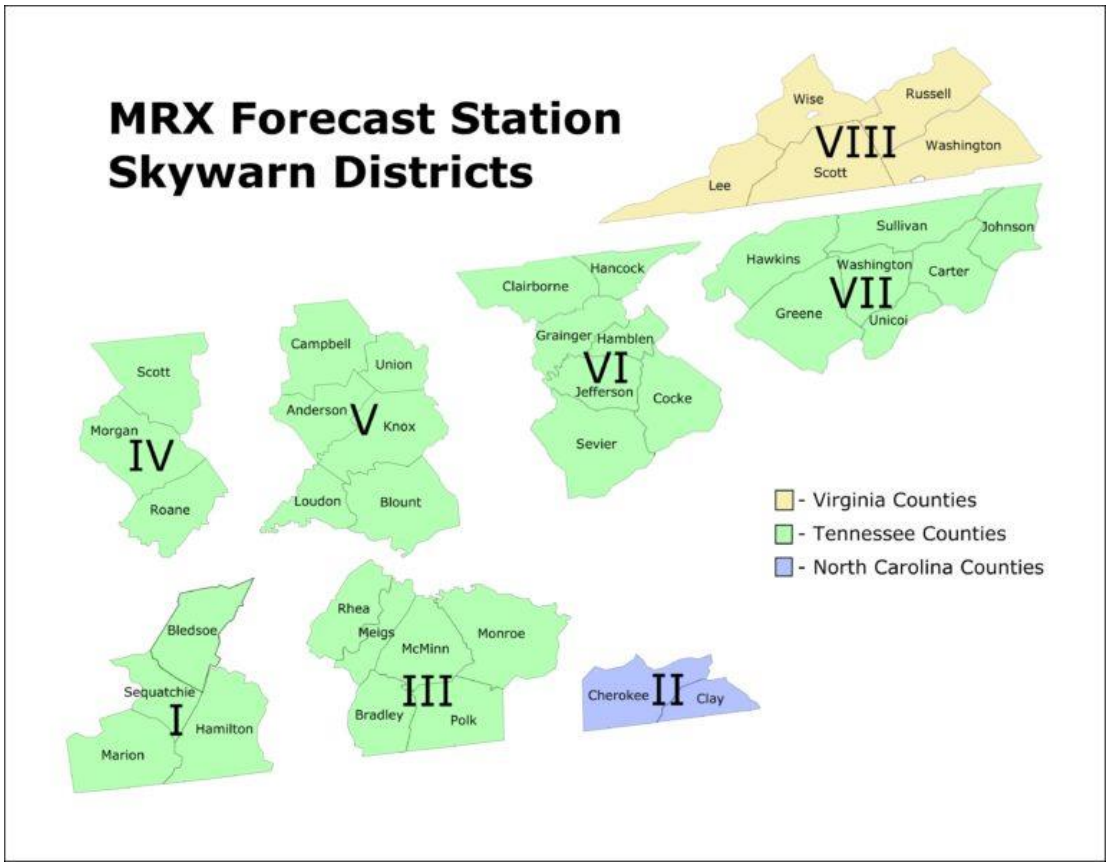
3. **Contact the SKYWARN District Coordinator for your county.**

    In Person: 20 pts; ZOOM, TEAMS, etc. 15 pts; Phone: 10 pts; Email:10 pts; Text: 5 pts.

    a. Contact your county's SKYWARN coordinator.

Explain you are participating in the CUSIC 2023 Great Shakeout Exercise and a TN ARES task for the exercise requested that you contact them and explain that in your role as a TN ARES Emergency Coordinator for your county you have resources to support SKYWARN nets. TN ARES encourages close collaboration with and support for SKYWARN nets under the memorandum of understanding between the National Weather Service and the American Radio Relay League. It is a good preparedness step to introduce the principals to one another before an incident.

SKYWARN Districts in Tennessee

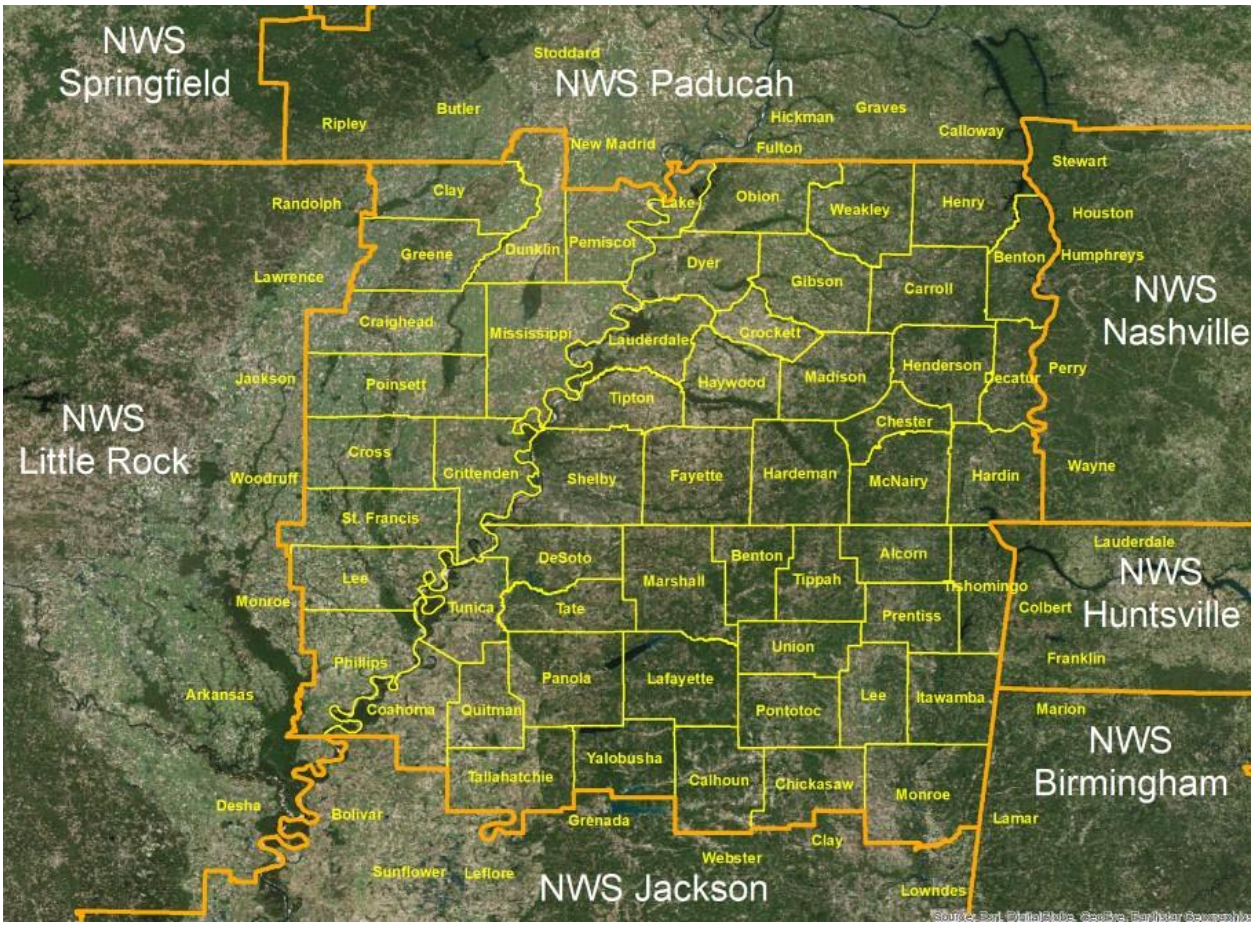


4. Contacts for NWS Morristown, MRX, covered counties can be found here:
   http://www.mrxskywarn.org/districts-3/
   Anthony Cavallucci, KF7TNC
   Warning Coordination Meteorologist

Contacts for NWS Nashville, OHX, covered counties and coordinators may be obtained here: krissy.hurley@noaa.gov , Meteorologist-in-Charge. Additional information for Nashville contacts will be provided as they are available.

Contacts for NWS Huntsville, AL, HUD, North Alabama and Southern Tennessee SKYWARN (Franklin, Lincoln, Moore counties in TN) may be found at https://nalsw.net/contact-us/. Fill in the information and submit to obtain required information.

Contacts for NWS Memphis, MEG, Warning Coordination Meteorologist (WCM): Todd Beal



PART TWO

This portion of the exercise will be focused on the use of Winlink and a special template to notify the United States Geological Survey (USGS) of ground truth conditions in your

immediate area following a major earthquake. Information describing CUSEC and their annual earthquake exercise is available at https://www.shakeout.org/faq/ .

Use the link at https://www.shakeout.org/register/ to register for the event. TN ARES is already registered and may be used as your organization. You could also register in your name or as TN ARES/[your groups name]. Example: TN ARES/Dickson County ARES.

It is important that you follow all instructions in the Winlink portion for filling out the DYFI form. Remember this is an exercise and a test of the notification system. As a result, the instructions will document the fact that you participated but the data requested may be prescribed to satisfy procedural requirements and not necessarily reality.

Follow the instructions at https://winlink.org/content/great_shakeout to prepare and send your message. Your contributions will reflect well on you, your organization and amateur radio. Many thanks to the Radio Safety Foundation and the Winlink development team for their customer responsiveness and for the impressive technical functionality they have contributed to the ever-increasing challenge of ensuring our collective safety.

SUMMARY for Great ShakeOut-TN ARES SET 19OCT2023

PARTICIPANTS:

- Primarily the ARES Emergency Coordinators in Tennessee.
- Other ARES appointed personnel are encouraged to participate.

DATE: 19OCT2023

TIME: See instructions (https://winlink.org/content/great_shakeout)

TASKS: See instructions (https://winlink.org/content/great_shakeout)

Part One:

- Contact **AHJ**s (EMA and Healthcare) and SKYWARN Coordinators for your county.
- Document results in Google Form to be distributed on or before 18OCT2023.
- Google Form response due by 1NOV2023

Part Two:

- Prepare a Winlink message with DYFI template to document ground truth In your area. See instructions for submission deadline. https://winlink.org/content/great_shakeout

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- Add aj4no@winlink.org to your CC:.
- Document results in Google Form to be distributed on or before 18OCT2023.
- Winlink message due 19OCT2023. See instructions for details.

The following pages offer informative summaries of the exercise.

There are multiple purposes for this exercise:

- USGS needs the data for exercising their ability to deal with incoming data from the "DYFI Reports" to calculate the severity using the Modified Mercalli Intensity Scale. (See Figure 1 below.)

- FEMA Regions (initially spawned by Region 4) want "any data" that illustrates the value of agencies working with volunteer resources to bring in situational awareness "ground truth" from specific areas where other methods may not be available. (see email below)

- State and local civil authorities, as well as their NGO partners also want to provide methods for obtaining situational awareness information, mainly, but not only, through volunteer resources.

- State agencies want the incoming data to test their GIS capabilities. (See Figure 2 & 3 below.)

- Winlink wants to test its ability to provide requested information as efficiently and effectively as possible, given the resources that we have available.

Winlink builds EmComm features in order that they be used and understood by those who manage their jurisdiction's emergency needs, directly, and through the use of volunteers. This exercise is an excellent opportunity to provide an example of what is possible with the use of managed volunteer resources. Hopefully, you will distribute this information, widely.

Thanks much,
Steve Waterman
DHS CISA SHARES Auxiliary (Winlink Admin)
FEMA R4 RECCWG AuxComm Committee, Chair
TEMA COMU
Williamson County, TN. EMA Reserves
Winlink Administrator, Dev Team, ARSFI BOD
615-300-5296

Forwarded with permission. A macro perspective from Regional Emergency Communications Coordinator | Response Division | FEMA Region 04

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 Interoperabiity, adaptability and versatility of Winlink. In any crisis, 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.

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, 5and 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.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed, walls make cracking soundSensation like heavy truck striking building. Standing motor cars 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 1 - the Modified Mercalli (MMIS) Intensity Scale

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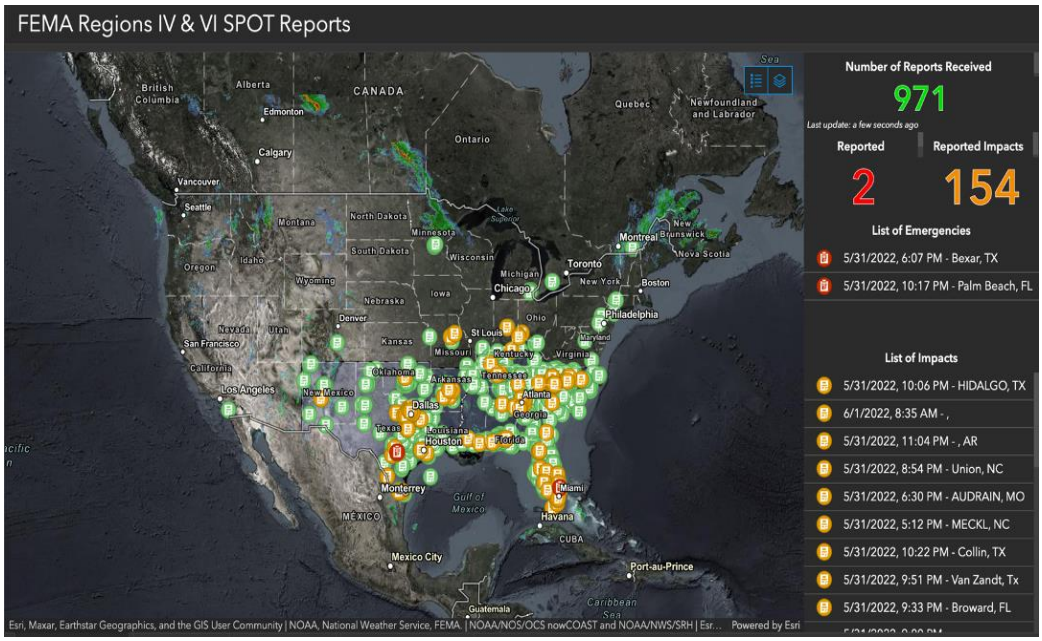

Figure 2.0 - FEMA Regin 4 & Region 6 2022 Annual Exercise Winlink spot reports

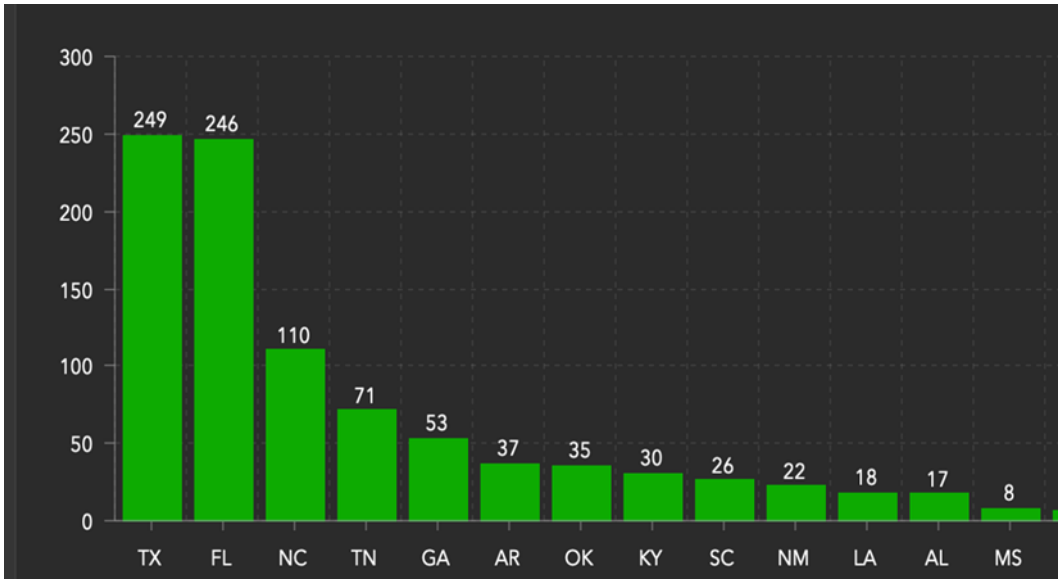

Figure 3 - FEMA Regin 4 & Region 6 2022 Annual Exercise Winlink component

Donnie Monette
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