Test Report

CSEPP Use of Integrated Public Alert and Warning System (IPAWS)

Final
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EXECUTIVE SUMMARY

The Chemical Stockpile Emergency Preparedness Program (CSEPP) communities have unique alerting needs due to the congressional mandate to provide "maximum protection" to the public. The CSEPP communities constantly explore technology that can improve the process of protecting the public. The Integrated Public Alert and Warning System (IPAWS) provides an additional tool to perform that function.

CSEPP and public safety officials have a long history of regularly testing systems that are used to protect the public. Siren systems and the Emergency Alert System (EAS) are tested weekly with a record of the results. IPAWS, and Wireless Emergency Alerts (WEA) specifically, does not allow for production testing. This led to a lack of confidence in these systems. To improve that confidence and to get better information on how these systems work a test plan was developed.

The test plan was executed on December 8 and 9, 2014. Information on the systems used by the participating site as well as how IPAWS processes the messages was collected. An after action review (AAR) followed on December 16 and 17, 2014, and included lessons learned:
  ➢ The tools used to author IPAWS messages should be selected based on the needs of the respective agency.
  ➢ All IPAWS tools should include simple ways to cancel or update messages.
  ➢ The public should be educated on IPAWS and the messages that can be sent.
  ➢ Not all cellular phones will display the same message the same way.
  ➢ Not all display systems and text-to-speech display the same.
  ➢ Some text-to-speech will read "#" as "pound sign" some "hashtag."
  ➢ Display systems do not recognize bullet points.
  ➢ Other characters used can change the message.
  ➢ Each authoring tool operates differently and can implement the same feature differently.
  ➢ A user's ability to practice and test the authoring tools will benefit the deployment and operationalization of these systems.
  ➢ The more comfortable and confident users are with the systems, the more likely the systems will be used.
  ➢ All authoring tools should have complete and easy to understand user manuals and job aids.
  ➢ All authoring tool vendors should conduct hands-on user training (in person or webinar).
  ➢ More user interaction is needed with the vendors to ensure better tools.

CSEPP should continue to take actions to improve the use of and effectiveness of IPAWS. These steps include the following:
  ➢ Update CSEPP documents
  ➢ Re-conduct these tests after the Public Affairs Integrated Process Team (IPT) updates messages
  ➢ Conduct more exercises and training to become more familiar with selected systems
  ➢ Conduct the test with more sites (outside CSEPP communities)
  ➢ Conduct a live exercise

- Educate the public
- Geo-target messages
- Work with the IPAWS Program Management Office (PMO) and Federal Communications Commission (FCC) to address needs of the CSEPP communities
- Educate vendors on the needs of the CSEPP communities

1   BACKGROUND

The communities surrounding the United States (US) Army chemical stockpile facilities have requirements and responsibilities to protect the public. The Federal Emergency Management Agency (FEMA) takes the lead in assisting, promoting, and evaluating preparedness in the off-post communities.

FEMA CSEPP coordinates activities among the Department of Defense (DoD), FEMA, and communities affected by CSEPP. FEMA's role is executed through a national office within the Technical Hazards Division (THD) and through personnel in the FEMA regional offices where the chemical installations are located.

FEMA's CSEPP mission includes providing support and oversight for chemical emergency preparedness on the part of state and local governments in CSEPP communities. This mission is accomplished through direct technical support provided by FEMA CSEPP staff; contractors; and funding for CSEPP-specific personnel, equipment, and operating expenses.

CSEPP preparedness is based on the congressional mandated level of protection. The CSEPP Program Guidance describes this as follows:

> *In 1985, Congress (see DOD Authorization Act, 1986, Public Law 99-145) directed the Department of Defense (DOD) to dispose of its lethal unitary (pre-mixed) chemical agents and munitions while providing "maximum protection for the environment, the general public, and the personnel involved."[1]*

This direction from Congress creates a higher level of responsibility for the entities involved. One example of this is the speed with which public alert and notification must take place. The CSEPP guidance states:

> *Communications that are critical for public alert and notification take priority. Other urgent notifications are also needed, and occur as time permits, among local, State, and Federal agencies, including higher authorities within the Army.*

Local authorities have primary responsibility for protecting their population, including public warning, protective action instructions, blocking entry to the potential hazard area, managing evacuation, and providing initial reception and shelter for evacuees. The area surrounding the storage sites is broken down into zones. These zones can be a few blocks or parts of a county. Each zone may have different and sometimes even conflicting actions. An example is the zones of Madison County, Kentucky, outside the Blue Grass Army Depot (BGAD).

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[1] FEMA, CSEPP Program Guidance December 2012

CSEPP Zones
Madison County, Kentucky

Zone 3A
Zone 3B
Zone 2A
Zone 1B
Zone 2B
Zone 2E
Zone 1A
Zone 1C
Zone 1D
Zone 2D
Bluegrass Army Depot
Zone 2C
Zone 3D
Zone 3C

Place Name
Interstate
Major Road
Local Road
Jeep Trail
Proposed Road
Railroad
Stream
Water Body
Public Land

4
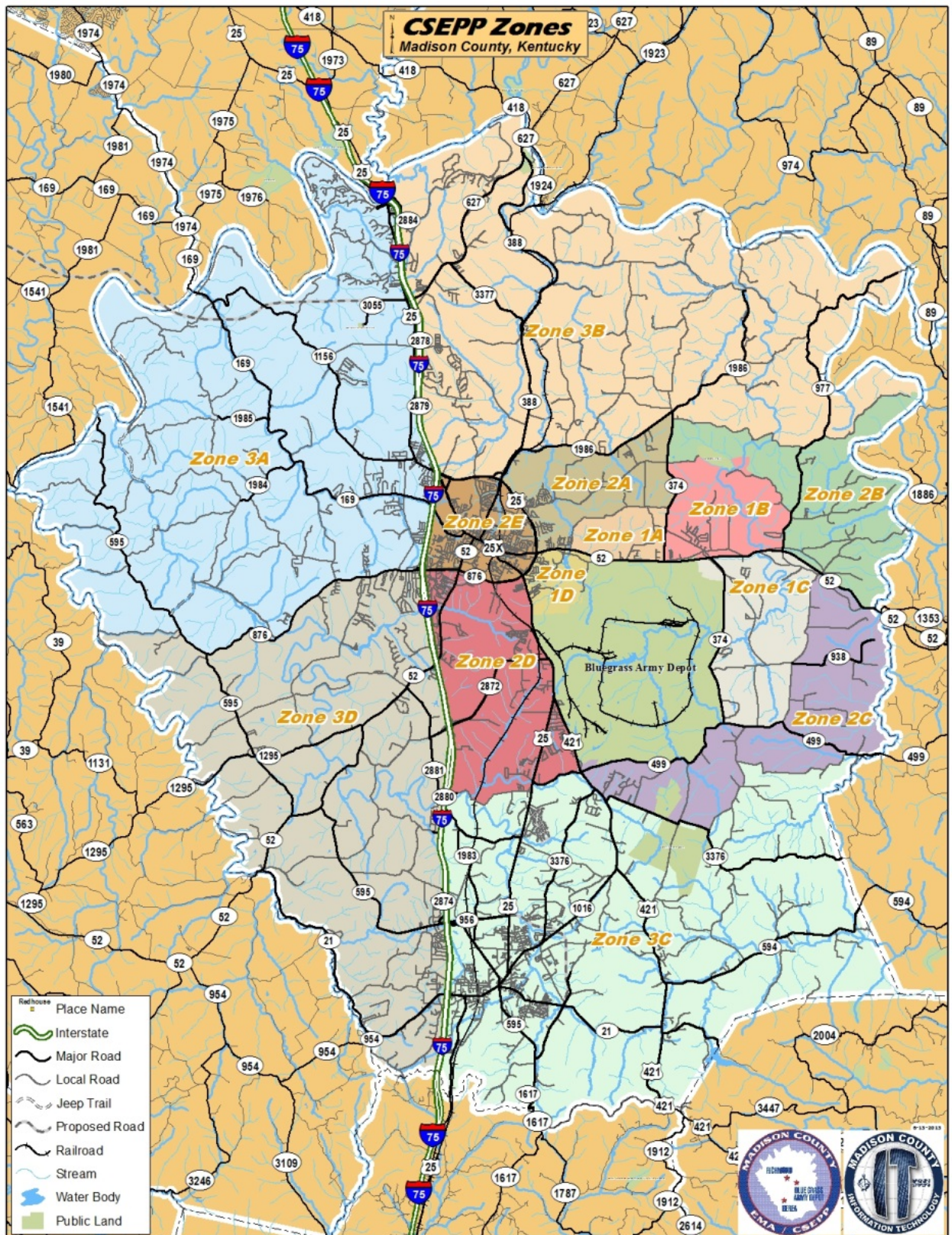
Alert and notification to the public is a vital and time-critical process to minimize potential health impact in the event a protective action is needed. The installation is required to notify the off-post communities within five minutes of a protective action recommendation (PAR). The impacted communities then review that recommendation and determine what protective action decision (PAD) they will notify the public to take. The CSEPP guidance states:

> *Systems and procedures should be in place to make a protective action decision (PAD) and provide an alert signal and appropriate protective action instruction to the population in the affected zones of the IRZ within eight minutes of receipt of the warning and PAR from the installation.*

An incident's duration is likely to be lengthy in most cases. To ensure the "maximum protection" to the public, the alert(s) and notification(s) will continue throughout the incident or while there remains a threat to the public. The CSEPP guidance states:

> *Once initiated, procedures to alert and notify the public (for example, sirens, TARS, and EAS) should be repeated, and updated if required, at regular intervals in each affected zone or area, at least every 12 minutes for the first hour and every 20 minutes thereafter, until the danger to the public is determined to be past in that zone or area.*

Each community annually reports their readiness based on the benchmarks identified in the CSEPP guidance. There are multiple small scale and table top exercises each year, which culminate with a full-scale exercise annually, which is used to evaluate the communities. The CSEPP guidance states:

> *Through the CSEPP exercise program, response communities demonstrate proficiency and fulfillment of established standards within their respective areas of expertise. The exercise program will be used to evaluate and validate plans, policies, and procedures.*

During the full-scale exercise, the ability to alert and notify the public is evaluated. The communities use the available system(s) and determine whether the public received the message. In one exercise, the access to the EAS was down; the respective county attempted to use a backup method, but that also failed. This resulted in a negative finding against the county for not being able to alert the public. While this was only an exercise, it demonstrates how important the alert and notification benchmark is to the CSEPP communities.

The concepts of exercising and using the systems on a regular basis — before emergencies — are ingrained in the CSEPP communities. As the new alerting capabilities of IPAWS are being considered for incorporation into CSEPP plans, the users need to have a better understanding of the system(s) and be able to exercise them.

As a result, the pilot IPAWS test was developed with three major goals and objectives in mind.

Goal 1 – Validate equipment and configurations
- ➤ Objective 1.1 – Validate alert authority's equipment can effectively handle audio
- ➤ Objective 1.2 – Validate broadcaster's equipment can effectively handle audio
- ➤ Objective 1.3 – Validate equipment can generate WEA

Goal 2 – Validate the message templates
- ➤ Objective 2.1 – Validate message template for EAS
- ➤ Objective 2.2 – Validate message template for National Weather Radio (NWR)
- ➤ Objective 2.3 – Validate message template for WEA

Goal 3 – Validate Procedures
- ➤ Objective 3.1 – Validate alert authority's procedures are effective
- ➤ Objective 3.2 – Validate broadcaster's procedures are effective

In addition to these goals, a test plan was developed to further the understanding and use of IPAWS within CSEPP. These overarching goals were as follows:
- ➤ Build IPAWS user confidence
- ➤ Increase comfort levels with existing equipment
- ➤ Update IPAWS Implementation (How-to) Guide

2 METHODS

2.1 Planning

In early 2013, three working groups were established for IPAWS within the CSEPP regions of Kentucky and Colorado: Governance, Messaging, and Technology. The Governance work group was tasked with drafting text for the establishment of state and/or local alerting authority to send messages to the public. The Messaging work group was tasked with developing message templates for the various alerts that may be needed for public notification. The Technology work group discussed the technology associated with IPAWS messaging and reviewed the messaging templates for adherence to specifications. The groups met fairly regularly throughout 2013.

In March 2013, initial testing objectives and planning began to conduct a pilot IPAWS test in Kentucky.

Between April and July 2013, functional requirements for IPAWS alert origination devices were drafted, reviewed, and revised.

In May 2013, surveys were sent to wireless providers for feedback, with the plan to conduct the pilot IPAWS test in coordination with the 2013 BGAD exercise in September 2013.

In May 2013, the first version of the *Test Plan – CSEPP Use of Integrated Public Alert and Warning System (IPAWS)* (CSEPP Test Plan) was prepared, and underwent several reiterations in the months that followed.

In August 2013, CTIA representative Brian Josef contacted FEMA Technical Engineering Support (FTES) and asked for all survey information to go through CTIA and they would work with the providers.

On September 4, 2013, Madison County filed a waiver request with the FCC to grant a waiver of 47 Code of Federal Regulations (C.F.R.) §10.350; specifically the prohibiting of test messages from state and local alerting authorities, to allow for testing in December 2013.

In September 2013, guidelines for the use of IPAWS in pre-planned events was prepared and vetted through the Governance work group in October. The guidelines do not supplant the authority of the individual jurisdiction's elected officials and/or emergency management staff. Any alert would still be approved by the alerting authority for the jurisdiction before being sent.

In September 2013, the FCC placed a hold status on the waiver request, pending additional information and wireless providers' letters of support.

On November 15, 2013, at the request of the FCC, Madison County withdrew their waiver request with the FCC and requested to do so without prejudice.

In 2014, planning for an IPAWS test continued. In April 2014, FTES drafted guidance on how to implement IPAWS. In June and July, the guidance was revised for use in the pilot test. The guidance includes checklists, model system specifications, model EAS and WEA surveys, a model alert plan, a model memorandum of understanding (MOU) template, model procedures, a model message template, and a model public affairs communications plan.

In July 2014, FTES analyzed the systems selected by alerting authorities for use with IPAWS to determine trends. The IPAWS PMO provided data that alerting authorities submit with their application for permission or when updates are made. This data was consolidated to protect the details from release. The data contained 422 alerting authorities and 533 systems. Of the deployed systems, 18 percent, approximately 96 systems, are provided by 47 different vendors, each with fewer than ten actual deployments reported.

Between July and October 2014, the CSEPP Test Plan was revised to represent testing at the IPAWS Lab at Joint Interoperability Test Command (JITC), and detailed procedures and test scripts were provided. The resulting document was the culmination of meetings with the JITC and the IPAWS PMO.

On July 14, 2014, a conference call was held to discuss the CSEPP Test Plan and ideas for moving forward with the test phase for IPAWS. FEMA hoped that counties would commit to participating in the IPAWS Lab at JITC testing. Kentucky Emergency Management (KYEM); Pueblo County, Colorado; and Lexington-Fayette County, Kentucky, indicated their willingness to participate.

On July 30, 2014, a conference call was held to review the CSEPP Test Plan with participants. At this point, no date for testing had been determined, although late September or October were discussed as possibilities.

On September 5, 2014, FEMA proposed dates for testing in November 2014, with alternate dates in December 2014. The testing was subsequently slated for December 8–9, 2014, with the AAR scheduled for December 16–17, 2014.

In December 2014, an addendum was published which clarified parts of the testing procedures.

2.2 Preparation

FTES conducted pre-test coordination meetings with participants in person and via teleconference/webinar.

On October 29, 2014, FTES met with KYEM personnel. The CSEPP Test Plan and activities were reviewed, as were KYEM's alerting software, DASDEC™ and AlertSense. The pilot test was to be used as a training and practice session for KYEM watch officers as they do not use IPAWS or alerting systems on a regular basis as the weekly and monthly tests are automated.

On October 29, 2014, FTES met with Lexington-Fayette Urban County Government (LFUCG) personnel. The CSEPP Test Plan was reviewed, as were the county's alerting software, DASDEC™ and WebEOC. Software issues were identified with DASDEC™. The Collaborative Operating Group (COG) had not been loaded into WebEOC. LFUCG took both as action items.

On November 19, 2014, a meeting was held to review the roles and responsibilities of the observers for the pilot CSEPP IPAWS test. Garrard County personnel were slated to observe the test at Lexington-Fayette County; Laurel County personnel were slated to observe the test at KYEM. The message templates for the assigned sites, test scripts, and a table to track the messages are in the CSEPP Test Plan. The test scripts describe the test, the procedure and the expected result. Following the expected result area is an area for observers to note whether the test passed or failed. If an initial test fails and changes are made, observers were to also note the result of the repeated test. Some scripts have more than one message. In this case, the observer needed to write down the test number to identify a respective test. The observer was also to note all the results. If the observer used a laptop, pass/fail and results could be typed, or hand-written notes made and scanned. All notes will be compiled after the testing for the final report.

On December 1, 2014, FTES met with Pueblo County personnel. The CSEPP IPAWS testing procedures were reviewed, as was the county's On-The-Go Alerting™ equipment. Attempts were made to contact the On-The-Go Alerting™ vendor to resolve issues.

On December 2, 2014, FTES again met with Pueblo County personnel to review the CSEPP Test Plan and actions on the day of testing.

On December 5, 2014, a coordination call was held with the participating agencies to prepare for the CSEPP IPAWS testing. Only the revised portions of the test plan were reviewed. Anyone involved in the testing process has the ability to call a testing hold. If this were to occur, all action will stop immediately. Once it is confirmed that all action has stopped, the reason for the hold will be explained. A determination will then be made whether to continue the testing, postpone it, cancel it, or reschedule it. Emergency Alert Message 1 through 6 are live messages. The key is the wording "THIS IS A TEST" at the beginning and end of the message. Testing will begin with a roll call, followed by system configurations, test 1, etc.

2.3   Execution

On December 8–9, 2014, CSEPP led tests of IPAWS from the IPAWS Lab at JITC. The testing methodology was provided to all participants in the CSEPP Test Plan and Addendum.

2.3.1   Testing Process

The tests followed the established testing scripts. Each script used the following means of performing each test and documenting the results:

> Observations – This included observations of equipment installation, configurations, or staff procedures. Observations consisted of the test observer watching the tester perform an activity or show the observer the equipment or configuration.

> Simulation – Simulation used testers performing a part of the procedures in a simulated fashion such as writing down a message or using equipment set in test mode or configured in the IPAWS test environment.

2.3.2 Testing Resources

> Tester – A tester was a person identified to perform the test on the equipment and systems involved.

> Test Observer – A test observer was a person identified to collect data during the testing process.

> Technical Experts – The test required various technical experts, primarily from the FEMA IPAWS PMO with expertise on the infrastructure of IPAWS and with access to various test equipment.

> Equipment – The test required the following equipment:
>   o Test telephones and devices
>   o Common Alerting Protocol (CAP) 1.2 origination tools
>   o EAS Encoders/Decoders polling the IPAWS-OPEN EAS Feed
>   o Customized nanocell to simulate cellular broadcast for WEA
>   o Customized cellular telephones to receive WEAs from the nanocell
>   o Conference bridge
>   o Speakerphone at each site
>   o Computer screen projector
>   o Copy of this test plan
>   o Assorted office supplies

IPAWS Lab and Test Environment – A major component of the tests included the use of the JITC IPAWS-Open Platform for Emergency Networks (OPEN) Test Development Lab (TDL) where JITC personnel observed receipt of executed scenarios by CSEPP test participants. JITC personnel provided technical support and assisted the CSEPP observer with obtaining log files and capturing screenshots of alert dissemination via EAS, NWS, and WEA.

2.3.3 Testing Teams

During the actual testing, there was a test team at each testing location. The test team generally consisted of one tester and a test observer.

The testing was overseen by the test coordinators, who directed when each site should send messages or perform any test functions. The test coordinators were located at the IPAWS Lab at JITC.

2.3.4 Lab Testing

EAS devices and alert and warning dissemination equipment were configured to simulate the following entities:
- Fayette County, Kentucky
- Laurel County, Kentucky
- Pueblo County, Colorado

A series of test scripts was performed by county alerting authorities using the JITC IPAWS-OPEN TDL.

The CSEPP Test Plan and Addendum contain detailed information on the testing configurations and test scripts, and are included as appendices A and B, respectively.

2.4   Post-testing Analysis

On December 16–17, 2014, an AAR of the CSEPP IPAWS pilot test was conducted at the IPAWS Lab at JITC. Participants included personnel from FEMA CSEPP; JITC; FEMA IPAWS; FEMA Radiological Emergency Preparedness Program (REPP); KYEM; Pueblo County, Colorado; Fayette County, Kentucky; and FTES.

Log files, pictures and video were reviewed.

3 RESULTS

3.1 Planning

The planning process took place over several years. The CSEPP communities were looking to embrace the new technology of IPAWS for their mission of providing "maximum protection" to the public during the destruction of chemical weapons. This level of protection is mandated by Congress to protect the public in the communities surrounding the remaining chemical storage sites.

The working groups came together and developed several documents to assist in the adoption of IPAWS. While this was being done, there were reports of several incidents of over-alerting from weather-related messages, including a major outdoor sporting event being alerted for a storm miles away. This led to reluctance to adopt an untested technology in these critical areas.

Due to the regulatory restriction on testing several of the IPAWS alert distribution channels (WEA and Non-Weather Emergency Message [NWEM]) there was a reluctance to use IPAWS. In the CSEPP communities, the systems used to alert and protect the public are used and tested regularly. This allows the users to be familiar with these systems in the event of an actual incident. Each community has an annual graded exercise to evaluate their readiness for an event. CSEPP needed to integrate IPAWS into their regular exercise process to get the best benefit from this technology.

A plan was developed to perform a test of these systems and a request was sent to the FCC for a waiver of the rules. In informal discussions with the FCC, this was the first time this was requested and they decided that the process used for requesting a live code test of EAS would be appropriate. This process also included obtaining letters of agreements from all potential carriers involved.

When this was attempted, the CTIA became involved and acted as an intermediary between CSEPP and the carriers. This slowed the process. In the end, CTIA told the communities to contact the carriers directly, but this was very late in the process.

As a result of the actions and the requirements from the FCC, the plan was dropped and, in the interim, plans were developed to conduct a lab test. The plan for the lab test was to gain experience with the tools and identify the needs for a live test in the future.

3.2 Preparation

In preparation for the lab testing, FTES made visits to each site to review the testing process and the plan. During these visits, FTES provided assistance as requested by the participants to prepare for the testing. There were several items that were addressed in these visits.

Most common were questions on using the software. The users had not used these tools for IPAWS, and some of the systems were recently procured. As a part of the preparations, the available

documentation for the systems was reviewed. One of the major issues was most systems had limited or outdated documentation.

Several systems were to be used to generate test messages to the JITC. This resulted in identifying that at least one system was also programed to send out e-mails for all alerts. This would have resulted in alert messages being sent to e-mail recipients. This resulted in changes to the CSEPP Test Plan to disable other connections.

One of the issues that became clear as preparation for the testing was ongoing was that there was a lack of standard implementation of the IPAWS guidelines. The first example of this was the implementation of the "block channel" value in the CAP message. The intention of the block channel is to tell IPAWS-OPEN that a message is not intended to go to a specific distribution channel. One vendor allowed the use of both production and test alerts; to accomplish this, the vendor's developers used the "block channel" to tell IPAWS-OPEN not to distribute the message. The message creation page had check boxes to select or unselect the distribution channels. Even when all check boxes for the production COG were unchecked (to indicate not to send), the message was sent to the production IPAWS-OPEN with a "block channel" signal for each channel that was not checked.

This resulted in the production IPAWS-OPEN receiving multiple messages that were not intended for production. This could place a larger than normal load on the production system. This vendor also did not include a "block channel" for the All-Hazards Information Feed, which resulted in the messages being able to go through the production IPAWS-OPEN to the live All-Hazards Information Feed where they may be picked up by various services to send to the public.

When this issue was brought to the attention of the vendor, their developer stated that this was the way the software was supposed to work. FTES had a conference call with the IPAWS PMO to discuss this issue and FTES was told this was not the intent of the "block channel" feature. The IPAWS PMO stated that these messages should not go to production. Additional examples of implementation differences were demonstrated during the testing.

The site visits resulted in several changes and additions to the CSEPP Test Plan, which included the following:
- Addition of a process to halt testing in the event of an actual incident.
- Addition of a test-only message.
- Change to use the test message only until the end of testing.
- Change to use prepared messages at the end of testing to capture information for the Public Affairs IPT.
- Identification that "cut and paste" does not work due to pasting of non-allowable characters.

3.3   Execution

During CSEPP testing of IPAWS at the IPAWS Lab at JITC, the users began the testing being tentative and hesitant to enter messages. This was reinforced by the result of several of the first messages

failing. As testing progressed, the users gained a better understanding of the use of their respective systems, which resulted in more confidence in their systems. KYEM was using AlertSense. Lexington-Fayette County was using both DASDEC™ and WebEOC, while Pueblo County was using On-The-Go Alerting™.

During testing, a webinar was available to the participants. This webinar provided cameras focused on the wireless phones and the television screens. This allowed the users to see their messages as they were displayed on WEA-enabled cell phones and television screens (full screen and text crawl). While the cameras had to be switched back and forth for the users, the users that were able to use the webinar stated that is was helpful. KYEM was not able to access the webinar due to network security issues at their facility.

3.3.1 Message Creation

Each system tested had its own unique requirements. These systems ranged from very simple user interfaces to complex interfaces; the advantages and disadvantages of each are provided in Table 1.

Table 1 – Interface Advantages and Disadvantages

	Simple Interface	Complex Interface
Advantages	- Easy for users to create messages - Pre-populated fields - Less system knowledge needed to use application - Easier to train users - Less risk of errant alerts	- Many functions available to the user - Detailed logs containing messages sent and responses are available to the user for troubleshooting
Disadvantages	- Fewer functions available to the user - Limited availability of log files - Troubleshooting available to the user may be limited	- Requires more training - Difficult to operate (many field or pages) - Users need to understand the application as well as the operation of IPAWS and legacy EAS - High risk for errant alerts

In each testing site, the users were not very familiar with the applications that were in use. The system in use the longest was the DASDEC™ at LFUCG. This system was in daily use to receive alerts, but was not actively used to send alerts and the user's training had taken place over a year prior. The newest system was the AlertSense at KYEM, and users had recently completed training. The one common element with all systems was the need for better simple user guides and job aids that can be referenced by a user to operate the system.

The first technical issue encountered was that one of the applications was taking the time from the local device, not a network source. This resulted in several message failures due to the times of the CAP message being outside the allowable parameters of the IPAWS-OPEN. The device time was changed and the issue was resolved.

The next issue encountered was the use of default settings. This included default end dates, durations, and text from previous messages. Some systems will keep the text from the previous message and prepopulate a message. Users must carefully review each element. This resulted in duplicate messages during the testing. One system also set the system to default to the production COG each time a new message was started. This issue led to a message being released to the public during testing.

The default times issue created several messages that were 23.5 hours long. In addition, one setting was initially defaulting to the year 2000, causing the message to fail. The default settings are changeable in the systems and, once modified, this resolved many issues.

The issues with "cut and paste" of text into the IPAWS applications were identified in pre-testing preparation. In the preparation phase, a test found that bullets were not acceptable characters. During the testing it was also found that there are other formatting issues in some word processing programs that may impact the text in the message. Using a text editor to remove special format and characters worked in some cases, but caution should be used, as even some web browsers may add formatting that is not visible to the user to the text. Cut and paste could not be used with DASDEC™ as it often created errors.

Another issue for message creation was the area element (polygon) creations. All the systems tested supported polygons, but in different ways. DASDEC™ required a third-party tool to create the polygon and create the area text that can be entered into the field in the message. This was not tested due to the lack of a third-party tool and the "cut and paste" issues.

For one test message, a polygon that consisted of three points, two of which were the same, was created by the user. This polygon was a straight line. The message went through, but in a live situation, it is unknown who would have been alerted. In another message the user created a polygon with multiple points. The user attempted to make a shape similar to the existing CSEPP zone and drew it freehand. While the message contained fewer than 200 points and was accepted by IPAWS-OPEN, it contained more than 100 points so it failed WEA validation and was not sent out.

The WebEOC interface was set up to generate a message for only one distribution channel at a time. To test all the channels, a message for each channel had to be created by the user. This added time to the alerting process and increased the potential for error among the messages.

The last major issue was the ability to cancel or update a message. Only two of the four systems provided the ability to cancel or update a message. A third vendor had this feature in beta testing, and said that the cancel could be performed by editing the CAP message in an editing module This was labor intensive, required technical knowledge of the CAP format, and was not able to be done in an actual message by a typical user.

3.3.2   Message Transmission

Message delivery was successful from the CAP origination systems. There was little impact as long as an internet connection was available. The internet connections did not fail and were not impacted during the testing.

The one issue of message transmission came from a hosted provider. During the test a message failed. While troubleshooting the failure, it was discovered that the alert origination COG had changed to another COG certificate, and the message was outside of the COG's jurisdiction so the message failed. The vendor was not able to determine why the COG changed. The user reloaded the correct COG certificate and continued testing.

3.3.3   Message Delivery

The testing was performed using the IPAWS Lab at JITC. This resulted in some findings that were test-system related. While the lab can take feeds for the National Oceanic and Atmospheric Administration (NOAA) HazCollect system, it is not connected to NOAA. As such, the messages were only reviewed for compliance by IPAWS-OPEN, but were not tested with NOAA.

The WEA system in the lab uses a simulated cell tower (nanocell) and custom software that was developed to perform demonstrations. The heavy volume of messages processed during the testing occasionally would overwork these systems, requiring the systems to be rebooted. Overall the system generated the data that was needed, but testing would continue while these devices were off-line so some messages were not fully processed.

HazCollect

Messages sent to HazCollect processed correctly and the logs indicated they would have been successful.

EAS

The display of an EAS message is dependent on the equipment at the broadcaster's location. The way a broadcaster sets up their system will impact the way a message is displayed to the public, and in some cases, if it is displayed at all. For the test, two systems were set up to display on televisions.

The first method is the full screen display. In the real world, this is often used by cable broadcasters to display an alert. The message is displayed for a period of time. If the message is long, it is broken down to several pages and displayed. A test sample is shown below.
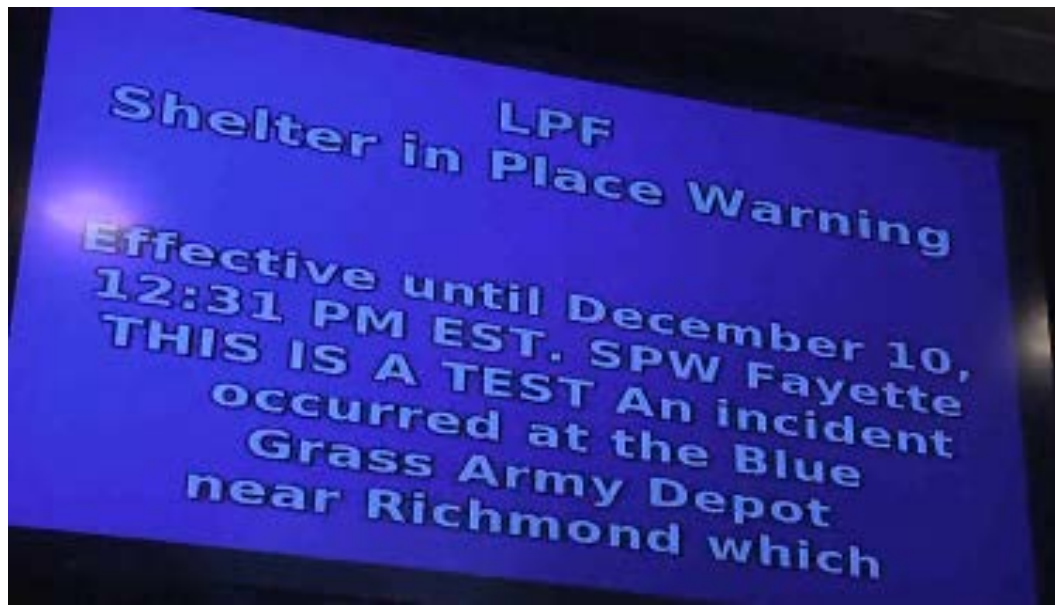
The second system used text scroll. In the real world, this can be text on a regular screen or text on a colored banner. In testing, the text was over the video. The text was difficult to read on several video backgrounds. A test sample is shown below.
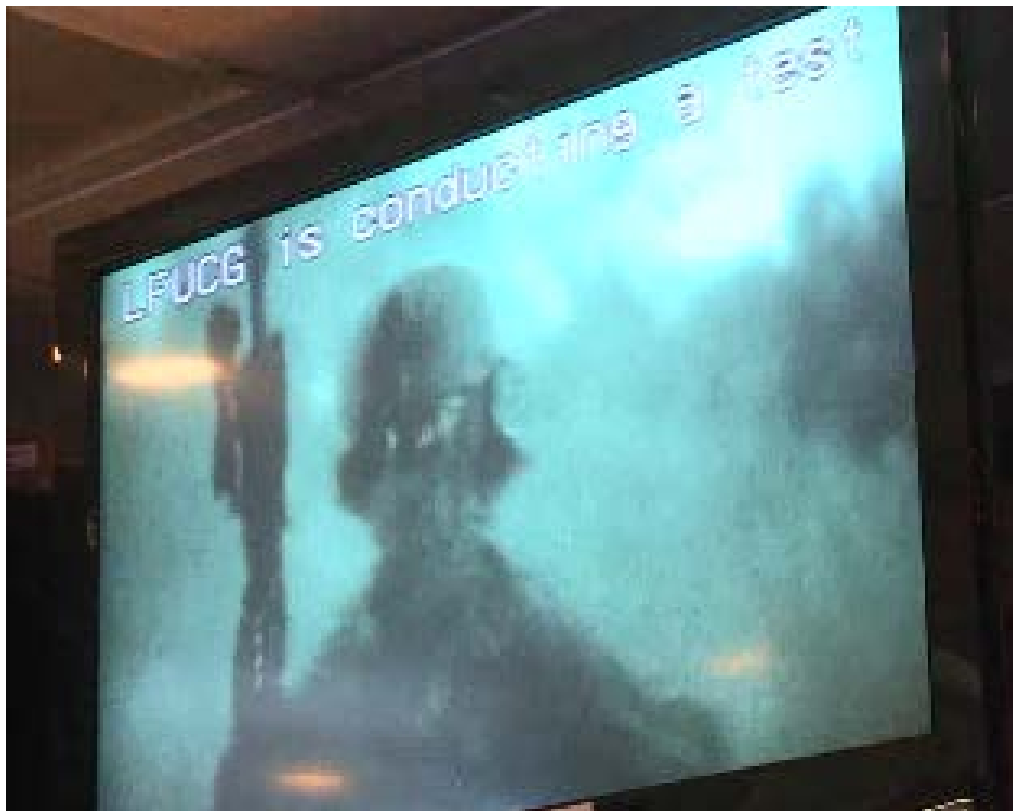
For an EAS message, the system will add a header to the scripted message. The following is the header in the CAP message:

```
ZCZC-CIV-FRW-008101+0129-3501901-LLLLLLLL-
Message from CO Pueblo County Sheriff's Office,Pueblo,CO.
```

This header is displayed by the EAS distribution point as something like this:

> *Civil authorities have issued a Fire Warning for the following Colorado counties: Pueblo.*
> *Effective until December 17, 3:31 PM EST.*

After the header, the text from the description and instruction will be added. The time listed in the header comes from the sent time and duration or expire time. This may not be the same as the time listed in the text of the message, which may lead to confusion by the public.

The header can also extend a message to be longer then intended when it is created. When the message becomes too long, the system will simply end the message at the limit defined by the broadcaster. Decoder text crawls can be set to loop a number of times or for message length, which caps at two minutes. This can result in the loss of some of the message. The message shown below ended on the word "to" after two minutes the first time it was displayed, and faded out and ended at the end of the word "this" after two minutes the second time it was displayed. The device was changed during the testing to display the full messages.
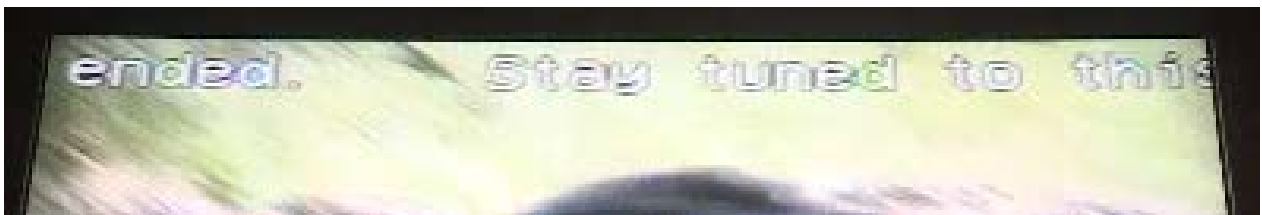
The distribution systems use text-to-speech for the audio from CAP messages. This will impact the way certain words are pronounced. This may impact the message, but testing also found that the use of characters also impacted the message.

The messages that were used contained bulleted lists of actions for the public to take. During preparation, it was found that bullets did not work; the messages were modified to use "-" and ">" as bullets in the messages, as shown in the example below.
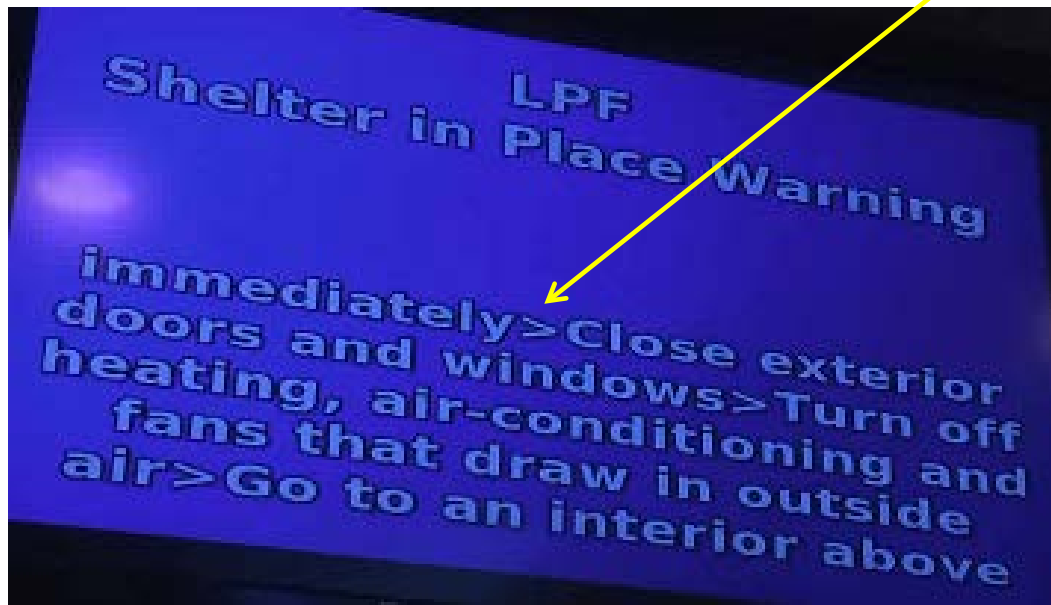
The text-to-speech reader translated the "-" to "dash" and ">" to "greater than" in the message audio. This could lead to public confusion. The testing also found that not all systems translate these characters the same way. All of the messages contained an identifier, such as "#Test1-1". The "#" was translated to "hashtag" by one system and "pound sign" by another.

During testing, some messages used carriage returns to go to the next line and break up the message to be more readable. Some origination systems used spaces for the carriage return, but one origination system simply ignored the carriage return. This caused text to run together and impact the meaning. The screen shot below shows an example where the fact that the impact includes "Southeast 2" may be lost to the viewer.
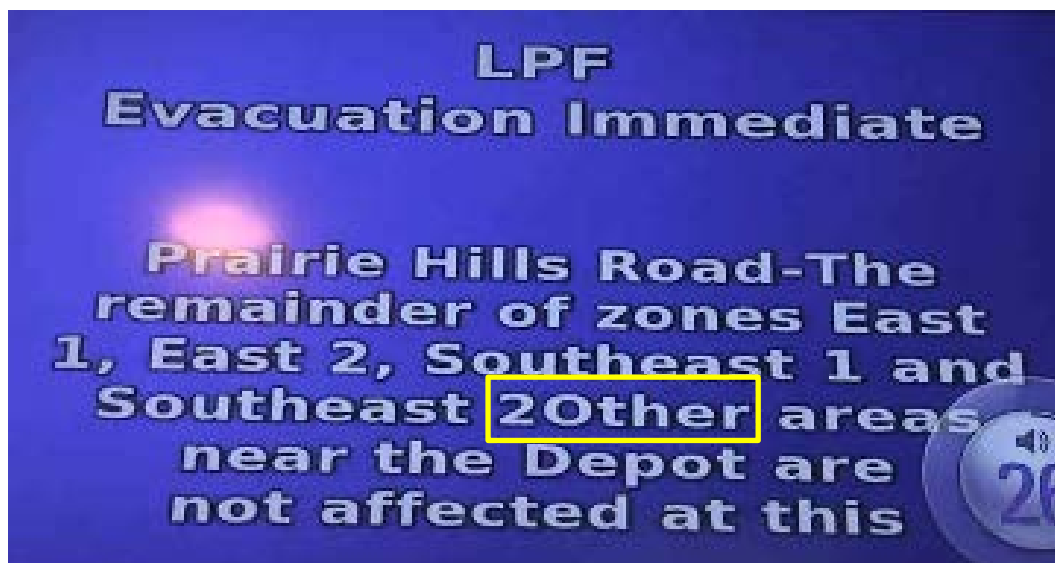
WEA

WEA messages were displayed on two test phones in the lab. Each phone displayed the messages differently. It is important to understand the text that will be displayed and the importance of the 90 character limit. On the test phone, the <CMAMtext> CAP element was followed by a message that was a combination of the <Urgency> and <Severity> CAP elements.
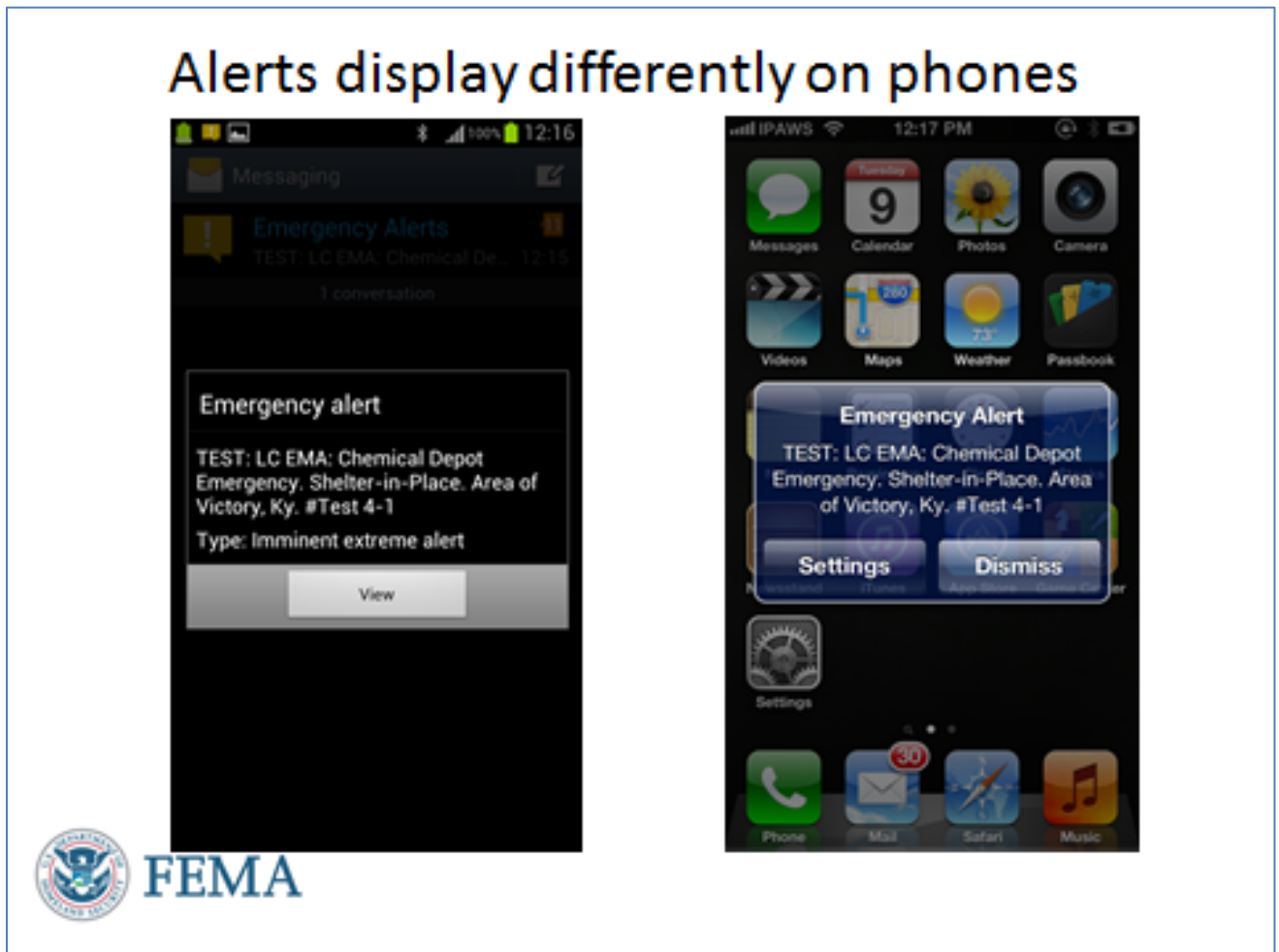
The phone can also store previous messages received.

Multiple Alerts Displayed
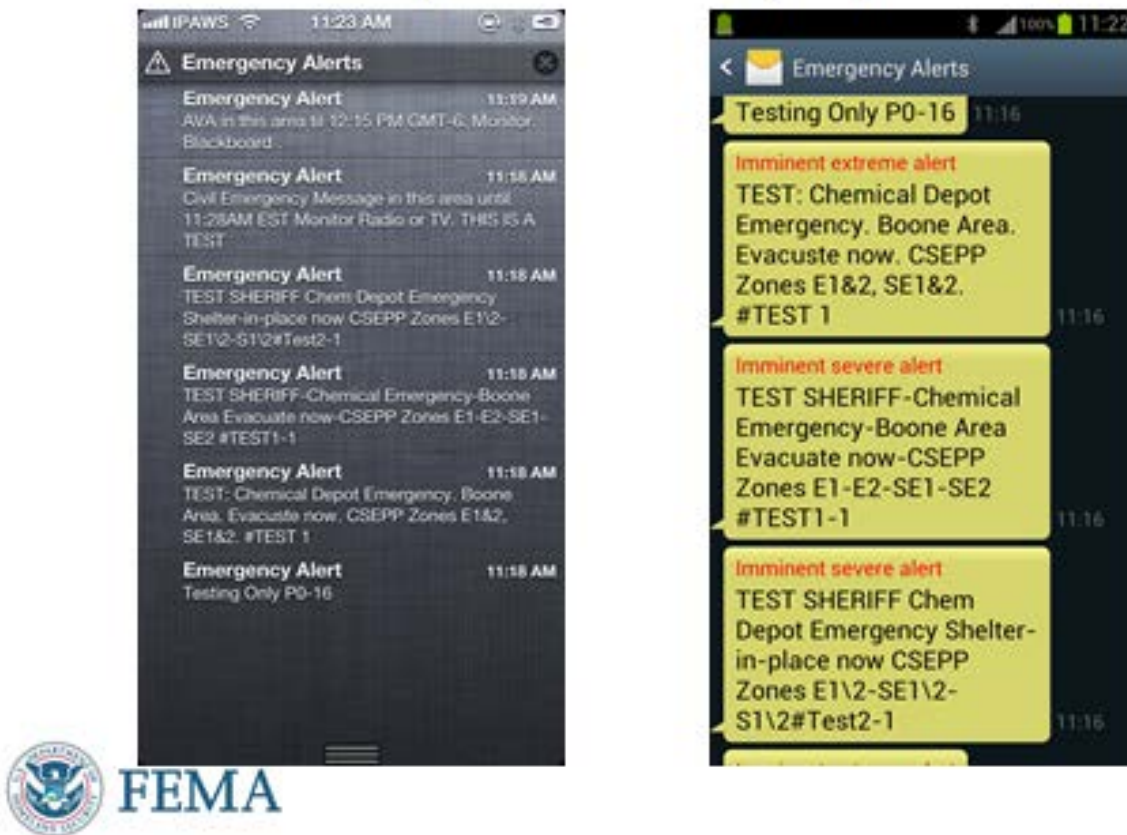
Live Message

At the completion of the test scripts, one additional message was added to the testing. This message was an attempt to capture a screen shot of a WEA message that does not come from the free text <CMAMtext> element, but is created using the default WEA formula. A message without free text <CMAMtext> was generated and sent. Due to default system settings and user error, the message went to the production IPAWS-OPEN and then out to the public.

This message was received by wireless phones throughout the target county, and surrounding counties. The extent was not captured, but people in the surrounding counties including public safety officials reported receiving the alerts.

3.4   Post-testing Analysis

The CSEPP Test Plan called for analysis of the times and accuracy of the messaging. The available systems provided limited availability to track time. Many of the log systems track only down to the

minute. Observers were informed by the IPAWS technicians that the messages were processing through the IPAWS-OPEN system in about two seconds. There was one set of data from KYEM that was used with the data from the Trilithic EAS device with a 30-second polling time. These messages could also be heard on the simulated radio systems before the display on the television.

Time from the origination system to the EAS device:

Average time	0:18
Average time for a short message (Message 0)	0:17
Average time for a long message (Messages 1–6)	0:19
Shortest time	0:05
Longest time	0:57

Time to display the message on the screen:

Average message	1:40
Shortest message	0:28
Longest message	3:06
Average for short messages (Message 0)	0:50
Average for long messages (Messages 1–6)	2:50

Test 13 was performed with the messages from the Public Affairs IPT. This test was limited to only one message per site.

Time from first to last message to be received	0:38
Time for all messages to display	9:55
Time between first and second message	0:37
Time between second and third message	0:31

The WEA messages appeared to be displayed about three to six seconds after the sites stated the message was sent.

The CAP messages were compared, and from the originator to the IPAWS-OPEN there was no change. The CAP message from IPAWS-OPEN to EAS, WEA, and HazCollect were not able to be reviewed. Review of the WEA screen shots and EAS videos show that the messages were sent, with the exception of the EAS header and the WEA type that was added to one phone.

After the testing an AAR was performed. This was in the form of a project review rather than an exercise AAR. During the AAR, participants were asked several questions:
- What went well / did not go well with the testing process?
- What went well / did not go well with the testing itself?
- What went well / did not go well with the respective alerting software?
- What should have been done, but was not?
- What should not have been done, but was?

The results are provided in Table 2.

Table 2 – AAR Results

What went well with the testing process?	What did not go well with the testing process?

• Fairly good instruction on the steps to take during the testing
• Learning experience; process allowed each user to gain experience with the equipment
• Able to monitor the other sites and the webinar cameras
• Pre-site visits found issues, such as not having "test" in the messages, which were addressed with the issuance of an addendum to the CSEPP Test Plan
• Pre-test sessions were helpful to most of the testing agencies
• Pre-test sessions changed the test messages to include "test" at the beginning and end of each message
	• Difficult to manage with the various locations on a phone bridge; each location also had other activities going on around them, some in close proximity
	• Not all sites were able to connect to the webinar to see cameras
	• CSEPP Test Plan intention was thorough, but difficult to decipher
	  o Documentation did not flow in an orderly fashion
	  o There were charts and messages on multiple pages to use for the testing
	  o One site had several pages taped to nearby surfaces to be able to organize them all
	  o This made it difficult for the observer to keep track of the testing
	• Pre-test meetings should have included message generation and testing with the test COG and JITC with technical support one-on-one prior to the group's testing
	• Some users were not familiar with the test COG and had difficulty loading it into their systems at the last minute
	• Notification to the public and public safety agencies in the areas where the testing was taking place

What went well with the testing itself?	**What did not go well with the testing itself?**
• The ability to test the agency's own equipment will help to integrate the tools into their operations • Users were able to gain confidence using the equipment • Able to see results immediately via the webcam • Allowed the users to better understand the future needs for an alerting tool and backup systems • Users began to find and solve their own issues when they happened • Users learned from each test how their system worked and other systems involved in the testing	• Operator error; due to the limited practice on these systems and limited vendor documentation and training, users made errors in using their systems • The nanocell that supported the testing was designed for use as a demonstration system, and had to be rebooted several times during the testing o This is a known issue, which is being addressed by the IPAWS PMO and JITC • Some systems created polygons with too many points and were rejected

What went well with the respective alerting software?	What did not go well with the respective alerting software?

• Lexington-Fayette County DASDEC™
  o Provided most of the functions the agency is looking for
• Lexington-Fayette County WebEOC
  o Able to cancel or update the message
• KYEM AlertSense
  o Customer support from vendor during the testing was great; vendor was on a conference call providing support
  o Easy user interface
• Pueblo County On-The-Go Alerting™
  o Once familiar, was easy to use; user was not familiar with the iPad actions that the application used, but once familiar the application was user-friendly
  o Good back up system
	• Lexington-Fayette County DASDEC™
	  o Does not provide a cancel or update function
	  o Does not have mapping capability; system will allow you to copy an area from a third-party geographic information system (GIS), but it must be in the proper format for a CAP message
	  o Not able to upload pictures
	  o Limited technical support
	• Lexington-Fayette County WebEOC
	  o Must enter a separate message for each distribution channel (WEA, EAS), then each message is sent separately also
	  o Once the message is sent the software did not update the page automatically; user had to refresh the page to see the message status
	  o To switch between the production and test COG, user must log in as the administrator and change it, then log out and log in as the user
	  o At one point in the testing, COG certificate was changed to another COG without user action; the user re-uploaded the correct certificate
	• KYEM AlertSense
	  o After each message, the system goes back to a blank message on the production COG; this can lead to test messages going to the public
	  o Verification message should be clear on which IPAWS-OPEN environment the message is going to; user did not see the user guide prior to or during testing
	• KYEM DASDEC™
	  o Technical support was not responsive
	• Pueblo County On-The-Go Alerting™
	  o There is no user guide for the application; customer support links to a YouTube channel with videos to use the application, but the videos are for a prior version and the screens are not the same, and new functions are not demonstrated
	  o During testing it became clear that the application would not be a primary solution for Pueblo County
	  o User-level agreement limits the use of the application to a single user for each single device
	  o Event send time and expiration had to be set each time; at one point the messages were being rejected due to the time on the iPad being incorrect
	  o Difficult to draw a free-hand shape on the map; this resulted in too many points and a message failure

| | o Seems to be adding a header to the EAS message in front of the CAP Description element |
| | o Seems to ignore carriage returns in the message, resulting in words on separate lines on the screen being together in the CAP message and the television screen |

What should have been done, but was not?	What should not have been done, but was?
• Schedule and conduct defined testing with each site individually with technical support before the group testing • Have user training to include the use of JITC systems to train on the system • Look at being able to enlarge the webcam video or have better quality to see the messages • Conduct pre-test public education on IPAWS • Coordinate with public safety and 9-1-1 agencies in the area about the testing • Coordinate with or inform schools and businesses in the area about the testing • More practice would be beneficial	• Conducting ad hoc tests beyond the CSEPP Test Plan • Continuing with a second message after the first message was not seen in the lab • Allowing IPAWS PMO technical staff to all go to lunch at the same time leaving no one monitoring the production IPAWS-OPEN

4   LESSONS LEARNED

Many lessons were learned as a result of the CSEPP IPAWS pilot test.

1. The tools used to author IPAWS messages should be selected based on the needs of the agency.

2. IPAWS tools should all include simple ways to cancel or update messages.

3. The public should be educated on IPAWS and the messages that can be sent.
   a. IPAWS PMO pointed out the California Governor's Office of Emergency Services (OES) page[2] is a good example of public education.

4. Not all cellular phones will display WEA text in the same manner.

5. Not all display systems and text-to-speech display the same. For example, some will scroll text on the top or bottom of the screen while others display on the whole page.
   a. Some text to voice will read "#" as "pound sign" some "hashtag."

6. Display systems do not recognize bullet points.
   a. Other characters used can change the message.
   b. For example, ">" was used as a bullet, but the text-to-speech said "greater than" each time it came up.

7. Each authoring tool operates differently and can implement the same feature differently (e.g., "block channel" not implemented for all distribution channels).

8. A user's ability to practice and test the authoring tools will benefit the deployment and operationalization of these systems.
   a. The more comfortable and confident users are with the systems the more likely the systems will be used.

9. All authoring tools should have complete and easy to understand user manuals and job aids.

10. All authoring tool vendors should have hands-on user initial and refresher training (in person or webinar).

11. More user interaction is needed with the vendors to ensure better tools are produced.

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[2] http://www.calalerts.org/index.html

5   NEXT STEPS (WAY AHEAD)

The steps below are recommended based on the results of the CSEPP IPAWS test with the IPAWS Lab at JITC.

1. **Update CSEPP documents**

The previously developed documents should be reviewed and updated with the information gained from the testing. This should include the Alert Origination specifications, Implementation Guide, and message templates.

2. **Re-conduct these tests after the Public Affairs IPT updates messages**

After the Public Affairs IPT reviews the results of this testing, the team may update the message template. The Public Affairs IPT should also examine the issue of multiple alerts at the same time and develop recommendations to reduce the time it takes to create and send an alert. Additional testing should be conducted with the new information to determine the results with the new templates and procedures.

3. **Conduct more exercises and training**

Procedures should be developed for the use of IPAWS in routine exercises as well as the routine use of the IPAWS Lab at JITC's tools for training and skill retention.

4. **Conduct the test with more sites (outside CSEPP communities)**

The testing was successful, allowing the users to develop confidence in the system and to identify the characteristics of the systems in use.

5. **Conduct a live exercise**

A method should be developed to conduct additional testing for the entire system, to include delivery to the public. The methods used to select towers to activate are not known to the users. This information is critical to developing effective messages. In addition, the configuration of a broadcaster's EAS device for local event types is not fully known. This will allow the users to better document the system and be able to more effectively use the systems. This could possibly be supported by the JITC monitoring systems.

6. **Educate the public**

The results of the live message showed that there was limited knowledge of these systems by the public. A public education campaign should be developed that includes talking points for elected officials. These messages should be incorporated into other campaigns.

7. **Geo-target messages**

The CSEPP communities have unique alerting needs. The ability to target geographic areas would be an improvement. CSEPP should continue to engage the FCC, IPAWS PMO, and carriers to improve the accuracy of message targeting.

8. **Work with the IPAWS PMO and FCC to address needs of the CSEPP communities**

The results of the CSEPP IPAWS testing at the IPAWS Lab at JITC should be shared with the IPAWS PMO and FCC. The FCC should also be made aware of the unique needs of the CSEPP communities. This may assist with future changes with IPAWS and distribution channels.

9. **Work with vendors to better understand the needs of the CSEPP communities**

The features and functional needs of the CSEPP communities should be reviewed with the respective product vendors, as should the testing results. It may be possible to conduct a webinar for the IPAWS PMO developers on the needs of the user communities. The document, user guide, and job aid needs of the users should be reviewed.

Suggestions for vendors arising from the testing are as follows:

- ➢ The system(s) should:
    - o Synchronize time from a master clock or IPAWS-OPEN and not the user's device to ensure the times attached to messages are valid.
    - o Provide validation of polygons for IPAWS and the distribution channel before they are sent to IPAWS-OPEN.
    - o Provide text validation to ensure that there are no improper or invisible characters in the message text.
    - o Include a message cancel and/or update function.
    - o Allow users to see the message status without having to refresh the page.
    - o Eliminate the need to create the same message for each dissemination pathway.
    - o Allow the user to retry a message to a failed path when posting a message failed with HTTP errors (e.g., 503 service temporarily unavailable).
- ➢ Easier to understand user manuals, job aids and refresher training should be developed.

APPENDIX A – CSEPP TEST PLAN

The following pages contain the original test plan.

The remainder of this page is intentionally blank.

Test Plan - CSEPP Use of Integrated Public Alert and Warning System (IPAWS)

FINAL v4
October 13, 2014

Table of Contents

1   INTRODUCTION

1.1   Overview

The Chemical Stockpile Emergency Preparedness Program (CSEPP) communities have unique needs for alert and notifications. With the congressional mandate of "maximum protection" for the public, CSEPP alert authorities need a rapid set of systems to alert and direct the public to take specific actions to protect themselves.

This test plan was developed to gain a better understanding of the processes and systems that comprise the Integrated Public Alert and Warning System (IPAWS). This understanding includes the interconnection to the legacy systems, timing of messages, and understandability of messages by the public. This started with documenting the requirements of the CSEPP alert authorities, and then developing goals and objectives for this testing.

1.2   Goals and Objectives

Goal 1 – Validate equipment and configurations
  ➤ Objective 1.1 – Validate alert authority's equipment can effectively handle audio
  ➤ Objective 1.2 – Validate broadcaster's equipment can effectively handle audio
  ➤ Objective 1.3 – Validate equipment can generate Wireless Emergency Alerts (WEA)

Goal 2 – Validate the message templates
  ➤ Objective 2.1 – Validate message template for Emergency Alert System (EAS)
  ➤ Objective 2.2 – Validate message template for National Weather Radio (NWR)
  ➤ Objective 2.3 – Validate message template for WEA

Goal 3 – Validate Procedures
  ➤ Objective 3.1 – Validate alert authority's procedures are effective
  ➤ Objective 3.2 – Validate broadcaster's procedures are effective

1.3   Scope

The scope of this document is limited to the testing of the identified functional requirements of the CSEPP communities. This test plan documents the project activities to be performed, the schedule of activities, assigned responsibilities, and resources required, including staff, tools, and computer facilities. The documentation of the test results will be incorporated into a final report.

Testing will occur within the limits of the following:
  • 47 Code of Federal Regulations (CFR) 10
  • 47 CFR 11
  • IPAWS policies and procedures
  • Proposed Kentucky State and Colorado State IPAWS Plans

The scope of this testing will be focused on three areas. The first is the alert origination tools and authorities, which will look at the procedures, templates, and functions of the chosen IPAWS solutions.
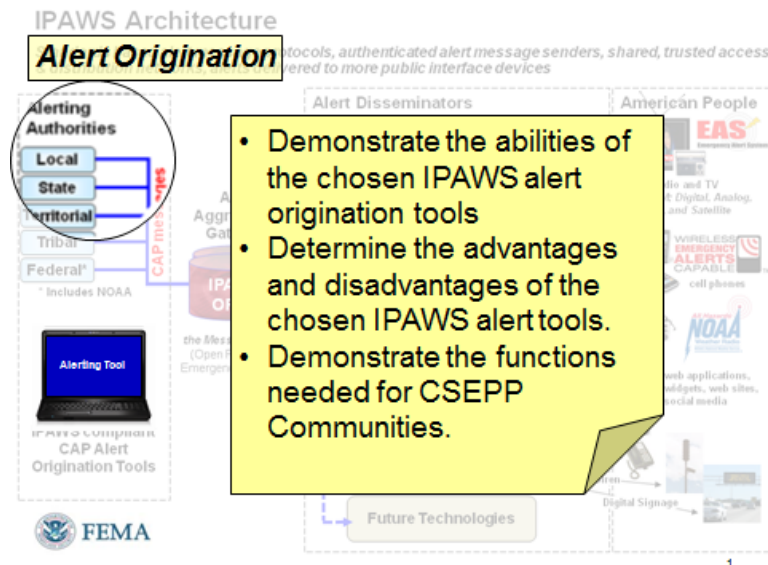
The second area is the processes at the IPAWS-Open Platform for Emergency Networks (OPEN) aggregator. The understanding of how the aggregator operates impacts the procedures and messages of the alert authorities. Gaining an understanding of the systems will improve system use by alert authorities.
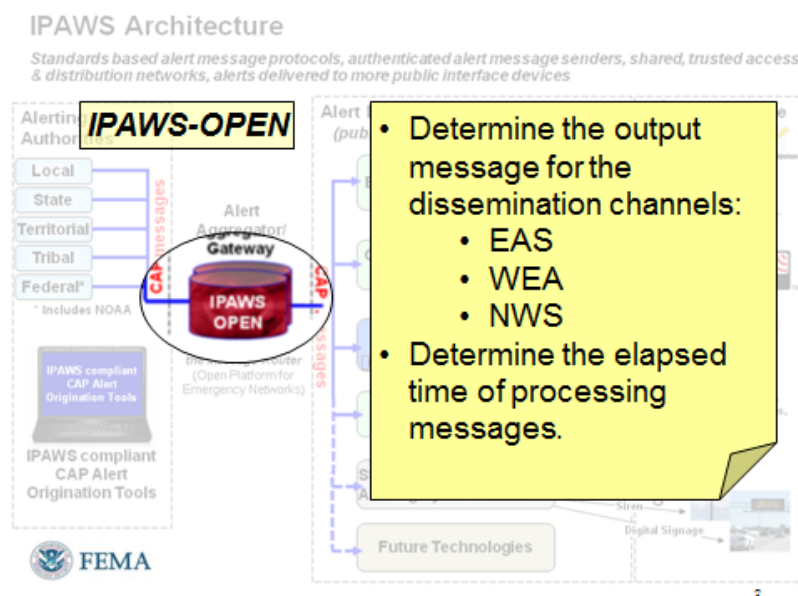
Lastly the test is intended to gain information on what the public will experience from the alert dissemination channels. Gaining an understanding of what message is presented to the public will assist the alert authorities in developing better effective messages.
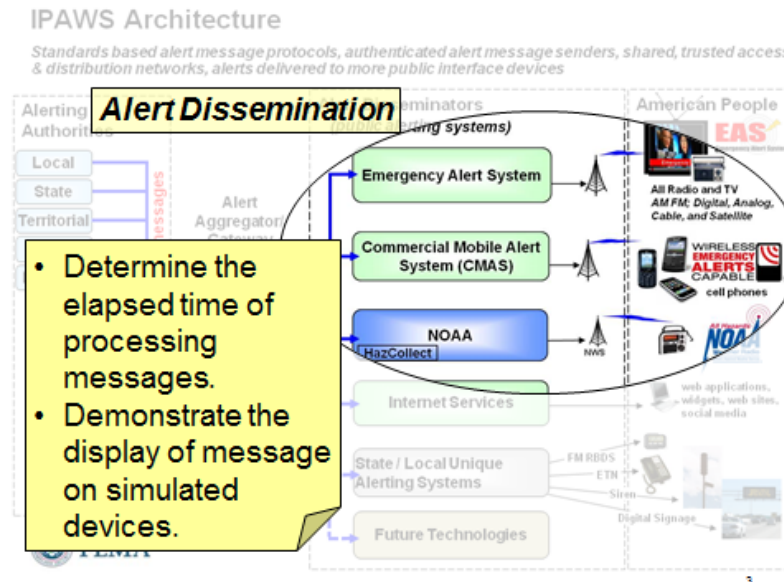
1.4   Limitations and Assumptions

The Joint Interoperability Test Command (JITC) IPAWS-OPEN Test Development Laboratory (TDL) is a representation of IPAWS-OPEN capabilities in a closed, secure environment. CSEPP lab tests will utilize JITC IPAWS-OPEN to establish a baseline measure of the processing of Common Alerting Protocol (CAP) messages from the originator to the IPAWS-OPEN distribution points of the message distribution channels.

JITC IPAWS-OPEN does not support Non-Weather Emergency Messages (NWEM). Therefore, it is not possible to duplicate the full operation and function of NWEM message distribution. Additional tests will need to be performed to assess NWEM message distribution.

IPAWS supports polygons, full county Federal Information Processing Standards (FIPS), and state FIPS codes. Sub-county FIPS is not currently supported. Throughout this document, sub-county will be assumed to be implemented using polygons in the CAP element <area> for alerting.

JITC IPAWS-OPEN demonstrates WEA capabilities by use of a simulated cellular base station and customized cellular devices. WEA lab tests may not fully represent live-code WEA messages; however, message processing to the WEA channel can be validated. Performance of WEA in a production environment is dependent on carrier network configuration and traffic loading, as well as tower configuration and handset configuration, model, and usage. A test method for WEA will need to be developed at a later time.

These tests will not mimic or test the radio propagation of radio, television, or wireless providers. Additional data from the distribution channels will be needed by the alert origination authorities to properly develop alert and notification plans, which is outside of this test plan.

1.5   Risks

Every risk has with it three variables that can be used to measure the importance of the risk.

➢ **Severity** – This is the effect in the event that the risk occurs. This is rated on a scale of 1 to 5, with 1 being minimal impact and 5 being catastrophic impact.

➢ **Probability** – This is the measure of the likelihood of the risk occurring. This is rated on a scale of 1 to 5, with 1 being unlikely and 5 being almost a sure thing.

➢ **Exposure** - Exposure is the measure of how long this risk is present. If the risk is only present a short time, it may be low. This is rated on a scale of 1 to 4, with 1 being a short time and 4 being almost the entire time.

Severity		Probability		Exposure	
Score	**Explanation**	**Score**	**Explanation**	**Score**	**Explanation**
1	Little impact	1	20 percent likely	1	Less than 25 percent
2	Some Impact	2	40 percent likely	2	26 to 50 percent
3	Moderate Impact	3	60 percent likely	3	51 to 75 percent
4	Severe Impact	4	80 percent likely	4	76 to 100 percent
5	Catastrophic Impact	5	100 percent likely		

The ratings in these various categories are multiplied to develop a rating for each defined risk. These risk ratings can be used to mitigate the risks that have the most impact first or to set a priority for addressing the risk.

Caution must be used as all risks should be reviewed even if they have a low priority. Even low priority risks are still risks to successful completion.

A complete risk Matrix is included in Appendix A.

1.6   Use Cases

The use of IPAWS to accomplish the goals of CSEPP was reviewed and the following use cases developed. These use cases were used to develop this test plan.

➤ **General Alert** (Single Jurisdiction, Single Message)
The general alert use case is a situation where a jurisdiction has an alert to go to the public and only needs to issue a single message. An example of this could be a local emergency management agency issuing an alert message to boil water due to contamination.

➤ **Sub-county General Alert** (Single Jurisdiction, Single Message, sub-county Area)
The general alert use case is a situation where a jurisdiction has an alert to go to a geographic sub-set of the public and only needs to issue a single message. An example of this could be a local emergency management agency issuing an alert message to zone A to Shelter in Place.

➤ **Sub-county Multiple Alerts** (Single Jurisdiction, Multiple Messages)
The multiple alert use case is a situation where a single jurisdiction must send multiple alerts to a geographic sub-set of the public. An example of this is an Immediate Response Zone (IRZ) jurisdiction that needs to send a Shelter in Place message for one zone and a relocate message to another zone.

➤ **Two Jurisdictions** (Two Jurisdictions, Single Message for each Jurisdiction)
The two jurisdiction use case is a situation where two jurisdictions must send alerts to the public. An example of this is an accident where two IRZ jurisdictions are impacted and must both send alerts to the public.

➤ **Two Jurisdictions Multiple Alerts** (Two Jurisdictions, Multiple Messages for each Jurisdiction)
The two jurisdiction multiple alert use case is a situation where two jurisdictions must send multiple alerts to the public. An example of this is an accident where two IRZ jurisdictions are impacted and must both send a Shelter in Place message for one zone and a relocate message to another zone.

➤ **Multiple Jurisdictions** (Four Jurisdictions, Multiple Messages for each Jurisdiction)
The multiple jurisdiction use case is a situation where four jurisdictions must send multiple alerts to the public. An example of this is a regional accident where multiple jurisdictions are impacted and must send a Shelter in Place message for one zone and a relocate message to another zone.

2   GENERAL TESTING METHODOLOGY

This test plan is designed to test the requirements as developed and documented herein. These requirements are not a complete list of all functions and requirements for IPAWS systems; rather, they are a basic set of requirements for CSEPP.

As part of the development process, the technical working group developed a set of use cases that covers the basic functional requirements of a CSEPP user. Each use case was further refined into a respective set of requirements. Based on these requirements, this test plan was developed.

Each use case is listed with the associated requirements. Each requirement is used to develop a test for that requirement. Each test associated with a requirement is described, along with the test procedure. The basic format of each requirement is as follows:
- Test Title — Depicts the title or name for reference
- Test Description — Provides a brief overview of the test, to include the requirements being tested and the environment in which the test is performed
- Test Procedures — Lists the test steps to be followed by the tester
- Expected Results — Describes what is expected to happen
- Pass/Fail — Will be used during the actual test to record Pass or Fail
- Results — Will be used during the actual test to document the results of the test

While each requirement has a set of test steps associated with it, there is considerable duplication among the requirements. Consequently, a single test may be used to test more than one requirement at a time; this will reduce the time needed to complete the testing.

The testing process is intended to follow the crawl, walk, run format. Test steps are simple initially and then grow more complex as the testing process continues.

2.1   Testing Process

The tests will follow the testing scripts. Each script will make use of the following means of performing each test and documenting the results.

- **Observations** – This will include observations of equipment installation, configurations, or staff procedures. Observations will consist of the test observer watching the tester perform an activity or show the observer the equipment or configuration.

- **Simulation** – Simulation uses testers performing a part of the procedures in a simulated fashion such as writing down a message or using equipment set in test mode or configured in the IPAWS test environment.

➢ **Live** – Live testing is performing the procedures using actual equipment connected to the production IPAWS environment. ***This will take place at a future time and is not included with the current testing.***

2.2   Testing Resources

➢ **Tester** – A tester is a person identified to perform the test on the equipment and systems involved. The tester should be a person that would normally perform the functions and be very knowledgeable in the test plan and technologies involved. The tester should follow the testing plan and notify the observer of all actions, to include changes to the test procedures, if needed.

➢ **Test Observer** – A test observer is a person identified to collect data during the testing process. The observer should be very knowledgeable in the test plan and technologies involved. The observer should not participate in the activities of the test, but should observe and report activities, to include variations from the testing procedures, if needed.

➢ **Technical Experts** – The test will require various technical experts, who will primarily be from the FEMA IPAWS office with expertise on the infrastructure of IPAWS and with access to various test equipment. There may also be a need for expert support from the IPAWS encoder vendors, local dissemination channels, and someone familiar with local emergency management plans and operations.

➢ **Equipment** – The test will require the following equipment:
  o Test telephones and devices
  o IPAWS message initiating devices
  o IPAWS message receiving devices
  o Conference bridge
  o Speakerphone at each site
  o Computer screen projector
  o Copy of this test plan
  o Assorted office supplies

➢ **IPAWS Lab and Test Environment** – A major component of these tests will include the use of the JITC IPAWS-OPEN and test environment to execute the scenarios defined in this test plan. JITC personnel will provide technical support as needed and assist the CSEPP observer with obtaining log files and capturing screenshots of alert dissemination via EAS, NWS, and WEA.

2.3   Testing Teams

During the actual testing, there will be a test team at each testing location. The test team will consist of a minimum of one tester and a test observer. Having two observers at each location is preferred, and will be done in earlier tests as these tests will be in a limited number of locations. The final multi-site testing will likely necessitate a single observer at each site.

The testing will be coordinated by the test coordinator, who will direct when each site should send messages or perform any test functions. The test coordinator will be located at the JITC Lab. The test coordinator is:

<mark>NAME TBD</mark>

For the duration of the testing, a person who is an observer shall not act as a tester for any tests. The following personnel are assigned as observers:

Observer's Name	Primary Location
Martin Cybulski	JITC Lab
Jay Overman	Lexington-Fayette County, Kentucky
Rob Low	Kentucky Emergency Management (KYEM) Emergency Operations Center (EOC)
David Hard	Pueblo County, Colorado

The following personnel are assigned as testers:

Tester's Name	Primary Location
Local Staff	JITC Lab
Local Staff	Lexington-Fayette County, Kentucky
Local Staff	KYEM EOC
Local Staff	Pueblo County, Colorado

The following personnel will lend technical expertise to the process.

Name	Agency	Phone	E-mail
Mark Lucero	FEMA IPAWS Program Management Office (PMO)		
	JITC Lab		
Cheryl Layman	FEMA CSEPP Public Affairs Integrated Process Team (PAIPT)		
Gordon Vanauken	FEMA CSEPP Engineering Support	(814) 574-1186	gordonvanauken@mcp911.com

2.4   Testing Phases

The testing will take place in phases; generally based on location. The following testing phases will be used:
- Lab Testing
- Multi-site testing

2.4.1   Lab Testing

During the lab testing phase, EAS devices and alert and warning dissemination equipment will be configured to simulate the following Kentucky and Colorado entities:
- Fayette County
- Laurel County
- Pueblo County

Section 4.1.2 details the configurations.

During the lab testing phase, a series of test scripts will be performed by county alerting authorities using the JITC IPAWS-OPEN environment.

Test Script Used	
Test 1. System configuration test (Test)	
Test 2. Message template validation (Test)	
Test 3. Message displays to public devices (Test)	
Test 4. Message time to public devices (Test)	
Test 5. Sub-FIPS alerting (Test)	
Test 6. Zone alerting (Test)	
Test 7. Multiple alerts (Test)	
Test 8. Multiple Sub-FIPS alerting (Test)	
Test 9. Multiple zone alerting (Test)	
Test 10. Update active alert (Test)	
Test 11. Cancel active alert (Test)	

2.4.2   Multi-site Testing

During the multi-site testing phase, EAS devices and alert and warning dissemination equipment will be configured to simulate the following Kentucky and Colorado entities:
- Fayette County
- Laurel County
- Pueblo County

During the multi-site testing phase, a series of test scripts will be performed by the county alerting authorities using the JITC IPAWS-OPEN environment.

Test Script Used	
Test 12. Multiple alerts for two COGs (Test)	
Test 13. Multiple alerts from multiple COGs (Test)	
Test 14. Multiple sub-county alerts from multiple COGs (Test)	

2.4.3   Retesting (If Needed)

If any additional test(s) are needed or tests need to be re-conducted, the final test session will be used. This segment of testing is intended to cover, for example, additional functions discovered as a part of the testing, or changes needed to accurately test the requirement.

2.5   Schedule

The test plan schedule is designed to allow flexibility in the testing as needed. The final report will document the actual dates of the testing phases. Tentative agendas for these dates are included in Appendix F.

The Deployment Team will coordinate plan activities with the Project Manager.

Test Site/Area	Planned Dates	Actual Dates
Lab Testing	December 8, 2014	
Multi-site Testing	December 9, 2014	
Data Collection	December 10–15, 2014	
Retesting (if needed)	December 9, 2014	
After Action	December 16–17, 2014	
Exercise (if used)	N/A	

3   FUNCTIONAL REQUIREMENTS

The following functional requirements were developed based on the use cases and capabilities of the IPAWS systems.

Req. 1.   A set of predefined CAP messages shall be validated for content and format through the IPAWS-OPEN devices. This will include:
- o   Each predefined message passes through the IPAWS-OPEN to EAS
- o   Each predefined message passes through the IPAWS-OPEN to NWEM
- o   Each predefined message passes through the IPAWS-OPEN to WEA
- o   Each predefined message is disseminated by EAS providers
- o   Each predefined message is disseminated by NWEM providers
- o   Each predefined message is disseminated by WEA providers

Req. 2.   A validated alert message is displayed to the public within two minutes using EAS.

Req. 3.   A validated alert message is displayed to the public within two minutes using WEA.

Req. 4.   A validated alert message is displayed to the public within two minutes using NWEM.

Req. 5.   An alert message shall be presented to the public in less than one minute from the time the alerting authority sends a valid message.

Req. 6.   The systems (originator, IPAWS-OPEN, and dissemination channel) shall be capable of sending an alert to an area smaller than a full county using sub-county FIPS codes.

Req. 7.   The system shall be capable of sending an alert to an area smaller than a full county such as a CSEPP zone using the CAP element <area>.

Req. 8.   The system shall be capable of sending multiple (up to six) messages to the public from a single alerting authority in a period of less than two minutes.

Req. 9.   The system shall be capable of sending multiple (up to four) messages to the public in an area smaller than a full county using sub-county FIPS codes from a single alerting authority in a period of less than two minutes.

Req. 10.   The system shall be capable of sending multiple (up to four) messages to the public in an area smaller than a full county using the CAP element <area> from a single alerting authority in a period of less than two minutes.

Req. 11.   The system shall be capable of sending an update to an active alert.

Req. 12.   The system shall be capable of sending a cancelation to an active alert.

Req. 13.   The system shall be capable of sending multiple (up to six) messages to the public from two alerting authorities in a period of less than two minutes.

Req. 14.   The system shall be capable of sending multiple (up to 12) messages to the public from up to four alerting authorities in a period of less than two minutes.

Req. 15.   The system shall be capable of sending multiple (up to 12) sub-county area messages to the public from up to four alerting authorities in a period of less than two minutes.

Req. 16.   The system shall be capable of converting text to speech at the distribution channel for EAS and NWEM.

4   TESTING

4.1   Testing Configurations

To perform, IPAWS lab EAS devices will be configured in accordance with applicable Collaborative Operating Group (COG) Memorandum of Agreement (MOA) alerting permissions. At least two sub-county FIPS codes will be included.

4.1.1   Origination Sites

Each origination site will use the normal equipment that they have within their EOC or warning site. Prior to testing, the equipment will be changed to the test environment and verified by a second person. This equipment will be configured as their county authority, but will use the testing certificate and JITC IPAWS-OPEN. The IPAWS equipment shall be connected to the JITC Aggregator Service at the following URL: https://www.ipaws-open.net/IPAWS_CAPService/IPAWS

Each site must make sure that the equipment is disconnected from the radio frequency (RF) transmission lines and any other live external feeds at the alerting device.

Many devices used by the CSEPP communities are used to initiate legacy EAS messages using RF transmitters. Where possible the backup device should be used for this testing to maintain a live system in the event of an actual incident. The operator should disconnect all outputs to live systems. This includes the connections on the back of the device.
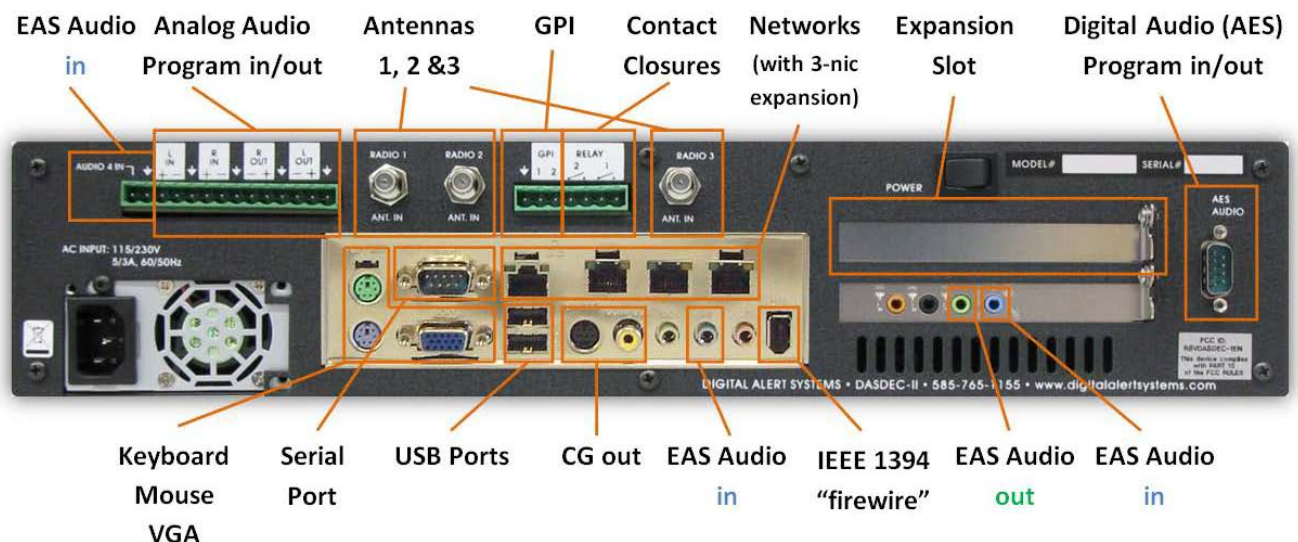
Specifically the following should be disconnected with the audio out first:
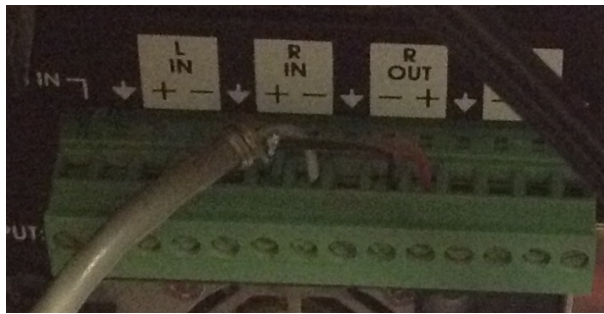
| Analog Audio Program In/Out | Contact Closures | EAS Audio In/Out |
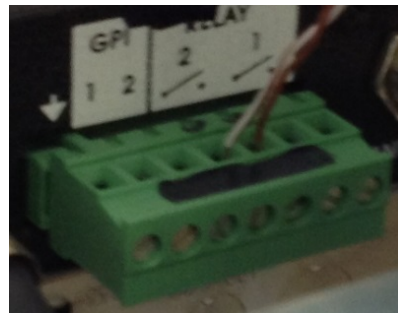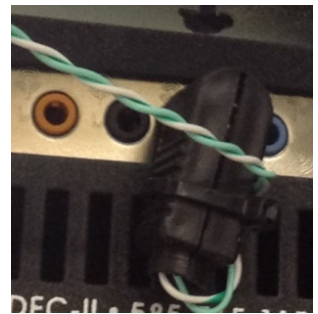
Next, the software should be changed to connect to the test lab. Most of the equipment has been configured in the past, but verify before the testing. The IPAWS software must be configured with the testing certificate and then directed to the JITC site. The IPAWS equipment shall be connected to the JITC Aggregator Service at the following URL: https://www.ipaws-open.net/IPAWS_CAPService/IPAWS

After the device is configured to use the JITC lab environment, the agency will transmit a required weekly test (RWT) to confirm the connection to the lab and no live feeds.

Each participating alert authority should contact their Public Affairs Officer to brief them on the testing, and to develop contingencies or a communications plan. A model Communications Plan is included in Appendix D.

The following areas will be used:

Fayette County
FIPS – 021067
Sub-FIPS Code – N/A

Commonwealth of Kentucky
FIPS – 021125 (Laurel County)
FIPS – 021000 (Statewide) – not used for testing
Sub-FIPS Code – N/A

Pueblo County
FIPS – 008101
Sub-FIPS Code – N/A

4.1.2   JITC Lab

The equipment at the JITC Lab should be set up as indicated below.

➤ Device Configuration

Device	Configuration
IPAWS-OPEN	Normal
WEA Feed	Forward all messages regardless of destination
EAS Feed	Normal
NWEM Feed	Normal
Wireless Phone 1	Normal
Wireless Phone 2	Normal
EAS Device 1 – Radio Only	Fayette County Radio FIPS – 021151 *SAGE ENDEC with Default settings*
EAS Device 2	Pueblo County FIPS – 008101
EAS Device 3	Fayette County Television FIPS – 021067 *DASDEC – Default settings* *Red ribbon with white letters at top of screen*
EAS Device 4	Laurel County FIPS – 021125
EAS Device 5 – Radio Only	Laurel County FIPS – 021125 Fayette County FIPS – 021067 *SAGE ENDEC with Default settings*
EAS Device 6	Laurel County FIPS – 021125 Pueblo County FIPS – 008101 Fayette County FIPS – 021067

➢ Capture Targets

Device	Log
County IPAWS Software	Date/Time of send and full CAP messages sent
IPAWS-OPEN	Date/Time of receipt and full CAP messages received
WEA Feed	Date/Time of receipt and full CAP messages received and sent
EAS Feed	Date/Time of receipt and full CAP messages received and sent
NWEM Feed	Date/Time of receipt and full CAP messages received and sent
Wireless Phones	Date/Time of receipt and messages displayed
EAS Devices	Date/Time of receipt and full CAP messages received and broadcast messages

4.2   Testing Procedures

On the day of testing, each site will dial into the conference bridge. The bridge will be:

MCP Bridge #4
Call in number: (814) 954-1239
Pass Code: 18508#

Each site will report the staff members who are on-site. The systems will be configured and Test 1, the RWT, will be conducted one at a time, coordinated by the test coordinator at the JITC Lab.

Each message sent by the alert originator will have a unique number. The test message has a hashtag. For each test, this will be changed to add a number. For example, the first time message 1 is sent the hashtag will be "#Test1-1" The next time message 1 is sent will be "#Test1-2" and so on.

4.3   Test Scripts

The following pages contain test scripts for conducting IPAWS testing.

Test 1.   System Configuration Test (Test)

Test Description:
This test will be conducted in the JITC IPAWS-OPEN test environment. The test is to verify that the various devices are configured correctly for future tests. Each site will send one RWT message.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Create a CAP message with an alert origination tool and transmit.
3. Validate that the message was processed and displayed on the test devices (public display devices at the JITC such as cell phone, television, or radio).

Expected Results:
The alert message is properly processed and displayed on all test devices.

Pass/Fail:

Results:

Test 2.   Message Template Validation (Test)

Test Description:
This test will be conducted in the JITC IPAWS-OPEN environment. This script will test requirement 1. The test will validate each message template prepared by the messaging working group. Each site will send two messages from the templates.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Create an alert message using the message template and transmit.
3. Validate that the message was processed and displayed on the test devices.
4. Repeat process for each message template.

Expected Results:
Each message template is properly processed and displayed on the test devices correctly.

Pass/Fail:

Results:

Test 3.   Message Displays to Public Devices (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirements 2, 3, and 4. The test will validate connection to each distribution medium. For each message transmitted in test 2, review the following.

Test Procedure:
1. Use the messages transmitted in test 2.
2. Validate that the message was processed and displayed on the test devices for each distribution medium.
3. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
Each message is properly processed and displayed on the test devices correctly.

Pass/Fail:

Results:

Test 4.   Message Time to Public Devices (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 5. The test will validate time to distribute an alert to each distribution medium. If possible this can be tested with the messages transmitted in test 1. If those tests do not capture the data, each alert originator will transmit one message for all distribution feeds.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Create an alert message using a message template and transmit.
4. Validate that the message was processed and displayed on the test devices for each distribution medium.
5. Test site shall capture picture, video or screen shot of each message on each distribution medium.
6. Test site shall capture log files from each device in the process (time received at IPAWS-OPEN, sent to distribution device, and time received on public display, etc.).

Expected Results:
Each message is presented to the public user's device in less than one minute.

Pass/Fail:

Results:

Test 5. Sub-FIPS Alerting (Test)

Test Description:

This test will be conducted in the test environment. This script will test requirement 6. The test will validate the alerting using a FIPS code zone identifier. The lab will configure two EAS devices with determined sub-county FIPS codes. The Lexington-Fayette County site will perform this test.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Create an alert message using a message template and a sub-county FIPS code 121067 and transmit.
3. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
4. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:

The system today may not support sub-county FIPS codes. The CAP message will be captured at each point through the system to determine how the system processes sub-county FIPS.

Pass/Fail:

Results:

Test 6. Zone Alerting (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 7. The test will validate the delivery of an alert to an area smaller than a county. The lab will configure two EAS devices with separate sub-county areas if possible.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Create an alert message using a message template and an <area> element (e.g., geocode or polygon) smaller than a county, but within the alerting authority permitted area and transmit to WEA.
3. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
4. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
Alert is received on the device associated with the area and not others. The WEA Toy Cell at JITC may not be configurable and there is only one Toy Cell. CAP messages will be captured to determine the processing of the messages if not able to directly test this.

Pass/Fail:

Results:

Test 7.   Multiple Alerts (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 8. The test will validate the system can process multiple alerts. KYEM EOC will conduct this test.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Create an alert message using a message template and transmit.
4. Record time initial call is sent.
5. Repeat two additional messages (one with same event code and one with different event code) within two minutes.
6. Record time of first and last message sent.
7. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
8. Record times each alert is received by device.
9. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
All messages are properly processed and displayed within two minutes. Verify that the distribution devices send messages and do not ignore as duplicates.

Pass/Fail:

Results:

Test 8. Multiple Sub-FIPS Alerting (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 9. The test will validate the alerting using a FIPS code zone identifier. The lab will configure two devices on separate sub-county FIPS codes. **Based on the results of test 5, this test may be not performed**.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Create an alert message using a message template and a sub-county FIPS code and transmit.
4. Record time initial call is sent.
5. Repeat two additional sub-county FIPS messages (one with same event code and one with different event code) within two minutes.
6. Record time of first and last message sent.
7. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
8. Record times each alert is received by device.
9. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
Alert is received on the device associated with the sub-county FIPS area and not others within two minutes. Verify that the distribution devices send messages and do not ignore as duplicates.

Pass/Fail:

Results:

Test 9.   Multiple Zone Alerting (Test)

Test Description:

This test will be conducted in the test environment. This script will test requirement 10. The test will validate the delivery of an alert to an area smaller than a county. The lab will configure two devices on separate areas.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device in synchronized.
3. Create an alert message using a message template and a sub-county <area> element and transmit to WEA.
4. Record time initial call is sent.
5. Repeat two additional messages (one with same event code and one with different event code) within two minutes.
6. Record time of last message sent.
7. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
8. Record times each alert is received by device.
9. Test site shall capture (picture, video or screen shot of) each message on each distribution medium.

Expected Results:

Alert is received on the device associated with the area and not others within two minutes. Verify that the distribution devices send messages and do not ignore as duplicates.

Pass/Fail:

Results:

Test 10. Update Active Alert (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 11. The test will validate the ability to update alerts.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Turn off one wireless device.
3. Create an alert message using a message template and 30-minute duration and transmit to WEA.
4. Validate that the message was processed and displayed on the correct test device.
5. Test site shall capture picture, video or screen shot of each message on each distribution medium.
6. Turn on second wireless device.
7. Test site shall capture picture, video or screen shot of each message on each distribution medium.
8. Create an alert message update using a message template and change the duration to 15 minutes and transmit.
9. Validate that the message was processed and displayed on the correct test devices
10. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
Alert message is properly updated and displayed on the wireless device.

Pass/Fail:

Results:

Test 11. Cancel Active Alert (Test)

Test Description:

This test will be conducted in the test environment. This script will test requirement 12. The test will validate the ability to cancel alerts.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Turn one wireless device off.
3. Create an alert message using a message template and 30-minute duration and transmit to WEA.
4. Validate that the message was processed and displayed on the correct test device.
5. Test site shall capture picture, video or screen shot of each message on each distribution medium.
6. Create an alert cancel message and transmit.
7. Turn on the second wireless device.
8. Validate that the message was processed and not displayed on the second test device.
9. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:

Alert message is properly canceled and is no longer transmitted to the public.

Pass/Fail:

Results:

Test 12. Multiple Alerts for Two COGs (Test)

Test Description:

This test will be conducted in the test environment. This script will test requirement 13. The test will validate the ability for two authorities to send alerts at the same time.

Test Procedure:

1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Alert Authority A – KYEM EOC
    a. Create an alert message using a message template and transmit.
    b. Record time initial call is sent.
    c. Repeat one additional message within two minutes.
    d. Record time of first and last message sent.
4. Alert Authority B – Lexington-Fayette County
    a. Create an alert message using a message template and transmit.
    b. Record time initial call is sent.
    c. Repeat one additional message within two minutes.
    d. Record time of first and last message sent.
5. Validate that each message was processed and displayed on the correct test devices for each distribution medium.
6. Record times each alert is received by device.
7. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:

All messages are properly processed and displayed within two minutes.

Pass/Fail:

Results:

Test 13. Multiple Alerts from Multiple COGs (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 14. The test will validate the ability for multiple authorities to send alerts at the same time.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Alert Authority A – Lexington-Fayette County
    a. Create an alert message using a message template and transmit.
    b. Record time initial call is sent.
    c. Repeat one additional message within two minutes.
    d. Record time of first and last message sent.
4. Alert Authority B – Pueblo County
    a. Create an alert message using a message template and transmit.
    b. Record time initial call is sent.
    c. Repeat one additional message within two minutes.
    d. Record time of first and last message sent.
5. Alert Authority C – KYEM EOC
    a. Create an alert message using a message template and transmit.
    b. Record time initial call is sent.
    c. Repeat one additional message within two minutes.
    d. Record time of first and last message sent.
6. Validate that each message was processed and displayed on the correct test devices for each distribution medium.
7. Record times each alert is received by device.
8. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
All messages are properly processed and displayed within two minutes.

Pass/Fail:

Results:

Test 14. Multiple Sub-county Alerts from Multiple COGs (Test)

Test Description:

This test will be conducted in the test environment. This script will test requirement 15. The test will validate the ability for multiple authorities to send alerts to sub-county areas at the same time

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Alert Authority A – Lexington-Fayette County
   a. Create an alert message using a message template using a sub-county area and transmit to WEA.
   b. Record time initial call is sent.
   c. Repeat one additional message within two minutes.
   d. Record time of first and last message sent.
4. Alert Authority B – Pueblo County
   a. Create an alert message using a message template using a sub-county area and transmit to WEA.
   b. Record time initial call is sent.
   c. Repeat one additional message within two minutes.
   d. Record time of first and last message sent.
5. Alert Authority C – KYEM EOC
   a. Create an alert message using a message template using a sub-county area and transmit to WEA.
   b. Record time initial call is sent.
   c. Repeat one additional message within two minutes.
   d. Record time of first and last message sent.
6. Validate that each message was processed and displayed on the correct test devices for each distribution medium.
7. Record times each alert is received by device.
8. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:

All messages are properly processed and displayed within two minutes.

Pass/Fail:

Results:

APPENDIX A – RISK MATRIX

Risk	Severity 1 to 5	Probability 1 to 5	Impact Score	Exposure 1 to 4	Exposure Timeframe	Score	Mitigation Method
Real incident occurs during testing	3	2	● 6	4	Ongoing	○ 24	Do not conduct testing on Depot work days
Test message sent to live systems	4	2	● 8	4	Deployment	○ 32	Use two people at each site to verify configuration and connections of the system prior to testing. Develop Communications contingency plans with PAOs
Public and media reaction to testing process	1	1	● 1	4	Ongoing	● 4	Develop communications plan with PAOs
	1	1	● 1	1	Pending	● 1	

APPENDIX B – TEST MESSAGE BLANK TEMPLATE

<table>
<tr>
<td rowspan="2">Insert Agency Logo Here</td>
<td colspan="3">

EMERGENCY ALERT MESSAGE

Agency / Jurisdiction Name
Address
City, State XXXXX
Phone: (XXX) XXX-XXXX
</td>
</tr>
<tr>
<td>**Date:**</td>
<td>**Time:**</td>
<td>**Event Code:**
(Required 3 character code)</td>
</tr>
<tr>
<td colspan="4" align="center">**Headline**
160 <u>characters</u> or less including spaces.</td>
</tr>
<tr>
<td colspan="4" align="center">**Insert text here**</td>
</tr>
<tr>
<td colspan="4">**Description:** *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 <u>words</u>.</td>
</tr>
<tr>
<td colspan="4">Insert text here.

#[incident name]</td>
</tr>
<tr>
<td colspan="4">**Instruction:** *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 <u>words.</u></td>
</tr>
<tr>
<td colspan="4">Insert text here.</td>
</tr>
<tr>
<td colspan="4" align="center">**WEA Message** **(Parameter CMAMtext)**
This is the message that will be received on cell phones.
90 <u>characters</u> or less including spaces. Cannot contain URL or phone number links.
It must include sending agency identifier i.e. NWS or Sheriff.</td>
</tr>
<tr>
<td colspan="4">Insert text here.</td>
</tr>
<tr>
<td colspan="4" align="center">**Twitter Message**
140 <u>characters</u> or less including spaces.</td>
</tr>
<tr>
<td colspan="4">Insert text here. #[incident name]</td>
</tr>
</table>

Hint: To find the word and/or characters count, highlight the text and click "Words:" in the bottom left of your screen. The pop up box will show the word and character count (with spaces.)

EMERGENCY ALERT MESSAGE – 1

Pueblo County Sheriff's Office

101 W. 10th Street
Pueblo, CO 81003
Phone: (XXX) XXX-XXXX

Sheriff Kirk M Taylor

Date:	Time:	Event Code: EVI
		(Required 3 character code)

Headline
160 characters or less including spaces.

Town of Boone (CSEPP Zones E1&2, SE1&2) advised to immediately evacuate due to Pueblo Chemical Depot emergency

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

The Pueblo County Sheriff advises people in the Town of Boone to immediately evacuate due a possible release of mustard agent at the Pueblo Chemical Depot. It is estimated the mustard plume may reach the Town of Boone and Boone Road at: XXXX.

The evacuation area includes:
- o The Town of Boone, the Boone School, Il Ranch Road, Boone road
- o Boone Hill Road, Nepesta Road, Prairie Hills Road
- o The remainder of zones East 1, East 2, Southeast 1, and Southeast 2

Other areas near the depot, including the City of Pueblo are not affected at this time, but should stand by for additional information. #Test1-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

- People in these areas should leave, traveling away from Pueblo Chemical Depot. Close vehicle windows and vents; and turn off the air-conditioner/heater.
- If evacuation is not possible, in-place sheltering is recommended.
- Boone School is implementing its emergency plans; do not attempt to pick up children from school.

WEA Message (Parameter CMAMtext)
This is the message that the public will receive on their cell phone.
90 characters or less including spaces.
Cannot contain URL or phone number links. Must include issuing agency identifier i.e. NWS or Sheriff.

SHERIFF: Chemical Depot emergency. Boone area. Evacuate now. CSEPP Zones E1&2, SE1&2. #Test1-**X**

Twitter Message
140 characters or less including spaces.

Town of Boone (CSEPP Zones E1&2, SE1&2) advised to immediately evacuate due to Pueblo Chemical Depot emergency. #Test1-**X**

EMERGENCY ALERT MESSAGE – 2

Pueblo County Sheriff's Office

101 W. 10th Street
Pueblo, CO 81003
Phone: (XXX) XXX-XXXX

Sheriff Kirk M Taylor

Date:	Time:	Event Code: SPW
		(Required 3 character code)

Headline
160 characters or less including spaces.

Areas of Pueblo County to Shelter-in-Place
due to Pueblo Chemical Depot emergency

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

The Pueblo County Sheriff advises people in several areas to immediately Shelter-in-Place due to an incident involving the release of mustard agent at the Pueblo Chemical Depot.

The area affected (zones East 1 & 2, SE 1 & 2, and South 1 & 2) includes:
- o North Avondale, Avondale and Boone
- o Avondale Elementary School and the Boone School
- o Vineland east of 27th Lane and Pueblo Memorial Airport and Industrial Park
- o The southern portions of Boone Road

Other areas near the depot, including the City of Pueblo are not affected at this time. #Test2-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

To shelter-in-place:
- Bring all family members and pets indoors immediately.
- Close exterior doors and windows.
- Turn off heating, air-conditioning, and fans that draw in outside air.
- Go to an inner above ground room, preferably one without windows.
- Listen to local radio stations or visit puebloemergency.info for updates and further instructions.

WEA Message (Parameter CMAMtext)
This is the message that the public will receive on their cell phone.
90 characters or less including spaces.
Cannot contain URL or phone number links. Must include issuing agency identifier i.e. NWS or Sheriff.

SHERIFF: Chemical Depot emergency. Shelter-in-Place now. CSEPP Zones E1&2, SE1&2, S1&2. #Test2-**X**

Twitter Message
140 characters or less including spaces.

Immediate Shelter-in-Place near Pueblo Chemical Depot advised due to chemical emergency. CSEPP Zones E1&2, SE1&2, S1&2. #Test2-**X**

Insert Agency Logo Here	**EMERGENCY ALERT MESSAGE – 3** **(Sent by KYEM)** **Laurel County Emergency Management Agency** 165 Substation St London, Kentucky 40741 Phone: (606) 862-7904 Fax: (606) 862-7908

Date:	**Time:**	**Event Code: EVI** *(Required 3 character code)*

Headline *160 characters or less including spaces.*
Laurel County evacuations advised due to **Blue Grass Army Depot emergency**

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.
An incident occurred at the Blue Grass Army Depot near Richmond which involved the release of toxic chemicals in areas of Laurel County. Due to the expected health effects of these chemicals, emergency officials are recommending immediate evacuation of Victory. People in these areas should evacuate to London Community Center. Other areas in Laurel County are not affected at this time, but should stand by for additional information. #Test3-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.
• People in these areas should leave, traveling away from Blue Grass Army Depot. Close vehicle windows and vents; and turn off the air-conditioner/heater. • If evacuation is not possible, in-place sheltering is recommended. • Stay tuned to this station for updates and instructions for Laurel County Kentucky residents.

WEA Message (Parameter CMAMtext) *This is the message that the public will receive on their cell phone.* *90 characters or less including spaces.* *Cannot contain URL or phone number links. Must include issuing agency identifier i.e. NWS or Sheriff.*
LC EMA: Chemical Depot emergency. Evacuate now. Area of Victory, KY. #Test3-**X**

Twitter Message *140 characters or less including spaces.*
Immediate evacuation of Victory, KY advised to due to chemical emergency at Blue Grass Army Depot. #Test3-**X**

	EMERGENCY ALERT MESSAGE – 4	
Insert Agency Logo Here	**(Sent by KYEM)**	

Laurel County Emergency Management Agency

165 Substation St
London, Kentucky 40741
Phone: (606) 862-7904   Fax: (606) 862-7908

Date:	Time:	Event Code: SPW
		(Required 3 character code)

Headline
160 characters or less including spaces.

Laurel County shelter-in-place advised due to Blue Grass Army Depot emergency

Description: *What, where, how does this impact the public, for how long?*

Description and Instruction combined must be less than 160 words.

An incident occurred at the Blue Grass Army Depot near Richmond which involved the release of toxic chemicals in areas of Laurel County. Due to the expected health effects of these chemicals, emergency officials are recommending immediate shelter-in-place for people in the area of Victory, KY.

Other areas in Laurel County are not affected at this time, but should stand by for additional information. #Test4-**X**

Instruction: *What to do to stay safe and how to do it.*

Description and Instruction combined must be less than 160 words.

To shelter-in-place, do the following:
- Move inside immediately.
- Close and lock all windows and doors.
- Turn off ventilation system and all fans.
- Go into and seal your chosen room with plastic sheeting and duct tape.
- Listen to local radio stations via portable battery operated radio.
- Stay tuned to this station for updates and instructions for Laurel County Kentucky residents.

WEA Message (Parameter CMAMtext)
This is the message that the public will receive on their cell phone.
90 characters or less including spaces.
Cannot contain URL or phone number links. Must include issuing agency identifier i.e. NWS or Sheriff.

LC EMA: Chemical Depot emergency. Shelter-in-Place now Area of Victory, KY. #Test4-**X**

Twitter Message
140 characters or less including spaces.

Immediate Shelter-in-Place in the area of Victory, KY advised to due to chemical emergency at Blue Grass Army Depot. #Test4-**X**

EMERGENCY ALERT MESSAGE – 5

Lexington-Fayette County

1793 Old Frankfort Pike
Lexington, KY 40507
Phone: (859) 258-3784

Date:	Time:	Event Code: EVI *(Required 3 character code)*

Headline
160 characters or less including spaces.

Fayette County evacuations advised due to Blue Grass Army Depot emergency

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

An incident occurred at the Blue Grass Army Depot near Richmond which involved the release of toxic chemicals in areas of Fayette County. Due to the expected health effects of these chemicals, emergency officials are recommending immediate evacuation of Zone 1.

People in these areas should evacuate to Jacobson Park.

Other areas in Fayette County are not affected at this time, but should stand by for additional information. #Test5-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

- People in these areas should leave, traveling away from Blue Grass Army Depot. Close vehicle windows and vents; and turn off the air-conditioner/heater.
- If evacuation is not possible, in-place sheltering is recommended.
- Stay tuned to this station for updates and instructions for Fayette County Kentucky residents.

WEA Message (Parameter CMAMtext)
This is the message that will be received on cell phones.
90 characters or less including spaces. Cannot contain URL or phone number links.
It must include sending agency identifier i.e. NWS or Sheriff.

Lexington EMA: Chemical Depot emergency. Evacuate now. Area of Zone 1 #Test5-**X**

Twitter Message
140 characters or less including spaces.

Immediate evacuation of Zone 1 advised due to chemical emergency at Blue Grass Army Depot. #Test5-**X**

EMERGENCY ALERT MESSAGE – 6

Lexington-Fayette County

1793 Old Frankfort Pike
Lexington, KY 40507
Phone: (859) 258-3784

Date:	Time:	Event Code: SPW *(Required 3 character code)*

Headline
160 characters or less including spaces.

Fayette County shelter-in-place advised due to Blue Grass Army Depot emergency

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

An incident occurred at the Blue Grass Army Depot near Richmond which involved the release of toxic chemicals in areas of Fayette County. Due to the expected health effects of these chemicals, emergency officials are recommending immediate shelter-in-place of Zone 1.

Other areas in Fayette County are not affected at this time, but should stand by for additional information. #Test6-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

To shelter-in-place, do the following:
- Move inside immediately.
- Close and lock all windows and doors.
- Turn off ventilation system and all fans.
- Go into and seal your chosen room with plastic sheeting and duct tape.
- Listen to local radio stations via portable battery operated radio.
- Stay tuned to this station for updates and instructions for Fayette County Kentucky residents.

WEA Message (Parameter CMAMtext)
This is the message that will be received on cell phones.
90 characters or less including spaces. Cannot contain URL or phone number links.
It must include sending agency identifier i.e. NWS or Sheriff.

Lexington EMA: Chemical Depot emergency. Shelter-in-Place now. Area Zone 1 #Test6-**X**

Twitter Message
140 characters or less including spaces.

Immediate Shelter-in-Place of Zone 1 advised due to chemical emergency at Blue Grass Army Depot. #Test6-**X**

APPENDIX D – MODEL COMMUNICATIONS PLAN

The model Communications Plan may be found on the following pages.

Each participating agency can coordinate with their public information officer and develop a communication plan and pre-test messages if the agency feels it is needed.

The remainder of this page intentionally left blank.

Public Affairs Communications Plan
Integrated Public Alert and Warning System (IPAWS) Test

Plan Purpose

"*A public that can and will protect itself in the event of a chemical emergency*"
– Public Affairs IPT Mission Statement

The primary purpose of this plan is to mitigate public/media concerns that could arise because of the test of the Integrated Public Alert and Warning System (IPAWS) including Wireless Emergency Alerts (WEA). This plan outlines the methods that will be used to provide coordinated, consistent messages while ensuring that all parties (internal and external) are aware of the test and are provided the opportunity to become familiar with the new means of public alert and warning.

Action Plan

Key Audiences:

- Primary -- External. People who live or work in the CSEPP response zones (Immediate Response Zone [IRZ] and Protective Action Zone [PAZ]).
- Secondary – Internal. Staff, partner agencies, and key community communicators.

Key Messages:

- New way to warn the public in emergencies.
- Testing following the CSEPP Exercise, November 20, 2013.
- Here's what the public will see or hear: 1) EAS message, 2) Text Message on cell phone.
- Here's how to get more information_____.

Designated Spokespersons:

- Major County – John Doe, Public Information Officer, (555) 555-2345
- State– Jane Doe, (555) 555-1234
- Other PIOs?

Activities:

Date	Activity	Responsibility	Date Accomplished
	Development of key messages and designated spokespersons. A common set of talking points allows all players to emphasize basic points while referring more technical questions to the appropriate designated spokesperson(s).	John/Jane	7/18/2013
	Distribution / integration of key messages and tools. Provide the public affairs team and other appropriate internal team members the key messages and designated points of contacts.	John	
On-going	**Respond to / document media or public inquiry.** Use key messages to respond to media or public inquiry. Keep fellow site public affairs officers appraised of media contacts and questions. Document contact in case follow-up is needed at a later date.	PIOs	Ongoing
	Modify existing outreach tools to reflect new IPAWS alerts. Table top display, Power Point presentations, website pages.	Websites – Power points – PIOs modify their power points w/ new slides.	Web – October 20 Power Point – October 20
	Key message integration into CSEPP presentations, outreach events, tours, briefings.	PIOs	October 20
	Key message integration into Depot presentations, outreach events, tours. CSEPP will provide talking points for Depot PAOs and Outreach Office personnel to use in their presentations, outreach events and during tours.	John	October 20
City Councils CAC	**Elected official/legislative briefings.** Presentations relating to CSEPP activities are given on an ongoing basis to local emergency management boards, first responders, elected officials, legislative aides, and the Citizens' Advisory Commission. Updates will be given in person, by fax and email, and by telephone.	City Councils – CAC –	City Councils – CAC – September 10

Date	Activity	Responsibility	Date Accomplished
Production Ready for demo by <mark>October 1</mark> <u>Ads run</u> Radio – <mark>all October?</mark> TV – <mark>Nov 11-15</mark> Print – <mark>Nov 10-17</mark>	**Paid advertisements.** Incorporate key messages into paid advertisements in newspapers and on radio.	Radio – Print – TV –	<mark>November XX</mark> – Production complete
Chamber of Commerce <u>Deadlines</u> <mark>Oct XX, Mycity</mark> <mark>Oct XX, Anytown</mark> <mark>Nov XX, ???</mark> <u>City</u> <mark>Oct XX, Mycity</mark> Nov XX, Anytown <mark>Nov XX, ???</mark> <u>Business</u> <mark>Hospitals</mark>	**Newsletter / Public (outreach).** CSEPP will target the August editions of area civic and business newsletters for placement of a story about the IPAWS test.	Research deadlines and how to submit – Distribution of article –	<mark>October XX</mark> – e-mailed
<mark>September XX</mark> <mark>?? TBD</mark> Detonator	**Newsletter / employee and partner agency (in-reach).** CSEPP will provide an article on the IPAWS test for two newsletters, the News, which is produced on a monthly basis, and Detonator which is produced on a <mark>???</mark> basis. Both are distributed to employees and partner agencies with the idea that they are program representatives in the eyes of their families, friends and neighbors.		

Date	Activity	Responsibility	Date Accomplished
	Social Media Update social media pages and put out messages notifying the public	Facebook – • Prepare Website – • County – • State –	
November 5 November 12 November 19	**Personal notifications.** A series of three emails will be sent CSEPP staff, partner agencies, responders and key community communicators (i.e., police and fire chiefs, elected officials, school districts and Citizens' Advisory Commission members) to advise them of the change and provide answers they can use if questioned.		
	Press release. Press release on IPAWS test will be prepared and sent to local newspapers and broadcast media.	John	October/November XX – Media Campaign release
	Live appearances on local broadcast media (radio and TV) programs. Schedule live appearances on local radio and/or cable TV talk shows.	Schedule – Appear –	November XX – Local Radio interview November XX – Local Radio interview
October 23 November 13	**Messaging to Broadcasters.** Chair Broadcasters Association will send an ECAST message to state broadcasters but needs to be reminded. Month prior – reminder that Automatic relay for Civil Emergency messages need to be configured Week prior – reminder that the test will be taking place.		
	Highway Reader board. Ensure that the reader board has information that there is a text message exercise in progress.		
December	**Annual Report.** The IPAWS test will be noted in the 2013 end-of-the-year CSEPP report.		

Performance Measurement:

The public affairs team will attempt to assess the impacts / successfulness of this plan by monitoring both outputs (activity generated because of these actions) and outcomes (public knowledge).

Outputs – Statistical information will be gathered in the following areas:
- Media inquiries
- Media stories generated
- Public phone calls
- Number of web page hits
- Response pieces mailed
- Presentation requests

Outcomes – Public knowledge, changes in knowledge and/or knowledge voids can be assessed in part using the ongoing public surveys being conducted in partnership with the site and Public Affairs IPT. Surveys conducted prior to the implementation of this plan will serve as a baseline for prior knowledge.

APPENDIX E – MESSAGE TRACKING FORMS

Pueblo County					
Message#	**Test#**	**Note**	**Message#**	**Test#**	**Note**
RWT					
Test1-1			Test2-1		
Test1-2			Test2-2		
Test1-3			Test2-3		
Test1-4			Test2-4		
Test1-5			Test2-5		
Test1-6			Test2-6		
Test1-7			Test2-7		
Test1-8			Test2-8		
Test1-9			Test2-9		
Test1-10			Test2-10		
Test1-11			Test2-11		
Test1-12			Test2-12		
Test1-13			Test2-13		
Test1-14			Test2-14		
Test1-15			Test2-15		
Test1-16			Test2-16		
Test1-17			Test2-17		
Test1-18			Test2-18		
Test1-19			Test2-19		
Test1-20			Test2-20		

Notes:

KYEM					
Message#	**Test#**	**Note**	**Message#**	**Test#**	**Note**
RWT					
Test3-1			Test4-1		
Test3-2			Test4-2		
Test3-3			Test4-3		
Test3-4			Test4-4		
Test3-5			Test4-5		
Test3-6			Test4-6		
Test3-7			Test4-7		
Test3-8			Test4-8		
Test3-9			Test4-9		
Test3-10			Test4-10		
Test3-11			Test4-11		
Test3-12			Test4-12		
Test3-13			Test4-13		
Test3-14			Test4-14		
Test3-15			Test4-15		
Test3-16			Test4-16		
Test3-17			Test4-17		
Test3-18			Test4-18		
Test3-19			Test4-19		
Test3-20			Test4-20		

Notes:

LFUCG					
Message#	**Test#**	**Note**	**Message#**	**Test#**	**Note**
RWT					
Test5-1			Test6-1		
Test5-2			Test6-2		
Test5-3			Test6-3		
Test5-4			Test6-4		
Test5-5			Test6-5		
Test5-6			Test6-6		
Test5-7			Test6-7		
Test5-8			Test6-8		
Test5-9			Test6-9		
Test5-10			Test6-10		
Test5-11			Test6-11		
Test5-12			Test6-12		
Test5-13			Test6-13		
Test5-14			Test6-14		
Test5-15			Test6-15		
Test5-16			Test6-16		
Test5-17			Test6-17		
Test5-18			Test6-18		
Test5-19			Test6-19		
Test5-20			Test6-20		

Notes:

APPENDIX F – MEETING AGENDAS

All times are Eastern

December 5, 2014
Pre-Test Coordination Call

Conference Bridge
Call in number: (800) 320-4330
PIN# 351497

10:00 to 10:30   Introductions and overall testing objectives

10:30 to 10:45   Overview of the testing process

10:45 to 11:45   Review of the testing scripts and forms

11:45 to 12:00   Final questions and close out

All times are Eastern

December 8, 2014
Testing Day 1

MCP Bridge #4
Call in number: (814) 954-1239
Pass Code: 18508

09:00 to 09:30   Introductions and roll call

09:30 to 10:00   Configurations and Test 1 RWT

10:00 to 11:30   Tests 2 through 6

11:30 to 13:00   Break for Lunch

13:00 to 14:30   Retest Test 1 then Tests 7 through 12

14:30 to 14:45   Break

14:45 to 16:00   Test 13 and 14
                        Reset Devices to Live

All times are Eastern

December 9, 2014
Testing Day 2

MCP Bridge #4
Call in number: (814) 954-1239
Pass Code: 18508

09:00 to 09:30	Introductions and roll call
09:30 to 09:45	Configurations and Test 1 RWT
09:45 to 11:30	Make-up testing
11:30 to 13:00	Break for Lunch
13:00 to 14:30	Retest Test 1 then Make-up testing as needed
14:30 to 14:45	Break
14:45 to 16:00	Make-up testing as needed Reset Devices to Live

All times are Eastern

December 16, 2014
After Action Day 1

3341 Strauss Avenue Suite 236
Building 900
Indian Head, MD 20640

JITC WebEx: https://femaipawslab.webex.com/femaipawslab/onstage/g.php?d=292178617&t=a

Audio conference information
US TOLL: 1-650-479-3207
Access code: 292 178 617

The lab is on a military installation so extra time will be needed to log in to the site. Carpooling is encouraged. There are several hotels located in nearby Waldorf, MD. The nearest airport is Washington Regan National.

08:30 to 09:30   In process and access from front gate

09:30 to 10:00   Introductions and general facility orientation

10:00 to 11:30   Review test results for Tests 1 through 6

11:30 to 13:00   Lunch

13:00 to 14:30   Review Tests 7 through 12

14:30 to 14:45   Break

14:45 to 16:00   Review Tests 13 and 14

18:00 to 20:00   Optional group dinner

December 17, 2014
After Action Day 2

3341 Strauss Avenue Suite 236
Building 900
Indian Head, MD 20640

JITC WebEx: https://femaipawslab.webex.com/femaipawslab/onstage/g.php?d=296633729&t=a

Audio conference information
US TOLL: 1-650-479-3207
Access code: 296 633 729

08:30 to 09:00	In process and access from front gate
09:00 to 10:30	Review test results
10:30 to 11:30	Lab equipment orientation by JITC staff
11:30 to 13:00	Lunch
13:00 to 15:30	Retests using JITC devices
15:30 to 16:00	Final review and close out
17:00 to 19:00	Optional group dinner

APPENDIX B – CSEPP TEST PLAN ADDENDUM

The following pages contain the test plan addendum.

The remainder of this page is intentionally blank.

Test Plan - CSEPP Use of Integrated Public Alert and Warning System (IPAWS)

Addendum

This page intentionally left blank.

Table of Contents

1 INTRODUCTION

[Sections 1.1 through 1.4 remain the same.]

1.5 Risks

Every risk has with it three variables that can be used to measure the importance of the risk.

➢ **Severity** – This is the effect in the event that the risk occurs. This is rated on a scale of 1 to 5, with 1 being minimal impact and 5 being catastrophic impact.

➢ **Probability** – This is the measure of the likelihood of the risk occurring. This is rated on a scale of 1 to 5, with 1 being unlikely and 5 being almost a sure thing.

➢ **Exposure** - Exposure is the measure of how long this risk is present. If the risk is only present a short time, it may be low. This is rated on a scale of 1 to 4, with 1 being a short time and 4 being almost the entire time.

Severity		Probability		Exposure	
Score	**Explanation**	**Score**	**Explanation**	**Score**	**Explanation**
1	Little impact	1	20 percent likely	1	Less than 25 percent
2	Some Impact	2	40 percent likely	2	26 to 50 percent
3	Moderate Impact	3	60 percent likely	3	51 to 75 percent
4	Severe Impact	4	80 percent likely	4	76 to 100 percent
5	Catastrophic Impact	5	100 percent likely		

The ratings in these various categories are multiplied to develop a rating for each defined risk. These risk ratings can be used to mitigate the risks that have the most impact first or to set a priority for addressing the risk.

Caution must be used as all risks should be reviewed even if they have a low priority. Even low priority risks are still risks to successful completion.

At any time during the testing, any participant can raise new risks.

A complete risk Matrix is included in Appendix A.

[Section 1.6 remains the same.]

2   GENERAL TESTING METHODOLOGY

[Section 2 main wording remains the same.]

2.1   Testing Process

The tests will follow the testing scripts. Each script will make use the following means of performing each test and documenting the results.

- ➢ **Observations** – This will include observations of equipment installation, configurations, or staff procedures. Observations will consist of the test observer watching the tester perform an activity or show the observer the equipment or configuration.

- ➢ **Simulation** – Simulation uses testers performing a part of the procedures in a simulated fashion such as writing down a message or using equipment set in test mode or configured in the IPAWS test environment.

- ➢ **Live** – Live testing is performing the procedures using actual equipment connected to the production IPAWS environment. ***This will take place at a future time and is not included with the current testing. No live messages should be sent during this testing.***

2.1.1   Testing Hold or Stop

Any party to the testing process may call for a testing hold at any time.

If anyone calls for a testing hold on the conference bridge, all activity at all sites will immediately halt. The test coordinators will conduct a roll call of all sites to ensure that all activity has stopped. Only after all activities have stopped will the person calling the hold explain the reason.

The team will attempt to resolve the issue. The test coordinators will consult with the team and determine if the testing shall remain on hold, continue with the remaining sites, or be postponed, canceled, or rescheduled.

[Section 2.2 remains the same.]

2.3   Testing Teams

During the actual testing, there will be a test team at each testing location. The test team will consist of a minimum of one tester and one test observer.

The testing will be coordinated by the test coordinators, who will direct when each site should send messages or perform any test functions. The test coordinators will be located at the JITC Lab. The test coordinators are:

Martin Cybulski and **Gordon Vanauken**

For the duration of the testing, a person who is an observer shall not act as a tester for any tests. The observer may verify messages before they are sent as a safety measure, if needed. The following personnel are assigned as observers:

Observer's Name	Primary Location
JITC Staff	JITC Lab
Jay Overman	Lexington-Fayette County, Kentucky
Rob Low	Kentucky Emergency Management (KYEM) Emergency Operations Center (EOC)
Anna Gonzalez	Pueblo County, Colorado

[Sections 2.4 and 2.5 remain the same.]

3 FUNCTIONAL REQUIREMENTS

[Section 3 remains the same.]

4   TESTING

4.1   Testing Configurations

For each system used in the testing, the make, model, and software version will be captured prior to beginning.

4.1.1   Origination Sites

Each origination site will use the normal equipment that they have within their EOC or warning site. Prior to testing, the equipment will be changed to the test environment and verified by a second person. This equipment will be configured as their county authority, but will use the testing certificate and JITC IPAWS-OPEN. The IPAWS equipment shall be connected to the JITC Aggregator Service at the following URL: https://www.ipaws-open.net/IPAWS_CAPService/IPAWS

Each site must ensure that the equipment is disconnected from any radio frequency (RF) transmission lines and any other live external feeds at the alerting device.

Each site will ensure that the equipment is not connected to or configured to any other real-life systems, such as e-mail. These interfaces should be disconnected or disabled.

Each site will disable the live IPAWS COG after the RWT message, if possible, to prevent accidental transmissions to the production IPAWS server.

Next, the software should be changed to connect to the test lab. Most of the equipment has been configured in the past, but will need to be verified before the testing. The IPAWS software must be configured with the testing certificate and then directed to the JITC site. The IPAWS equipment shall be connected to the JITC Aggregator Service at the following URL: https://www.ipaws-open.net/IPAWS_CAPService/IPAWS

Each site may monitor the test server at the following beta site:

https://ipaws-open.net/ALERT_SERVICES/postedmessages.php?COGID=*COGID#*

The following areas will be used:

Fayette County
FIPS – 021067
Sub-FIPS Code – 121067
Devices: DASDEC™ and WebEOC

Commonwealth of Kentucky
FIPS – 021125 (Laurel County)
FIPS – 021000 (Statewide) – not used for testing
Sub-FIPS Code – N/A
Devices: DASDEC™ and AlertSense

Pueblo County
FIPS – 008101
Sub-FIPS Code – N/A
Device: On-the-Go Alerting

4.1.2 JITC Lab

The equipment at the JITC Lab should be set up as indicated below.

➢ Device Configuration

Device	Configuration
IPAWS-OPEN	Normal
WEA Feed	Forward all messages regardless of destination
EAS Feed	Normal
NWEM Feed	Normal
Wireless Phone 1	Normal
Wireless Phone 2	Normal
EAS Device 1 – Radio Only	Fayette County Radio FIPS – 021151 *SAGE ENDEC with Default settings*
EAS Device 2	Pueblo County FIPS – 008101
EAS Device 3	Fayette County Television FIPS – 021067 *DASDEC – Default settings* *Red ribbon with white letters at top of screen*
EAS Device 4	Laurel County FIPS – 021125
EAS Device 5 – Radio Only	Laurel County FIPS – 021125 Fayette County FIPS – 021067 *SAGE ENDEC with Default settings*
EAS Device 6	Laurel County FIPS – 021125 Pueblo County FIPS – 008101 Fayette County FIPS – 021067

➢ Capture Targets

Device	Log
County IPAWS Software	Date/Time of send and full CAP messages sent
IPAWS-OPEN	Date/Time of receipt and full CAP messages received
WEA Feed	Date/Time of receipt and full CAP messages received and sent
EAS Feed	Date/Time of receipt and full CAP messages received and sent
NWEM Feed	Date/Time of receipt and full CAP messages received and sent
Wireless Phones	Date/Time of receipt and messages displayed
EAS Devices	Date/Time of receipt and full CAP messages received and broadcast messages

4.1.3 FEMA IPAWS PMO

Technical staff at the IPAWS Program Management Office (PMO) shall monitor the IPAWS-OPEN Production server to prevent inadvertent alerting to the public. Any message to the production server should generate a testing hold situation.

4.2 Testing Procedures

On the day of testing, each site will dial into the conference bridge. The bridge will be:

<div align="center">

MCP Bridge #4
Call in number: (814) 954-1239
Pass Code: 18508#

</div>

Each site will report the staff members who are on-site. The systems will be configured and Test 1, the RWT, will be conducted one at a time, coordinated by the test coordinators at the JITC Lab.

Each message sent by the alert originator will have a unique number. The test message has a hashtag. For each test, this will be changed to add a number. For example, the first time message 1 is sent the hashtag will be "#Test1-1" The next time message 1 is sent will be "#Test1-2" and so on.

<div align="center">

ALL TEST MESSAGES WILL BE SENT AT THE DIRECTION OF THE TEST COORDINATORS.

</div>

4.2.1 Testing Hold or Stop

<div align="center">

ANYONE CAN CALL A TEST HOLD.

All Sites will immediately stop all activities when a "Testing Hold" is called.

</div>

The test coordinators will conduct a roll call of all sites to ensure all sites are in a hold status.

The team will attempt to resolve the issue. The test coordinators will consult with the team and determine if the testing shall remain on hold, continue with remaining sites, or be postponed, canceled or rescheduled.

4.2.2 Test Order

Test #	Site	Message #	Notes
1	All	N/A	Use normal RWT message
2 and 3	All	0	
4	All	0	
5	LFUCG	0	If AlertSense is capable, KYEM also
6	ALL	0	Each system capable of <area> element
7	All	0	Each system
8	LFUCG	0	Pending results of Test 5
9	All	0	
10	LFUCG	0	Others, if capable
11	LFUCG	0	Others, if capable
12	KYEM and LFUCG	0	
13	All	0	
14	All	0	
2	All	1 – 6	Per county assignment
13	All	1 – 6	Per county assignment
2	LFUCG	7	Cut and paste to DASDEC™

[Section 4.3 remains the same.]

APPENDIX A – RISK MATRIX

Risk	Severity 1 to 5	Probability 1 to 5	Impact Score	Exposure 1 to 4	Exposure Timeframe	Score	Mitigation Method
Real incident occurs during testing	3	2	6	4	Ongoing	24	Do not conduct testing on Depot work days.
Test message sent to live systems	4	2	8	4	Deployment	32	Use two people at each site to verify configuration and connections of the system prior to testing. Develop Communications contingency plans with PAOs.
Public and media reaction to testing process	1	1	1	4	Ongoing	4	Develop communications plan with PIOs.
Vendor system software implemented incorrectly	3	3	9	4	Ongoing	36	Monitor Production system during testing for any messages. Where possible disable Production COG.
System connected to other real-life systems	2	2	4	4	Pending	16	Disable or disconnect other live systems. Monitor RWT for distribution. Use Test messages for early tests.

APPENDIX B – TEST MESSAGE BLANK TEMPLATE

Insert Agency Logo Here	**EMERGENCY ALERT MESSAGE** **Agency / Jurisdiction Name** Address City, State XXXXX Phone: (XXX) XXX-XXXX

Date:	Time:	Event Code: *(Required 3 character code)*

Headline
160 characters or less including spaces.

Insert text here

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

Insert text here.

#[incident name]

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

Insert text here.

WEA Message (Parameter CMAMtext)
This is the message that will be received on cell phones.
90 characters or less including spaces. Cannot contain URL or phone number links.
It must include sending agency identifier i.e. NWS or Sheriff.

Insert text here.

Twitter Message
140 characters or less including spaces.

Insert text here. #[incident name]

Hint: To find the word and/or characters count, highlight the text and click "Words:" in the bottom left of your screen. The pop up box will show the word and character count (with spaces.)

Insert Agency Logo Here	**EMERGENCY ALERT MESSAGE – 0** **Agency / Jurisdiction Name** **(USED BY ALL SITES)** Address City, State XXXXX Phone: (XXX) XXX-XXXX

Date:	**Time:**	**Event Code:** **RWT, EVI, SPW, or CEM** *(Alternate during testing)*

Headline *160 characters or less including spaces.*
This is a test

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.
[Agency] is conducting a test of the alerting systems. This is only a test. #Test **A0-X** *In message the **A** will be the initial of the agency* *L – LFUCG* *K – KYEM* *P – Pueblo*

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.
In the event of an actual emergency you would receive instructions on how to protect yourself. This is only a test.

WEA Message **(Parameter CMAMtext)** *This is the message that will be received on cell phones.*
90 characters or less including spaces. Cannot contain URL or phone number links. *It must include sending agency identifier i.e. NWS or Sheriff.*
TEST ONLY [AGENCY] is testing the ability to send emergency alerts TEST ONLY #Test **A0-X**

Twitter Message *140 characters or less including spaces.*
NOT USED FOR TESTING

EMERGENCY ALERT MESSAGE – 1

Pueblo County Sheriff's Office

101 W. 10th Street
Pueblo, CO 81003
Phone: (XXX) XXX-XXXX

Sheriff Kirk M Taylor

Date:	Time:	Event Code: EVI
		(Required 3 character code)

Headline
160 characters or less including spaces.

Town of Boone (CSEPP Zones E1&2, SE1&2) advised to immediately evacuate due to Pueblo Chemical Depot emergency

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

THIS IS A TEST

The Pueblo County Sheriff advises people in the Town of Boone to immediately evacuate due a possible release of mustard agent at the Pueblo Chemical Depot. It is estimated the mustard plume may reach the Town of Boone and Boone Road at: XXXX.

The evacuation area includes:
- The Town of Boone, the Boone School, Il Ranch Road, Boone road
- Boone Hill Road, Nepesta Road, Prairie Hills Road
- The remainder of zones East 1, East 2, Southeast 1, and Southeast 2

Other areas near the depot, including the City of Pueblo are not affected at this time, but should stand by for additional information. #TEST1-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

> People in these areas should leave, traveling away from Pueblo Chemical Depot. Close
  vehicle windows and vents; and turn off the air-conditioner/heater.
> If evacuation is not possible, in-place sheltering is recommended.
> Boone School is implementing its emergency plans; do not attempt to pick up children from
  school.
THIS IS ONLY A TEST

WEA Message (Parameter CMAMtext)
This is the message that the public will receive on their cell phone.
90 characters or less including spaces.
Cannot contain URL or phone number links. Must include issuing agency identifier i.e. NWS or Sheriff.

TEST SHERIFF: Chemical Depot Emergency. Boone area. Evacuate now. CSEPP Zones E1&2, SE1&2. #TEST1-**X**

Twitter Message
140 characters or less including spaces.

NOT USED FOR TESTING
Town of Boone (CSEPP Zones E1&2, SE1&2) advised to immediately evacuate due to Pueblo Chemical Depot emergency. #Test1-**X**

EMERGENCY ALERT MESSAGE – 2

Pueblo County Sheriff's Office

101 W. 10th Street
Pueblo, CO 81003
Phone: (XXX) XXX-XXXX

Date:	Time:	Event Code: SPW
		(Required 3 character code)

Headline
160 characters or less including spaces.
Areas of Pueblo County to Shelter-in-Place due to Pueblo Chemical Depot emergency

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

THIS IS A TEST

The Pueblo County Sheriff advises people in several areas to immediately Shelter-in-Place due to an incident involving the release of mustard agent at the Pueblo Chemical Depot.

The area affected (zones East 1 & 2, SE 1 & 2, and South 1 & 2) includes:
- North Avondale, Avondale and Boone
- Avondale Elementary School and the Boone School
- Vineland east of 27th Lane and Pueblo Memorial Airport and Industrial Park
- The southern portions of Boone Road

Other areas near the depot, including the City of Pueblo are not affected at this time. #TEST2-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

To shelter-in-place:
> Bring all family members and pets indoors immediately.
> Close exterior doors and windows.
> Turn off heating, air-conditioning, and fans that draw in outside air.
> Go to an inner above ground room, preferably one without windows.

Listen to local radio stations or visit puebloemergency.info for updates and further instructions.
THIS IS ONLY A TEST

WEA Message (Parameter CMAMtext)
This is the message that the public will receive on their cell phone.
90 characters or less including spaces.
Cannot contain URL or phone number links. Must include issuing agency identifier i.e. NWS or Sheriff.

TEST SHERIFF: Chemical Depot emergency. Shelter-in-Place now. CSEPP Zones E1&2, SE1&2, S1&2. #TEST2-**X**

Twitter Message
140 characters or less including spaces.

NOT USED FOR TESTING
Immediate Shelter-in-Place near Pueblo Chemical Depot advised due to chemical emergency. CSEPP Zones E1&2, SE1&2, S1&2. #Test2-**X**

EMERGENCY ALERT MESSAGE – 3

(Sent by KYEM)

Laurel County Emergency Management Agency

165 Substation St
London, Kentucky 40741
Phone: (606) 862-7904   Fax: (606) 862-7908

Date:	Time:	Event Code: EVI
		(Required 3 character code)

Headline
160 characters or less including spaces.

Laurel County evacuations advised due to
Blue Grass Army Depot emergency

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

THIS IS A TEST

An incident occurred at the Blue Grass Army Depot near Richmond which involved the release of toxic chemicals in areas of Laurel County. Due to the expected health effects of these chemicals, emergency officials are recommending immediate evacuation of Victory.

People in these areas should evacuate to London Community Center.

Other areas in Laurel County are not affected at this time, but should stand by for additional information. #TEST3-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

People in these areas should leave, traveling away from Blue Grass Army Depot.
> Close vehicle windows and vents; and turn off the air-conditioner/heater.
> If evacuation is not possible, in-place sheltering is recommended.

Stay tuned to this station for updates and instructions for Laurel County Kentucky residents.

THIS IS ONLY A TEST

WEA Message (Parameter CMAMtext)
This is the message that the public will receive on their cell phone.
90 characters or less including spaces.
Cannot contain URL or phone number links. Must include issuing agency identifier i.e. NWS or Sheriff.

TEST LC EMA: Chemical Depot emergency. Evacuate now. Area of Victory, KY. #TEST3-**X**

Twitter Message
140 characters or less including spaces.

NOT USED FOR TESTING
Immediate evacuation of Victory, KY advised to due to chemical emergency at Blue Grass Army Depot. #TEST3-**X**

<table>
<tr><td colspan="2">Insert Agency Logo Here</td><td>EMERGENCY ALERT MESSAGE – 4
(Sent by KYEM)

Laurel County Emergency Management Agency
165 Substation St
London, Kentucky 40741
Phone: (606) 862-7904   Fax: (606) 862-7908</td></tr>
</table>

Date:	**Time:**	**Event Code: SPW** *(Required 3 character code)*

Headline
160 characters or less including spaces.

Laurel County shelter-in-place advised due to Blue Grass Army Depot emergency

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

THIS IS A TEST

An incident occurred at the Blue Grass Army Depot near Richmond which involved the release of toxic chemicals in areas of Laurel County. Due to the expected health effects of these chemicals, emergency officials are recommending immediate shelter-in-place for people in the area of Victory, KY.

Other areas in Laurel County are not affected at this time, but should stand by for additional information. #TEST4-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

To shelter-in-place, do the following:
> Move inside immediately.
> Close and lock all windows and doors.
> Turn off ventilation system and all fans.
> Go into and seal your chosen room with plastic sheeting and duct tape.
> Listen to local radio stations via portable battery operated radio.

Stay tuned to this station for updates and instructions for Laurel County Kentucky residents.

THIS IS ONLY A TEST

WEA Message (Parameter CMAMtext)
This is the message that the public will receive on their cell phone.
90 characters or less including spaces.
Cannot contain URL or phone number links. Must include issuing agency identifier i.e. NWS or Sheriff.

TEST LC EMA: Chemical Depot emergency. Shelter-in-Place now Area of Victory, KY. #TEST4-**X**

Twitter Message
140 characters or less including spaces.

NOT USED FOR TESTING
Immediate Shelter-in-Place in the area of Victory, KY advised to due to chemical emergency at Blue Grass Army Depot. #Test4-**X**

EMERGENCY ALERT MESSAGE – 5

Lexington-Fayette County

1793 Old Frankfort Pike
Lexington, KY 40507
Phone: (859) 258-3784

Date:	Time:	Event Code: EVI
		(Required 3 character code)

Headline
160 characters or less including spaces.

Fayette County evacuations advised due to Blue Grass Army Depot emergency

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.

THIS IS A TEST

An incident occurred at the Blue Grass Army Depot near Richmond which involved the release of toxic chemicals in areas of Fayette County. Due to the expected health effects of these chemicals, emergency officials are recommending immediate evacuation of Zone 1.

People in these areas should evacuate to Jacobson Park.

Other areas in Fayette County are not affected at this time, but should stand by for additional information. #TEST5-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.

People in these areas should leave, traveling away from Blue Grass Army Depot.
> Close vehicle windows and vents; and turn off the air-conditioner/heater.
> If evacuation is not possible, in-place sheltering is recommended.

Stay tuned to this station for updates and instructions for Fayette County Kentucky residents.

THIS IS ONLY A TEST

WEA Message (Parameter CMAMtext)
This is the message that will be received on cell phones.
90 characters or less including spaces. Cannot contain URL or phone number links.
It must include sending agency identifier i.e. NWS or Sheriff.

TEST Lexington EMA: Chemical Depot emergency. Evacuate now. Area of Zone 1 #TEST5-**X**

Twitter Message
140 characters or less including spaces.

NOT USED FOR TESTING
Immediate evacuation of Zone 1 advised due to chemical emergency at Blue Grass Army Depot. #Test5-**X**

EMERGENCY ALERT MESSAGE – 6

Lexington-Fayette County

1793 Old Frankfort Pike
Lexington, KY 40507
Phone: (859) 258-3784

Date:	Time:	Event Code: SPW *(Required 3 character code)*

Headline *160 characters or less including spaces.*
Fayette County shelter-in-place advised due to Blue Grass Army Depot emergency

Description: *What, where, how does this impact the public, for how long?* *Description and Instruction combined must be less than 160 words.*
THIS IS A TEST An incident occurred at the Blue Grass Army Depot near Richmond which involved the release of toxic chemicals in areas of Fayette County. Due to the expected health effects of these chemicals, emergency officials are recommending immediate shelter-in-place of Zone 1. Other areas in Fayette County are not affected at this time, but should stand by for additional information. #TEST6-**X**

Instruction: *What to do to stay safe and how to do it.* *Description and Instruction combined must be less than 160 words.*
To shelter-in-place, do the following: > Move inside immediately. > Close and lock all windows and doors. > Turn off ventilation system and all fans. > Go into and seal your chosen room with plastic sheeting and duct tape. > Listen to local radio stations via portable battery operated radio. Stay tuned to this station for updates and instructions for Fayette County Kentucky residents. THIS IS ONLY A TEST

WEA Message (Parameter CMAMtext) *This is the message that will be received on cell phones.* *90 characters or less including spaces. Cannot contain URL or phone number links.* *It must include sending agency identifier i.e. NWS or Sheriff.*
TEST Lexington EMA: Chemical Depot emergency. Shelter-in-Place now. Area Zone 1 #TEST6-**X**

Twitter Message *140 characters or less including spaces.*
NOT USED FOR TESTING Immediate Shelter-in-Place of Zone 1 advised due to chemical emergency at Blue Grass Army Depot. #Test6-**X**

EMERGENCY ALERT MESSAGE – 7

Insert Agency Logo Here

Agency / Jurisdiction Name
Address
City, State XXXXX
Phone: (XXX) XXX-XXXX

Date:	Time:	Event Code: CEM
		(Required 3 character code)

Headline
160 characters or less including spaces.
Bullet Test

Description: *What, where, how does this impact the public, for how long?*
Description and Instruction combined must be less than 160 words.
This is a test of bullets in an IPAWS message. #TEST**A**7-**X**

Instruction: *What to do to stay safe and how to do it.*
Description and Instruction combined must be less than 160 words.
- Manual Dash > Greater than sign \ Slash | Pipe + Plus * asterisk # Pound Sign   • Bullet THIS IS ONLY A TEST

WEA Message (Parameter CMAMtext)
This is the message that will be received on cell phones.
90 characters or less including spaces. Cannot contain URL or phone number links.
It must include sending agency identifier i.e. NWS or Sheriff.
TEST ->\\|+*# Test symbols #TEST**A**7-**X**

Twitter Message
140 characters or less including spaces.
NOT USED FOR TESTING

.

APPENDIX D – MODEL COMMUNICATIONS PLAN

[Appendix D remains the same.]

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APPENDIX E – MESSAGE TRACKING FORMS

Pueblo County					
Message#	**Test#**	**Event Code and Note**	**Message#**	**Test#**	**Note**
RWT					
Test P0-1			Test1-1		
Test P0-2			Test1-2		
Test P0-3			Test1-3		
Test P0-4			Test1-4		
Test P0-5			Test1-5		
Test P0-6			Test1-6		
Test P0-7			Test1-7		
Test P0-8			Test1-8		
Test P0-9			Test1-9		
Test P0-10			Test1-10		
Test P0-11					
Test P0-12					
Test P0-13			Test2-1		
Test P0-14			Test2-2		
Test P0-15			Test2-3		
Test P0-16			Test2-4		
Test P0-17			Test2-5		
Test P0-18			Test2-6		
Test P0-19			Test2-7		
Test P0-20			Test2-8		
Test P0-21			Test2-9		
Test P0-22			Test2-10		
Test P0-23					
Test P0-24					
Test P0-25					
Test P0-26					
Test P0-27					
Test P0-28					
Test P0-29					
Test P0-30					

Notes:

KYEM					
Message#	**Test#**	**Event Code and Note**	**Message#**	**Test#**	**Note**
RWT					
Test K0-1			Test3-1		
Test K0-2			Test3-2		
Test K0-3			Test3-3		
Test K0-4			Test3-4		
Test K0-5			Test3-5		
Test K0-6			Test3-6		
Test K0-7			Test3-7		
Test K0-8			Test3-8		
Test K0-9			Test3-9		
Test K0-10			Test3-10		
Test K0-11					
Test K0-12					
Test K0-13			Test4-1		
Test K0-14			Test4-2		
Test K0-15			Test4-3		
Test K0-16			Test4-4		
Test K0-17			Test4-5		
Test K0-18			Test4-6		
Test K0-19			Test4-7		
Test K0-20			Test4-8		
Test K0-21			Test4-9		
Test K0-22			Test4-10		
Test K0-23					
Test K0-24					
Test K0-25					
Test K0-26					
Test K0-27					
Test K0-28					
Test K0-29					
Test K0-30					

Notes:

LFUCG					
Message#	**Test#**	**Event Code and Note**	**Message#**	**Test#**	**Note**
RWT					
Test L0-1			Test5-1		
Test L0-2			Test5-2		
Test L0-3			Test5-3		
Test L0-4			Test5-4		
Test L0-5			Test5-5		
Test L0-6			Test5-6		
Test L0-7			Test5-7		
Test L0-8			Test5-8		
Test L0-9			Test5-9		
Test L0-10			Test5-10		
Test L0-11					
Test L0-12					
Test L0-13			Test6-1		
Test L0-14			Test6-2		
Test L0-15			Test6-3		
Test L0-16			Test6-4		
Test L0-17			Test6-5		
Test L0-18			Test6-6		
Test L0-19			Test6-7		
Test L0-20			Test6-8		
Test L0-21			Test6-9		
Test L0-22			Test6-10		
Test L0-23					
Test L0-24					
Test L0-25					
Test L0-26					
Test L0-27					
Test L0-28					
Test L0-29					
Test L0-30					

Notes:

APPENDIX F – MEETING AGENDAS

All times are Eastern.

December 5, 2014
Pre-Test Coordination Call

Conference Bridge
Call in number: (800) 320-4330
PIN# 351497

10:00 to 10:30   Introductions and overall testing objectives

10:30 to 10:45   Overview of the testing process

10:45 to 11:45   Review of the testing scripts and forms

11:45 to 12:00   Final questions and close out

All times are Eastern.

December 8, 2014
Testing Day 1

MCP Bridge #4
Call in number: (814) 954-1239
Pass Code: 18508

10:00 to 10:15   Introductions and roll call

10:15 to 10:45   Configurations and Test 1 RWT

10:45 to 11:30   Tests 2 through 6

11:30 to 13:00   Break for Lunch

13:00 to 14:30   Retest Test 1 then Tests 7 through 12

14:30 to 14:45   Break

14:45 to 16:00   Test 13 and 14
Reset Devices to Live

December 9, 2014
Testing Day 2

MCP Bridge #4
Call in number: (814) 954-1239
Pass Code: 18508

10:00 to 10:15	Introductions and roll call
10:15 to 10:45	Configurations and Test 1 RWT
10:45 to 11:30	Make-up testing
11:30 to 13:00	Break for Lunch
13:00 to 14:30	Retest Test 1 then Make-up testing as needed
14:30 to 14:45	Break
14:45 to 16:00	Make-up testing as needed
Reset Devices to Live

December 16, 2014
After Action Day 1

3341 Strauss Avenue Suite 236
Building 900
Indian Head, MD 20640

JITC WebEx: https://femaipawslab.webex.com/femaipawslab/onstage/g.php?d=292178617&t=a

Audio conference information
US TOLL: 1-650-479-3207
Access code: 292 178 617

The lab is on a military installation so extra time will be needed to log in to the site. Carpooling is encouraged. There are several hotels located in nearby Waldorf, MD. The nearest airport is Reagan National.

09:00 to 10:00	In process and access from front gate
10:00 to 10:30	Introductions and general facility orientation
10:30 to 12:00	Review test results for Tests 1 through 6
12:00 to 13:30	Lunch
13:30 to 15:00	Review Tests 7 through 12
15:00 to 15:15	Break
15:15 to 17:00	Review Tests 13 and 14
18:30 to 20:30	Optional group dinner

December 17, 2014
After Action Day 2

3341 Strauss Avenue Suite 236
Building 900
Indian Head, MD 20640

JITC WebEx: https://femaipawslab.webex.com/femaipawslab/onstage/g.php?d=296633729&t=a

Audio conference information
US TOLL: 1-650-479-3207
Access code: 296 633 729

09:00 to 10:00	In process and access from front gate
10:00 to 11:00	Review test results and After Action What went well? What did not go well? What should we have done but didn't? What didn't we do but should have? What lessons were learned?
11:00 to 12:00	Lab equipment orientation by JITC staff
12:00 to 13:30	Lunch
13:30 to 15:30	Retests using JITC devices
15:30 to 16:00	Final review and close out
17:00 to 19:00	Optional group dinner

APPENDIX C – TEST RESULTS

The following pages contain the summary of the test results.

The remainder of this page is intentionally blank.

Test 1. System Configuration Test (Test)

Test Description:
This test will be conducted in the JITC IPAWS-OPEN test environment. The test is to verify that the various devices are configured correctly for future tests. Each site will send one RWT message.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Create a CAP message with an alert origination tool and transmit.
3. Validate that the message was processed and displayed on the test devices (public display devices at the JITC such as cell phone, television, or radio).

Expected Results:
The alert message is properly processed and displayed on all test devices.

Pass/Fail:

Pueblo County
Fail: tries 1–5
Pass: try 6

KYEM
Fail: DASDEC™
Pass: AlertSense

Lexington-Fayette County
Pass: DASDEC™ and WebEOC

Results:

Pueblo County

1st try	Missing information	→	Reset the times
	Expired time wrong		Added "other" in categories
			Took out NWEM
2nd try	Expired time wrong	→	Fixed time (expired)
3rd try	Time issue	→	Created new alert and adjusted times
	Info areas description missing		Fixed these issues
	Not set within 5 minutes		Fixed these issues
4th try	Sent at is not within 5 minutes of current time	→	Adjusted times
5th try	Sent at is not within 5 minutes of current time	→	Noticed iPad clock time didn't match wall clock that Art was referencing
			Fixed iPad time

KYEM

RWT – DASDEC™ failed
RWT – AlertSense successful

Lexington-Fayette County

RWT – DASDEC™ successful
RWT – WebEOC successful
Note: Alert type can only send one at a time

Test 2.   Message Template Validation (Test)

Test Description:
This test will be conducted in the JITC IPAWS-OPEN environment. This script will test requirement 1. The test will validate each message template prepared by the messaging working group. Each site will send two messages from the templates.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Create an alert message using the message template and transmit.
3. Validate that the message was processed and displayed on the test devices.
4. Repeat process for each message template.

Expected Results:
Each message template is properly processed and displayed on the test devices correctly.

<mark>**Pass/Fail:**</mark>

Pueblo County
Fail: tries 1–2
Pass: try 3

KYEM
Pass

Lexington-Fayette County
Pass

<mark>**Results:**</mark>

Pueblo County

1st try	Expired time must be later than sent time	⟶	Adjusted time
2nd try	Type, value and description missing	⟶	Adjusted
Note: Noticed that if accidentally touch a field, then information fills that field			

KYEM

CEM – AlertSense successful

Lexington-Fayette County

EVI – DASDEC™ successful
EVI – WebEOC successful

Test 3.   Message Displays to Public Devices (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirements 2, 3, and 4. The test will validate connection to each distribution medium. For each message transmitted in test 2, review the following.

Test Procedure:
1. Use the messages transmitted in test 2.
2. Validate that the message was processed and displayed on the test devices for each distribution medium.
3. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
Each message is properly processed and displayed on the test devices correctly.

Pass/Fail:

Pueblo County
Pass

KYEM
Pass

Lexington-Fayette County
Pass

Results:

All messages that were successfully transmitted were displayed.

Test 4. Message Time to Public Devices (Test)

Test Description:

This test will be conducted in the test environment. This script will test requirement 5. The test will validate time to distribute an alert to each distribution medium. If possible this can be tested with the messages transmitted in test 1. If those tests do not capture the data, each alert originator will transmit one message for all distribution feeds.

Test Procedure:

1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Create an alert message using a message template and transmit.
4. Validate that the message was processed and displayed on the test devices for each distribution medium.
5. Test site shall capture picture, video or screen shot of each message on each distribution medium.
6. Test site shall capture log files from each device in the process (time received at IPAWS-OPEN, sent to distribution device, and time received on public display, etc.).

Expected Results:

Each message is presented to the public user's device in less than one minute.

Pass/Fail:

Results:

This test was not conducted.

Limited access to logs with time elements and lack of synchronization among devices limited this test.

Test 5.   Sub-FIPS Alerting (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 6. The test will validate the alerting using a FIPS code zone identifier. The lab will configure two EAS devices with determined sub-county FIPS codes. The Lexington-Fayette County site will perform this test.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Create an alert message using a message template and a sub-county FIPS code 121067 and transmit.
3. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
4. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
The system today may not support sub-county FIPS codes. The CAP message will be captured at each point through the system to determine how the system processes sub-county FIPS.

Pass/Fail:

Lexington-Fayette County
Fail

Results:

Lexington-Fayette County

DASDEC™ – EVI FIPS 121067
FIPS Code was only new element

Message successfully transmitted to IPAWS-OPEN, but returned 305 Error – Invalid Element Geocode.

Note: According to the IPAWS PMO, this was an IPAWS Lab failure due to the fact that it is still in version 3.06. It would have succeeded as of version 3.07 (in production now), but not tested as to what would happen.

Test 6. Zone Alerting (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 7. The test will validate the delivery of an alert to an area smaller than a county. The lab will configure two EAS devices with separate sub-county areas if possible.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Create an alert message using a message template and an <area> element (e.g., geocode or polygon) smaller than a county, but within the alerting authority permitted area and transmit to WEA.
3. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
4. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
Alert is received on the device associated with the area and not others. The WEA Toy Cell at JITC may not be configurable and there is only one Toy Cell. CAP messages will be captured to determine the processing of the messages if not able to directly test this.

Pass/Fail:

Pueblo County
Fail: try 1
Pass: try 2   PO-2 - CEM

KYEM
Pass, with minor issue

Lexington-Fayette County
Fail

Results:

Pueblo County

Note: Existing template wasn't working, so Art created a new template	
1st try	Geocode "Info Area" is missing
2nd try	Added same FIPS code

KYEM

Delivered message, but the CAP area was only three points and displayed as a straight line making it difficult to see initially in the display tool

Lexington-Fayette County

WEBEOC - CEM - GMAS

Test 7.   Multiple Alerts (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 8. The test will validate the system can process multiple alerts. KYEM EOC will conduct this test.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Create an alert message using a message template and transmit.
4. Record time initial call is sent.
5. Repeat two additional messages (one with same event code and one with different event code) within two minutes.
6. Record time of first and last message sent.
7. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
8. Record times each alert is received by device.
9. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
All messages are properly processed and displayed within two minutes. Verify that the distribution devices send messages and do not ignore as duplicates.

<mark>Pass/Fail:</mark>

Pueblo County
Pass

KYEM
Pass

Lexington-Fayette County
Pass

<mark>Results:</mark>

Pueblo County

1st try	PO-5 EVI	Need to reset expiration….the date/time automatically reset to two days in advance – wouldn't send until fixed
2nd try	PO-6 EVI	PASS
	PO-7 EVI	PASS

KYEM

K0-12	CEM
K0-13	EVI
K0-14	CEM

Lexington-Fayette County

L07	DASDEC™ RWT - √
	WebEOC RWT – Block Validation – greencode Wrong COG certificate uploaded by ? Blackboard Connect Demo COG cert changed
L09	DASDEC™ – CEM √
L010	DASDEC™ – CEM √
L011	DASDEC™ – SPW √

Test 8.   Multiple Sub-FIPS Alerting (Test)

Test Description:

This test will be conducted in the test environment. This script will test requirement 9. The test will validate the alerting using a FIPS code zone identifier. The lab will configure two devices on separate sub-county FIPS codes. **Based on the results of test 5, this test may be not performed**.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Create an alert message using a message template and a sub-county FIPS code and transmit.
4. Record time initial call is sent.
5. Repeat two additional sub-county FIPS messages (one with same event code and one with different event code) within two minutes.
6. Record time of first and last message sent.
7. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
8. Record times each alert is received by device.
9. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:

Alert is received on the device associated with the sub-county FIPS area and not others within two minutes. Verify that the distribution devices send messages and do not ignore as duplicates.

Pass/Fail:

Results:

This test was not conducted based on the failure of test 5.

Test 9.   Multiple Zone Alerting (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 10. The test will validate the delivery of an alert to an area smaller than a county. The lab will configure two devices on separate areas.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device in synchronized.
3. Create an alert message using a message template and a sub-county <area> element and transmit to WEA.
4. Record time initial call is sent.
5. Repeat two additional messages (one with same event code and one with different event code) within two minutes.
6. Record time of last message sent.
7. Validate that the message was processed and displayed on the correct test devices for each distribution medium.
8. Record times each alert is received by device.
9. Test site shall capture (picture, video or screen shot of) each message on each distribution medium.

Expected Results:
Alert is received on the device associated with the area and not others within two minutes. Verify that the distribution devices send messages and do not ignore as duplicates.

Pass/Fail:

Pueblo County
Fail: PO-8   Pass
Pass: PO-9 and PO-10

KYEM
Pass

Lexington-Fayette County
Pass

Results:

Pueblo County

1ˢᵗ try	Polygon has more than 100 points removed polygon and replaced with a circle; didn't work so created a new template issue was the expiration default date started @ 2000. Had to logout completely and log back in to fix the year issue.

KYEM

Successfully sent

Lexington-Fayette County

Everbridge – No RWT event	Issue only 1 COG certificate uploaded at any time – challenge to training Issue training mode option – internal system only or still to IPAWS Test Lab?
WebEOC – CEM – L012 　　　EVI – L013 　　　　SPW – L014	Select production/demo in Admin with save button Refresh in IPAWS Messaging board

Test 10. Update Active Alert (Test)

Test Description:

This test will be conducted in the test environment. This script will test requirement 11. The test will validate the ability to update alerts.

Test Procedure:

1. Verify that all devices are on the test environment (see section 4.1.1).
2. Turn off one wireless device.
3. Create an alert message using a message template and 30-minute duration and transmit to WEA.
4. Validate that the message was processed and displayed on the correct test device.
5. Test site shall capture picture, video or screen shot of each message on each distribution medium.
6. Turn on second wireless device.
7. Test site shall capture picture, video or screen shot of each message on each distribution medium.
8. Create an alert message update using a message template and change the duration to 15 minutes and transmit.
9. Validate that the message was processed and displayed on the correct test devices
10. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:

Alert message is properly updated and displayed on the wireless device.

<mark>**Pass/Fail:**</mark>

Pueblo County
Pass

KYEM
This test was not conducted.

Lexington-Fayette County
Fail

<mark>**Results:**</mark>

Pueblo County

PO-11	CEM – Pass
PO-11	2nd time CEM and change the expiration time validation error when trying to cancel. Error – no headline Pass

KYEM

AlertSense not able to perform updates

Lexington-Fayette County

WebEOC – CEM – L015 – WEA	Upload successful Update sent but not relayed
WebEOC	Issues: setting expiration time rejects message

Test 11.   Cancel Active Alert (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 12. The test will validate the ability to cancel alerts.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Turn one wireless device off.
3. Create an alert message using a message template and 30-minute duration and transmit to WEA.
4. Validate that the message was processed and displayed on the correct test device.
5. Test site shall capture picture, video or screen shot of each message on each distribution medium.
6. Create an alert cancel message and transmit.
7. Turn on the second wireless device.
8. Validate that the message was processed and not displayed on the second test device.
9. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
Alert message is properly canceled and is no longer transmitted to the public.

Pass/Fail:

Pueblo County
Fail

KYEM
Not able to perform this test.

Lexington-Fayette County
Pass: WebEOC

Results:

Pueblo County

Note: Used same message as test 10	
PO-11	CEM – Pass
PO-11	2nd time CEM and change the expiration time validation error when trying to cancel. Error – no headline Pass

KYEM

Not able to perform this test

Lexington-Fayette County

	UTITC phone 1 received
WebEOC – EVI-WEA – L017	Cancel sent
	Cancel successful
Note: WebEOC only; DASDEC™ – no cancel option	

Test 12.   Multiple Alerts for Two COGs (Test)

Test Description:

This test will be conducted in the test environment. This script will test requirement 13. The test will validate the ability for two authorities to send alerts at the same time.

Test Procedure:

1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Alert Authority A – KYEM EOC
a. Create an alert message using a message template and transmit.
b. Record time initial call is sent.
c. Repeat one additional message within two minutes.
d. Record time of first and last message sent.
4. Alert Authority B – Lexington-Fayette County
a. Create an alert message using a message template and transmit.
b. Record time initial call is sent.
c. Repeat one additional message within two minutes.
d. Record time of first and last message sent.
5. Validate that each message was processed and displayed on the correct test devices for each distribution medium.
6. Record times each alert is received by device.
7. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:

All messages are properly processed and displayed within two minutes.

Pass/Fail:

Results:

This test was not conducted.

Test 13. Multiple Alerts from Multiple COGs (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 14. The test will validate the ability for multiple authorities to send alerts at the same time.

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Alert Authority A – Lexington-Fayette County
   a. Create an alert message using a message template and transmit.
   b. Record time initial call is sent.
   c. Repeat one additional message within two minutes.
   d. Record time of first and last message sent.
4. Alert Authority B – Pueblo County
   a. Create an alert message using a message template and transmit.
   b. Record time initial call is sent.
   c. Repeat one additional message within two minutes.
   d. Record time of first and last message sent.
5. Alert Authority C – KYEM EOC
   a. Create an alert message using a message template and transmit.
   b. Record time initial call is sent.
   c. Repeat one additional message within two minutes.
   d. Record time of first and last message sent.
6. Validate that each message was processed and displayed on the correct test devices for each distribution medium.
7. Record times each alert is received by device.
8. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
All messages are properly processed and displayed within two minutes.

Pass/Fail:

Pueblo County
Pass

KYEM
Pass

Lexington-Fayette County
Pass

Test 13 was conducted twice, once for the regular testing, and a second time with messages developed by the PAIPT.

First Set

Pueblo County

PO-12 EVI	Accidently skipped PO-13 in documentation
PO-14	Fail - expiration time issue - Fixed - Pass
Note: Forgot to change WEA text from PO-8 to PO-14	

KYEM

K0-20 CEM
K0-21 - SPW

Lexington-Fayette County

L0-19 – DASDEC – EAS – CEM	
L0-20 – WebEOC – EAS – CAE	CAE alert was a mistake. Not authorized.

Second Set for Public Affairs IPT Messages

Pueblo County

2-2	Success

KYEM

3-2	Success

Lexington-Fayette County

5-3	SPW WebEOC Success

Test 14.   Multiple Sub-county Alerts from Multiple COGs (Test)

Test Description:
This test will be conducted in the test environment. This script will test requirement 15. The test will validate the ability for multiple authorities to send alerts to sub-county areas at the same time

Test Procedure:
1. Verify that all devices are on the test environment (see section 4.1.1).
2. Verify time on each device is synchronized.
3. Alert Authority A – Lexington-Fayette County
   a. Create an alert message using a message template using a sub-county area and transmit to WEA.
   b. Record time initial call is sent.
   c. Repeat one additional message within two minutes.
   d. Record time of first and last message sent.
4. Alert Authority B – Pueblo County
   a. Create an alert message using a message template using a sub-county area and transmit to WEA.
   b. Record time initial call is sent.
   c. Repeat one additional message within two minutes.
   d. Record time of first and last message sent.
5. Alert Authority C – KYEM EOC
   a. Create an alert message using a message template using a sub-county area and transmit to WEA.
   b. Record time initial call is sent.
   c. Repeat one additional message within two minutes.
   d. Record time of first and last message sent.
6. Validate that each message was processed and displayed on the correct test devices for each distribution medium.
7. Record times each alert is received by device.
8. Test site shall capture picture, video or screen shot of each message on each distribution medium.

Expected Results:
   All messages are properly processed and displayed within two minutes.

Pass/Fail:

Pueblo County
Pass

KYEM

Pass

Lexington-Fayette County

Pass

==Results:==

Pueblo County

PO-15 CEM	Pass
PO-16 EVI	Pass

KYEM

K0-22	SPW
Test 1	EVI

Lexington-Fayette County

LO-21	WebEOC – EAS – Poly CEM
LO-22	WebEOC – WEA – Poly EM

Date	Time	Message#	Test#	Event Code and Note	Message#	Test#	Note
		Pueblo County					
12/8	10:42–11:00	RWT	1	OTG-Sent			
	11:20	Test P0-1	2	EVI	Test1-1	2	EVI
	11:42	Test P0-2	6	CEM	Test1-2		
		Test P0-3			Test1-3		
		Test P0-4			Test1-4		
	15:11	Test P0-5	7	EVI	Test1-5		
		Test P0-6	7	EVI ⌐OTG	Test1-6		
		Test P0-7	7	SPW ⌐	Test1-7		
	16:18	Test P0-8	9	EVI – polygon	Test1-8		
		Test P0-9	9	EVI – polygon	Test1-9		
		Test P0-10	9	CEM	Test1-10		
12/9	10:15	Test P0-11	10	CEM			
		Test P0-12	13	EVI			
		Test P0-13			Test2-1	2	SPW
		Test P0-14	13	CEM	Test2-2	13	
		Test P0-15	14	CEM	Test2-3		
		Test P0-16	14	EVI	Test2-4		
		Test P0-17			Test2-5		
		Test P0-18			Test2-6		
		Test P0-19			Test2-7		
		Test P0-20			Test2-8		
		Test P0-21			Test2-9		
		Test P0-22			Test2-10		
		Test P0-23					
		Test P0-24					
		Test P0-25					
		Test P0-26					
		Test P0-27					
		Test P0-28					
		Test P0-29					
		Test P0-30					

Notes:
Day 1 @ Pueblo, CO
10 test messages were tested
EVI event code with circle type of polygon was tested

Day 2 @ Pueblo, CO
10 test messages were tested

KYEM					
Message#	Test#	Event Code and Note	Message#	Test#	Note
RWT	1				
Test K0-1	2	CEM	Test3-1	2	EVI
Test K0-2	2	CEM	Test3-2	13	
Test K0-3	2	CEM to WEA	Test3-3		
Test K0-4	1	RWT	Test3-4		
Test K0-5	6	SPW	Test3-5		
Test K0-6	6	SPW	Test3-6		
Test K0-7	6	SPW	Test3-7		
Test K0-8	6	SPW	Test3-8		
Test K0-9			Test3-9		
Test K0-10	6	SPW	Test3-10		
Test K0-11					
Test K0-12	7	CEM			
Test K0-13	7	EVI	Test4-1	2	SPW
Test K0-14	7	CEM	Test4-2		
Test K0-15	9	CEM	Test4-3		
Test K0-16	9	CEM	Test4-4		
Test K0-17	9	EVI	Test4-5		
Test K0-18			Test4-6		
Test K0-19			Test4-7		
Test K0-20	13	CEM	Test4-8		
Test K0-21	13	SPW	Test4-9		
Test K0-22	14	SPW	Test4-10		
Test K0-23					
Test K0-24					
Test K0-25			Test -1	14	EVI
Test K0-26					
Test K0-27					
Test K0-28					
Test K0-29					
Test K0-30					

Notes:

Day 1 @ KYEM (London, Kentucky)

17 test messages were tested.

Posting Test-K0 message experienced a 503 HTTP 503 service unavailable error.

Day 2 @ KYEM (London, Kentucky)

8 test messages were tested.

LFUCG					
Message#	Test#	Event Code and Note	Message#	Test#	Note
RWT	1 / 2	DASDEC – RWT Receiving WebEOC - RWT			
Test L0-1	1	DASDEC – RWT √	Test5-1	2	DASDEC™ – EAS/WEA-EVI √
Test L0-2	2	WebEOC – RWT √	Test5-2	2	WebEOC – EAS/EVI √
Test L0-3	3	DASDEC – EVI √	Test5-3	13	WebEOC – EAS-SPW √
Test L0-4	7	WebEOC – EVI √	Test5-4		
Test L0-5	5	DASDEC – EVI – FIPS 121067 X	Test5-5		
Test L0-6	6	WebEOC – CEM – CMAS X	Test5-6		
Test L0-7	1	DASDAC – RWT √	Test5-7		
Test L0-8	1	WebEOC - RWT X	Test5-8		
Test L0-9	7	DASDAC – CEM √	Test5-9		
Test L0-10	7	DASDAC-CEM √	Test5-10		
Test L0-11	7	DASDAC – SPW √			
Test L0-12	9	WebEOC – CEM – poly √			
Test L0-13	9	WebEOC – EVI – poly √	Test6-1	2	DASDEC™ – EAS/WEA X
Test L0-14	9	WebEOC – SPW – poly √	Test6-2		
Test L0-15	10	WebEOC – CEM – WEA √	Test6-3	2	WebEOC – WEA –SPW √
Test L0-16	10	Update of ↑ X	Test6-4		
Test L0-17	11	WebEOC – EVI – WEA √	Test6-5		
Test L0-18	Out	Error	Test6-6		
Test L0-19	12	DASDEC – EAS – CEM √	Test6-7		
Test L0-20	12	WebEOC – EAS – CAE X	Test6-8		
Test L0-21	14	WebEOC – EAS – CEM √	Test6-9		
Test L0-22	14	WebEOC-WEA – CEM √	Test6-10		
Test L0-23					
Test L0-24			7-1	2	WebEOC – WEA – CEM √
Test L0-25			7-2		
Test L0-26					
Test L0-27					
Test L0-28					
Test L0-29					
Test L0-30					

Notes:
Day 1 @ Lexington, Kentucky

DASDEC™ needs some refinement. Ability to cancel like WebEOC would be beneficial.
WebEOC does not have capability to do simultaneous alert types.

Test 1 DASDEC™ RWT received at JITC
Test 2 WebEOC RWT received at JITC
Test 3 DASDEC™ EVI received at JITC WEA
Test 4 WebEOC EVI received at JITC WEA
Test 5 DASDEC™ EVI FIPS 121067 FAILED
Test 6 WebEOC CEM CMAS FAILED
Test 7 DASDEC™ CEM, CEM, SPW received

Day 2 @ Lexington, Kentucky
Had to cancel all WebEOC messages from day 1 – 23 ½ hour exp.
DASDEC™ – guidance on polygon entry – GPS coordinate format? Showing pairs separating pairs.
No feedback within system for successful/failure after delivery except website.