

# WTX Section SET / 20241116 / Review & Report

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## BACKGROUND

The West Texas Section of the ARRL-ARES initially planned an exercise to take place in October, but due to hurricanes and the request from ARSF/Winlink to limit use during recovery unless vital, we rescheduled our exercise to November 16.

In the WTX section, we have often discussed the subject of how to alert everyone to a situation. Our vast coverage and in some areas, sparse population, make it challenging. Due to our geographic location we are not subject to wide area disasters such as hurricanes. Our events are much more localized. It is these reasons that cause our exercises be more focused on notification and activation.

When constructing an exercise, we try to devise a scenario that could cause cascading or widespread effects throughout the section or farther. These usually involve severe weather or some fantastical event that in reality has extreme low probability of happening in order to include the entire section.

## SCENARIO

The scenario constructed was as follows:

*A severe earthquake (7.0) has occurred 25 miles SW from Sanderson. Damage reports are slowly arriving in, but the major damage reported at present is the rupture of a 36" 5000 psi natural gas line. This line provides to El Paso for power generation. Simultaneous with that, a span of high voltage long distance transmission line was destroyed by the rupture. This has left El Paso operating on solar, wind and surrounding grid energy only. The added load to the state grid has placed a major strain on the grid. Power advisories are going out to conserve as much as possible. Some communication systems interruptions are anticipated.*

This was chosen based on a recent rash of mild earthquakes in the section and adding in some additional damage that seemed plausible if such an event were to ever happen. The location chosen is in an area where neither pipelines or high tension lines exist.

## EXERCISE PROCESS

Approximately one to two weeks prior to the exercise, a list of former exercise participants are notified of the upcoming event date and asking if they wish to be excluded and asking them to spread the word. Additional members who may wish to participate are added. The exact time and event details are withheld in this email. In preparation for the exercise, the list is adjusted accordingly based on replies.

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From this list finalized list, an activation notification is cued to be sent at the chosen date and time. In this notification are the details of the scenario and instructions of what to do. The exercise is conducted, and in this case terminated at the end of the voice net.

## NOTIFICATION

Previous exercises had experimented with various forms of activation. The most useful for such a wide geographic area has been via text messaging. One such use instructed stations to make a Winlink P2P connection to one of 3 different stations where a message containing exercise instructions would automatically be downloaded by the station making connection. Sending the activation and instructions by a combination of text (by email) and conventional email have been very successful, so this method was chosen. In this exercise, 146 activation messages were sent, with 14 being 'bounced' back.

With this exercise, we added a QST on the 7290 Traffic Net. Band conditions at the time of announcement were quite good. After that announcement, it was shared on the Big Bend Emergency Net and in the Panhandle and Big Bend areas, on local repeater nets. The QST consisted of the scenario and the tasking for the exercise. Stations were asked to submit the following to N5QNS (SEC) and W5JDO (SM) via either a Winlink out of state RMS, Winlink P2P according to the WTX section 205, or telnet:

1) A Winlink Field Situation Report, 2) An IC-213 with detail of their stations capabilities and the extents of their power back up if any and 3) there will be a voice net on 7.250 MHz at 1300L.

Announcement and activation occurred at approximately 1150L. The exercise concluded with closing the voice net at 1339L. Winlink ACK messages were sent to all that were received from.

## RESULTS

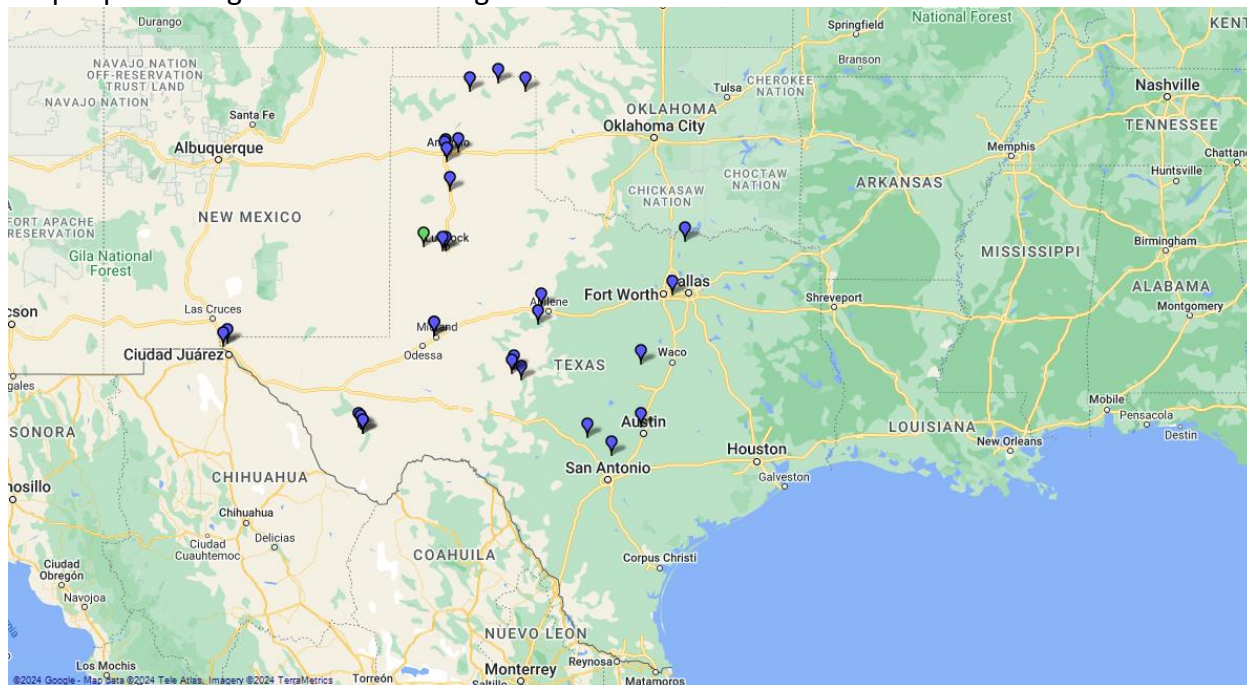
For the 37 stations that took part in the exercise, the results are as follows:

In Section: 33 (28%) [excluding the 14 bounced messages]	P2P to N5QNS: 1 station
SIT REPS: 17	REPORTED HAVING POWER BACKUP: 19
IC-213: 22	OUT OF SECTION: 4
VOICE NET: 19	COMBINED INFO ONTO SITREP OR 213: 4
ALL 3 ELEMENTS: 10	INQUIRY ONLY MESSAGE: 1
	RECEIVED NEXT DAY: 1

One message had incorrect Coordinates embedded in the messages. This caused that station to appear to reside in Quanshi, China.

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Map representing all Winlink messages received.



## FINDINGS

Regarding the 'bounced' activations, 6 were possibly due to a problem with the T-mobile server as these all indicated " server temporarily unavailable". There were 5 AT&T recipients that show as rejected, possibly due to an intended recipient making a change of phone carriers. One activation was labeled by the destination server as 'spam or virus' and 1 message had an improper domain format and finally, 1 had an incorrect email.

It was also quickly determined that the activation notice which included the scenario and instructions, which was sent via email-to-text should have been sent by email-to-mms. The result was a severely truncated message with no details or instructions being received by numerous stations. This was due to oversight by the SEC.

Normally a text message sent through the SMS channel of a carrier is limited to 160 characters. However, some carriers utilize the same channel as their MMS for SMS. The stations that utilize such a carrier (T-Mobile for example) would have received the entire activation message. There are other carriers that break a long message up into 160 character blocks and send them out in sequence. Finally, as discovered here, the first 160 go through but the rest are truncated off.

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In hindsight, this unintended consequence, reinforced the decision to utilize the QST on a well known traffic net.

In discussions after the exercise, it was discovered that there were older versions of the section 205 still being referenced by some stations which created confusion. Additionally, the choice to use an out of state RMS created long delays in some being able to send the requested forms or not getting to send them at all.

## **ADJUSTMENTS NEEDED**

### Email and Phone / Carrier

For the participation invitation email, it should contain a request to reply with a simple "message received" response in order to verify delivery. The invite this time only solicited a response if they did not want to participate.

Notify leadership of any changes in contact information or change of cellular carriers.

All future notification by phone messaging should be done through the mms channel of the carrier.

### Exercise Elements

Given a similar scenario, it may be wiser to solicit responses using the simple message format in Winlink asking for a summarized answer to a sit-rep along with the station capabilities and power backup extents. This would have greatly simplified the sending process as well as made it much quicker. It is noted that 4 stations did similar to this by combining the information from one form onto the other.

### WTX Section 205

The confusion caused by older versions being utilized was a significant problem. A new 205 will be produced and shared via an online document repository. Stations will be asked to destroy / delete any versions prior to the date of the new one. A link to this repository will be shared and posted on the WTX Section website (<http://arrl-wtx.org/>).

### GPS Coordinates

A (-) sign being present or not has a huge bearing on Winlink mapping. Verify coordinates.

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## **FUTURE EXERCISES / CLOSING THOUGHTS**

As this particular exercise was pre-publicized, many knew the date it was coming. However what was not known was the scenario, instructions (elements) or the exact time except sometime between 1130-noon. In other words, they were waiting to be activated.

A future test that could be interesting would be one that was totally unannounced. This type of test would be truly revealing to what could be expected on an actual emergency activation.

All future tests should keep in mind the lessons from this one and the mistakes that were made.

As an overall take on this exercise it appears to have been very successful despite the 'snags' that occurred. Beating the 'jungle drums' works.

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