2011 Simulated Emergency Test

SET2011-After Action Report

functional drill

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Abstract

On October 1, 2011 Michigan Section held a functional drill using the scenario of a winter storm. This document details the result of that functional drill.

1. Executive Summary

Each year on the first Saturday in October, the ARRL holds a "Simulated Emergency Test". The Michigan Section has long used this as an annual exercise to help develop various skills needed for emergency response.

The Michigan Section winter storm functional drill exercise 2011 Simulated Emergency Test was developed to test Michigan Section's ComA2.4.3.1 (Procedures and plans) and ComC1.2.2 (Interoperable comms) capabilities. The exercise planning team was composed of SEC staff. The exercise planning team discussed the ARES/NTS interface, message handling, congestion at the SEOC during a statewide incident, and response to infrastructure failures.

Based on the exercise planning team's deliberations, the following objectives were developed for 2011 Simulated Emergency Test:

- Objective 1: Improve the relationship between ARES and NTS by assigning permanent NTS Net to ARES District relationships.
- Objective 2: Introduce ARES to the standard NTS practice of having liaisons carry traffic to and from a net.
- Objective 3: Stress message passing by introducing constraints to simulate widespread infrastructure outages, such as loss of power and antennas.

The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify potential areas for further improvement, and support development of corrective actions.

1.1. Major Strengths

The major strengths identified during this exercise are as follows:

- District Emergency Coordinators and Net Managers worked efectively prior to the exercise to have plans in place.
- Jurisdictions responded effectively to unanticipated loss of infrastructure.
- Traffic handling skills improved across the board.

1.2. Primary areas for improvement

Throughout the exercise, several opportunities for improvement in the Section's ability to respond to the incident were identified. The primary areas for improvement, including recommendations, are as follows:

- Net procedures still presented some areas of confusion. Additional practice is indicated.
- Not all jurisdictions had plans for relieving operators in key positions. The need for written plans, including plans for dealing with multiple operational periods, must be stressed with the counties.

- While procedures and net discipline showed considerable improvement, there were still a number of areas where inexperience delayed traffic. Once again, additional training and practice is indicated.
- Many participants, especially nets, were reluctant to leave their comfort zones. In particular, nets seemed to have difficulty leaving their favored frequencies, modes and practices, even when other approaches would obviously have been more effective.
- While Section staff made significant efforts to make ARPSC members aware of the exercise, non-participants were for the most part unaware, even if they might be affected. Broader dissemination of plans is needed.

2. Executive Overview

This exercise aimed to strengthen the relationship between the Amateur Radio Emergency Services (ARES) and the National Traffic System (NTS). The station at the State Emergency Operations Center (SEOC) delivered injects to liaisons to the various NTS nets who, in turn, delivered those injects to the Districts.

Each District was assigned an NTS net, with the expectation that this assignment would be more or less permanent. ARES District Emergency Coordinators were encouraged to work together with NTS Net Managers to plan meeting times, frequencies, etc. The Great Lakes Emergency and traffic Net was assigned the responsibility of representing the four National Weather Service offices in Michigan.

Evaluators monitored the activity looking for evidence of planning, ability to maintain communications across the state, and ability to respond to loss of infrastructure.

As this exercise was conducted in conjunction with the annual ARRL Simulated Emergency Test, individual jurisdictions were encouraged to include local government agencies and NGOs in their local activities.

2.1. Exercise Details

- **`Exercise Name`** - 2011 ARRL Simulated Emergency Test
- **`Type of exercise`** - The Section-wide portion of the exercise was a functional drill, testing limited capabilities within the section. However, many jurisdictions, in keeping with the spirit of the ARRL test, engaged numerous other agencies on a local level.
- **`Exercise Date and Duration`** - October 1, 2011 - 4 hours
- **`Location`** - Statewide
- **`Sponsor`** - Michigan Section of The American Radio Relay League
- **`Program`** - n/a

- **`Mission`** - Respond
- **`Scenario Type`** - Winter Storm

2.1.1. Capabilities

- ComA2.4.3.1 - Develop Standard Operating Procedures and Standard Operating Guides in support of Emergency Operations Plans.
  - Continuity of Operation (COOP) plans describe how personnel, equipment, and other resources support sustained response/survivability and recovery for all sectors
  - Emergency response plans address substantial loss of public safety response capabilities during catastrophic events (to include special needs populations and people with disabilities)
- ComC1.2.2 - Develop common communication and data standards to facilitate the exchange of information in support of response management
  - Develop common communication and data standards to facilitate the exchange of information in support of response management
  - Redundant and diverse interoperable communication systems are available

2.2. Exercise Planning team

The Section Emergency Coordinator (who also serves as the Section Traffic Manager) and the Section's Training and Exercise Officer planned the exercise. District Emergency Coordinators and Net Managers provided input on who was intending to participate, their capabilities, etc.

2.3. Participating organizations

The Statewide portion of the exercise included the National Traffic System nets and the Amateur Radio Emergency Services. Because their capabilities did not map any of the needs for the exercise, the Thumb and Mid-Michigan Traffic Net was not asked to participate. Several individual counties also chose not to participate.

The National Weather Service office at White Lake provided the initial injects, as well as simulations based on historical events to add realism to the scenario.

At the local level, counties were encouraged to include served agencies. In various jurisdictions, participants included the American Red Cross, Salvation Army, local Health Departments, hospitals, and a large number of Townships.

Most counties used the station at their county Emergency Operations Center as the main point of contact. Several jurisdictions also operated from hospitals, township halls and fire barns, as well as Red Cross chapters.

2.3.1. Number of participants

- Players - approx 200
- Controllers - 1
- Evaluators - 5
- Facilitators - none
- Observers - not available
- Victim role players - not applicable

3. Exercise Design

3.1. Exercise Purpose and Design

Each year the Michigan Section uses the annual ARRL Simulated Emergency Test to conduct a statewide exercise to improve the ability of the Section to respond to emergencies and other incidents, and to interact with various State and local agencies, as well as NGOs.

Over the past few years the Section has been working on improving the interface between the National traffic System and ARES. This year the Section hoped to establish some more or less permanent relationships between the ARES Districts and the NTS nets. Each District was assigned a net, and an additional net was assigned the responsibility of working with the National Weather Service. (refer to *Appendix F, NTS to District Assignments* for details.) The Thumb and Mid Michigan Traffic Net was not assigned a District as there were no obvious candidates and the net has a relatively small footprint. The Northern Lower Eastern Upper Peninsula Net was also not assigned as that net has no current leadership.

The exercise was designed to exercise these new relationships, and also test the ability of the nets and local programs to respond to challenging conditions such as loss of repeater power, loss of antennas, etc.

As with most Statewide ARES/NTS exercises, it was a particular challenge to design a scenario where all participating counties and nets could send and receive relevant traffic. The Training and Exercise Officer polled all Districts to see which would participate, and only three responded in the affirmative. At least a few counties from every District did participate, so some counties received only generic traffic.

3.2. Exercise Objectives, Capabilities, and Activities

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from the Target Capabilities List (TCL). The capabilities listed below form the foundation for the organization of all objectives and observations in this exercise. Additionally, each capability is linked to several corresponding activities and tasks to provide additional detail.

Based upon the identified exercise objectives below, the exercise planning team has decided to demonstrate the following capabilities during this exercise:

- Objective 1: Districts and Nets plan effectively together
  - ComA2.4.3.1 - Develop Standard Operating Procedures and Standard Operating Guides in support of Emergency Operations Plans
    - Continuity of Operation (COOP) plans describe how personnel, equipment, and other resources support sustained response/survivability and recovery for all sectors
    - Emergency response plans address substantial loss of public safety response capabilities during catastrophic events (to include special needs populations and people with disabilities)
- Objective 2: Nets and local jurisdictions are able to operate effectively in the face of significant challenges.
  - ComC1.2.2 - Develop common communication and data standards to facilitate the exchange of information in support of response management
    - Operable communications systems that are supported by redundancy and diversity, that provide service across jurisdictions, and that meet everyday internal agency requirements, are in place
    - Redundant and diverse interoperable communication systems are available

3.3. Scenario Summary

A severe winter storm scenario was selected as this type of incident can realistically have widespread and severe consequences.

In the early morning of October 1, the National Weather Service in White Lake issues a warning of an impending severe winter storm. By the time the SEOC is activated and warnings sent to the Districts, telephone service is already affected.

As the morning wears on, severe icing and heavy winds cause damage to power lines and higher profile antennas. Many repeaters are forced off the air and even some HF antennas suffer damage. Local jurisdictions are forced to rely on backup repeaters, emergency power stations, and simplex operation. A short summary of the events may be found in *Appendix D, Exercise Events Summary Table*.

Injects for the exercise are delivered to Districts and some individual counties via radiogram (refer to *Appendix E, Master Scenario Event List*). The various NTS nets send liaisons to the SEOC to pick up and deliver traffic between the SEOC and their assigned Districts and the counties within that District.

4. Analysis of Capabilities

This section of the report reviews the performance of the exercised capabilities, activities, and tasks. In this section, observations are organized by capability and

associated activities. The capabilities linked to the exercise objectives of 2011 Simulated Emergency Test are listed below, followed by corresponding activities. Each activity is followed by related observations, which include references, analysis, and recommendations.

4.1. Capability 1 - Procedures

ComA2.4.3.1 - Develop Standard Operating Procedures and Standard Operating Guides in support of Emergency Operations Plans

4.1.1. Preparedness Measure 1.1 - Survivability and Recovery

Continuity of Operation (COOP) plans describe how personnel, equipment, and other resources support sustained response/survivability and recovery for all sectors

Evaluators were asked to look for:

- Are stations using appropriate procedures and protocols
- Are net controls and operators being rotated
- Is there evidence of a plan to rotate operators
- Is there evidence of a plan to provide operators with personal needs (food, drink, rest, etc.)
- Is there evidence that emergency power/portable operations are planned
- Are plans in place to provide support personnel (runners, etc.)

4.1.1.1. Observation 1.1.1 - Emergency Power

`Area for improvement:` Programs should have plans to continue to operate when commercial power fails. Not all evaluators had a chance to review plans, but some evidence of emergency power use was found. There is, however, no evidence of explicit plans.

Individual evaluator comments:

- One station 100% battery w/solar panels charging

Also see *Section 4.1.2.1, "Observation 1.2.1 - Emergency Power"*.

4.1.1.1.1. Analysis

It has become relatively customary for stations to have back up power, especially in locations that are often used to ARES activities. However, leaders are not always sensitive to knowing what stations have what emergency power capabillities.

4.1.1.1.2. Recommendations

Remind leaders in both ARES and NTS that they should stay alert to each station's backup power capabilities.

4.1.1.2. Observation 1.1.2 - Experience

`Area for Improvement:` Although only one evaluator observed this problem, the shortage of experience is widespread.

Individual evaluator comments:

- More experienced operators needed both Dist 3 and 5

4.1.1.2.1. Analysis

In many areas there is a shortage of experienced operators. Older operators are often not interested or unable to participate, and newer operators do not have the training and background desired.

Much of the shortage might be alleviated with training as well as documentation. Standardization of equipment to the degree possible would also help. However, the best antidote is to train by doing.

4.1.1.2.2. Recommendations

Operators require more frequent, meaningful exercises and training. All DECs should work with their ECs to develop local programs to build operator skills.

4.1.1.3. Observation 1.1.3 - Personal Needs

`Strength:` Programs considered personal needs of operators.

Individual evaluator comments:

- Food and refreshments on site - rest rooms available a short walk away
- Branch County operations continued into the afternoon, so some of their operators joined up for lunch

4.1.1.3.1. Analysis

Generally, programs did well. It would be good if programs included personal needs in their written operational plans.

4.1.1.3.2. Recommendations

No specific action needed at this time.

4.1.1.4. Observation 1.1.4 - Procedures

`Strength:` Although far from perfect, procedures have improved considerably.

Individual evaluator comments:

- Standard procedures on all nets heard

- BT separating heading of message from text and signature caused count confusion when not used
- The Allegan County exercise, the Branch Co. Exercise, and the 5th district hospital net were well disciplined and proper net procedured used

4.1.1.4.1. Analysis

Although significantly improved, familiarity with traffic procedures still falls a little short. Programs more and more often incoroporate some sort of traffic training into their programs; this should continue. NTS operators should be reminded that sometimes ARES operators don't have the practice they need, and NTS ops should be forgiving of these shortcomings, while striving to mentor operators towards improved procedures.

4.1.1.4.2. Recommendations

Programs should continue to include traffic handling training and pass occasional messages on their nets.

Net Managers should remind members that ARES operators don't always have the practice we might prefer, and NTS operators should take a mentoring approach towards ARES ops.

4.1.1.5. Observation 1.1.5 - Rotation

`Area for improvement:` Programs rotated operators and net controls, however, there was no evidence found of formal plans.

Individual evaluator comments:

- Operator rotation established
- Rotation: Yes KB8RCR and NK8X
- No evidence of plan to rotate operators
- The nets had assistant/alternate net controls

4.1.1.5.1. Analysis

Although some programs rotate operators, there is no evidence anywhere of a formal plan.

4.1.1.5.2. Recommendations

All programs should include plans for rotating operators in their written operational procedures.

4.1.1.6. Observation 1.1.6 - Support

`Area for improvement:` Plans to have adequate supporting personnel available were spotty at best.

Individual evaluator comments:

- No one planned portable operations; no support personnel, although some locations had multiple operators
- Boy scout troop on site if runners needed

4.1.1.6.1. Analysis

As in rotation plans, plans to have support personnel available were spotty, at best.

4.1.1.6.2. Recommendations

Incorporate plans for support personnel into written operational plans.

4.1.2. Preparedness Measure 1.2 - Loss of capability

Emergency response plans address substantial loss of public safety response capabilities during catastrophic events (to include special needs populations and people with disabilities)

Evaluators were asked to look for:

- Are stations using emergency power
- Are stations operating from field/temporary locations
- Are operations reliant on permanent infrastructure

4.1.2.1. Observation 1.2.1 - Emergency Power

`Strength:` Almost all jurisdictions operated their key stations from a location having emergency power capabilities.

Individual evaluator comments:

- Strength: Stations using emergency power
- Kent County Red Cross not on emergency power but had capability
- A few hams on the local nets indicated they were on emergency power, but the ECs and Net Controls were not making it a priority to declare that a station is or is not on E.P.

4.1.2.1.1. Analysis and Recommendations

Refer to *1.1.1 Emergency Power*.

4.1.2.2. Observation 1.2.2 - Infrastructure

Strength Programs consider robustness of available infrastructure when choosing command sites.

Individual evaluator comments:

- No stations known reliant on permanent infrastructure
- Operations relied on permanent infrastructure, but good infrastructure, at various locations like EOCs, medical facilities and Red Cross. With these sites of permanent antennas and towers and shelters, you also get emergency backup generators. Other ham operations were mainly home stations. No portable and a few mobile stations.

4.1.2.2.1. Analysis

Generally good response given the typical need. At some point in the future written plans for selecting/avoiding operational sites may be helpful.

4.1.2.2.2. Recommendations

No action required at the current time.

4.1.2.3. Observation 1.2.3 - Temporary Operation

Strength: Although no suggestion was made that temporary operations was desirable, many programs operated from served agencies and a number selected field operations.

Individual evaluator comments:

- All stations heard operating from the field. CED 7 in unheated outbuilding, Alpena in camping trailer
- Stations operating from Red Cross
- No field/temporary locations heard. Most stations at facilities with emergency power capabilities like EOCs, medical facilities, and Red Cross

4.1.2.3.1. Analysis

Again, given the typical need, a good response.

4.1.2.3.2. Recommendations

No action required at the current time

4.2. Capability 2 - Standards

ComC1.2.2 - Develop common communication and data standards to facilitate the exchange of information in support of response management

4.2.1. Preparedness Measure 2.1 - Cross-jurisdiction

Operable communications systems that are supported by redundancy and diversity, that provide service across jurisdictions, and that meet everyday internal agency requirements, are in place

Evaluators were asked to look for:

- Is there consistency across the procedures used by the various jurisdictions
- Is there evidence of interface with government or non-government responders
- Is there evidence of any plan to use different modes and/or frequencies when conditions warrant

4.2.1.1. Observation 2.1.1 - Consistency

`Strength:` Programs used consistent procedures.

Individual evaluator comments:

- Procedures seem much more coordinated than in the past
- Consistency, yes. Amateur to amateur

4.2.1.1.1. Analysis

Generally consistent procedures across the section.

4.2.1.1.2. Recommendations

No action required at the current time.

4.2.1.2. Observation 2.1.2 - Flexibility

`Mixed:` Most programs were able to incorporate multiple modes and frequencies, however some operators were confused when unexpected changes occurred, and even when there were plans to respond to changing conditions, plans were not always followed. However, flexible responses were chosen.

Individual evaluator comments:

- All stations heard were multi mode multi freq
- Worked real well, however, shutting down repeaters switching seems to confuse or frustrate operators
- Plan in place to QSY in response to propagation. However, HF did not switch when propagation deteriorated
- Conditions deteriorated and a new net control operator took over on the same frequency
- Branch county and the 5th District hospital nets were multi-frequency (repeater and simplex) and multimode (FM, D-Star, Packet). Unknown about Allegan

county and Calhoun county operations, likely FM only on two meters. Some 440 used by Branch county.

4.2.1.2.1. Analysis

In general, local programs responded well to disruptions in their operation, although some operators were confused when repeaters disappeared. Stations did not respond as well to changing propagation.

4.2.1.2.2. Recommendations

Local programs need to incorporate unexpected loss of repeaters into their local exercises more frequently.

Training on propagation is needed. In addition, both NTS nets and ARES programs require more familiarity with the behavior of the HF bands as conditions change.

4.2.1.3. Observation 2.1.3 - Served Agencies

Strength: Since the exercise was run on a weekend, few served agencies participated directly, however most programs operated from sites owned by their served agencies.

Individual evaluator comments:

- N8JWH/AAM6MI interfaced w/Army MARS monitoring 3 Army freqs and three amateur freqs from Alpena
- Yes, evidence of interface with other agencies
- No known gov't interfaces, just simulated. Hams were very much on-site with gov't and non-gov't agencies

4.2.1.3.1. Analysis

In general, interface with other agencies is good, although in statewide exercises, it is challenging to exercise together due to work schedules.

4.2.1.3.2. Recommendations

No action to be taken at this time.

4.2.2. Preparedness Measure 2.2 - Diversity

Redundant and diverse interoperable communication systems are available

Evaluators were asked to look for:

- Are multiple modes and frequencies in use
- Is there evidence of temporary, portable or mobile operation

- Are appropriate equipment manuals accessible where needed

4.2.2.1. Observation 2.2.1 - Mode/Frequency Flexibility

`Strength:` Most programs exploited multiple frequencies and modes.

Individual evaluator comments:

- Multi-frequency observed by 3 stations
- Multi mode 3 stations
- Multiple modes and frequencies used, VHF and HF
- Strength: Two counties used multimodes and frequencies

4.2.2.1.1. Analysis

Stations were appropriately flexible in utilizing available frequencies.

4.2.2.1.2. Recommendations

No action required at this time.

4.2.2.2. Observation 2.2.2 - Portable/Temporary Operations

`Mixed:` Few programs operated from temporary locations although most apparently had the capability.

Individual evaluator comments:

- HT were in use on VHF
- Some stations had mobile/portable capability but did not use it
- No temporary or portable operation observed. Some mobile operators heard

4.2.2.2.1. Analysis

Many stations had the capability to operate portable but were not requested at this time.

4.2.2.2.2. Recommendations

No action required.

4.2.2.3. Observation 2.2.3 - Onsite Documentation

`Strength:` Most locations had appropriate equipment manuals onsite.

Individual evaluator comments:

- All manuals at Alpena and DEC 7 never seen that before
- I know that equipment manuals are kept accessible at the Kalamazoo Red Cross chapter house

4.2.2.3.1. Analysis

Appropriate documentation was available.

4.2.2.3.2. Recommendations

No action required.

5. Conclusion

The Section showed considerable improvements over earlier exercises, especially in the relationship between ARES and NTS. DECs and Net Managers worked well together to resolve problems and plan approaches.

This does not mean there are no issues. Overall, ARES members could still stand to improve their traffic handling skills, and NTS members could learn to take more of a mentoring stance toward those who are not as practiced.

Formal planning was still weak. This was particularly evidenced in the lack of rotation of net controls, but very likely other roles had similar problems. Similarly, when repeaters failed or band conditions changed, not everyone had a plan to let them know what to do. In general, response to surprises could be improved through planning and practice.

To work on these issues, the Improvement Plan focuses on formal plans and improving the knowledge of operators.

A. Improvement Plan

This IP has been developed specifically for Michigan Section as a result of 2011 Simulated Emergency Test conducted on October 1, 2011. These recommendations draw on both the After Action Report and the After Action Conference.

Capability	Observation Title	Recommend-ation	Corrective Action Description	Capability Element	Primary Responsi Agency	Agency POC	Start Date	Completion Date
1.1 Survivability and Recovery	*1.1.1 Emergency Power*	Remind Leaders	Periodic email	Planning	SEC	SEC	2012-01-15	
							2012-07-15	
	1.1.2 Experience	Targeted training and exercise programs at the local level	DECs guide ECs in the development of programs specific to the needs of the individual jutrisdiction		DEC	DEC	2012-01-01	2012-12-31
	1.1.4 Procedures	Continue to work on traffic training	Incorporate training into meetings once per year		EC	DEC	ongoing	
			Pass occasional traffic on ARES nets		EC	DEC	ongoing	
		Remind NTS ops that ARES ops don't get traffic practice	Email to net members before statewide exercises		Net Managers	ASTM	2012-04-01	
							2012-09-15	
	1.1.5 Rotation	Plan to rotate operators	Incorporate rotation plans into written operational procedures		EC	DEC	2012-01-01	2012-12-31
					Net Managers	ASTM	2012-01-01	2012-06-30
	1.1.6 Support	Plan for support personnel	Incorporate support personnel needs into written operational procedures		EC	DEC	2012-01-01	2012-12-31

Table A.1. Improvement Plan Matrix (1 of 2)

Capability	Observation Title	Recommend-ation	Corrective Action Description	Capability Element	Primary Responsi Agency	Agency POC	Start Date	Completion Date
2.1 Cross-jurisdiction	*2.1.2 Flexibility*	Respond to loss of repeaters	Emergency coordinators to incorporate unexpected loss of repeaters into local exercises	Standards	EC	DEC	2012-01-01	2012-06-30
		Improve propagation knowledge	SEC to complete propagation video		SEC	SEC	2012-03-01	2012-06-30
			ECs to incorporate video into programs		EC	DEC	2012-07-01	2012-12-31
			Net Managers to train members on propagation		Net Managers	ASTM	2012-07-01	2012-12-31

Table A.2. Improvement Plan Matrix (2 of 2)

B. Participant Feedback

B.1. General Participant Feedback

A large number of comments were received from participants over various circuits. The following is a sampling of those comments. Note that in some cases, cut/paste preserved grammatical, spelling and typographic errors, in other cases they were introduced in transcription.

- Utilizing the UP Traffic Net worked very well. There were a number of check-ins, messages were passed by the EC's that were involved this year through the UP Net
- Aileen WA8DHB, Net control of the UP Net did an excellent job, including having downstate stations sending some of our traffic to the SEOC. I don't know if she received any information about the SET besides our conversations on the phone.
- Deployed one Emergency Response Veichle, Manned the Chapter radio room using HF, Packet in Converse mode, CW, Red Cross Low Band FM and 2mtr simplex. Had laison on E Team and the MVHF Traffic net. Took and sent NTS traffic, passed tactical traffic in converse mode Contacts made with Allegan Red Cross.
- Be careful of abbreviations in NTS messages
- some might not know what they mean Using State wide repeater system depended too much on infrastructure to link Counties together
- Some OP'S not familiar with NTS slowed the net down with fills and some inattentiveness
- SET info not found on State ARRL web site or on Yahoo Groups- Many didn't know the State was doing one
- Lack of a designated 60 mtr freq to fall back on/alternate freq's determined in advance by NM's So what if some hams don't have 60?
- NM's need to think out side the box- That is spread the net out on alternate freq's with NCS reporting back to the main
- NCS need increased circuits to pass traffic
- Some DEC's did nothing in their counties causing failure in these counties
- Suggest organizing the HF nets more like Skywarn nets are run - a main net and several sub nets This will allow disaster traffic to be moved more quickly
- RED CROSS: Radio room needs to be reorganized- More space for operating and sound deadening dividers and headphones Upgrade of laptops and printers

more NTS training common pwr connectors Check deployment boxes more often- Even though packet went well more trng needed.

- What Went Well:On site equipment helped rapid deployment Packet in converse mode Had more then enough comm circuits to pass traffic Knowledgeable operators on Packet solved minor problems with TNC's MVHF Traffic Net operators very knowledgeable and performed very well HF Liaisons great- Basic concept of the exercise developed by the State on the right track- Could use as many exercises as the State can arrange!
- no man-made interference
- Representation from SEOC, Districts 1,5,6 and 7
- Excellent scores compared to SET of October 2009
- Net liaisons extremely competent in obtaining traffic from HF and returning with outgoing traffic
- Very good communications between VHF and SEOC
- Goodly number of stations on emergency power
- Extremely efficient assistance from E-Team in Kent county and also participation from Kent County Red Cross and one other Red Cross facility in a different District
- Messages from SEOC began coming through in a timely manner and there was no wasted air space like in previous years
- Brief periods of time were allotted at the top of each hour for stations not involved in the exercise so that they may transmit any priority or welfare traffic
- As a net control I need to learn to obtain my rogers and provide fills for the exercise participants in a more efficient manner
- My net liaisons need to learn to give traffic more slowly thus leading to a possibility of less fills being required
- It was apparent that several stations needed NTS training as excess time was used in getting their traffic passed
- Need more stations on emergency power
- I had difficulty communicating with three stations most likely due to their equipment as the links they were using were in good operating order
- One station left early after being asked to take traffic and i got the impression that because of their lack of skill they felt unable to continue but perhaps i could be in error. while on the air the station was very efficient and seemed to know the proper protocol

- The Liaison who was monitoring the SEOC phone Net picked up three messages and brought them to the MIDTN, messages # 2, 4, 9 and where picked up and acknowledged by all four Counties in the NET. A repeat was not needed as they where monitoring the NET.
- Mike in Presque Isle picked up a VHF message # 41 to the effect that all power State wide was lost and if you where without backup you were done until the exercise ended
- MIDTN as well as Roscommon, Alpena and Presque Isle all had Emergency Power Sources and switched over and rechecked into the NET to acknowledge same
- We operated from the Roscommon Fairgrounds as a field day type station and erected antennas and used equipment we brought to the scene. I worked elbow to elbow with the DEC (Red) and he spent a great deal of time after the exercise teaching me what I needed to do to function better as a Manager of the NET
- I checked into QMN because the statewide SSB nets were very weak into this location. Also, they were yakking away for minutes at a time, explaining why things were like they were
- Major concern on these nets were on frequencies other than their usual frequencies. Also, I believe some folks on the 3553 KHz freq for QMN were likewise concerned.
- Repeater contacts went well with all stations hearing everyone. Analog simplex contacts were generally acceptable, but we found that some electrical noise at the Coldwater PD/FD was not allowing them to hear weak signals. D-Star simplex contacts had the same result as analog simplex as a result of the high noise levels at CPD. Steuben has no D-Star capability at this time. The high noise levels have been resolved at CPD by utilizing adding grounding to the shield of our antenna run.
- Both the Hillsdale and Branch EOCs had extreme electronic noise and no packet connections were possible. We are using toroids and grounding devices to try to quiet things down but we are not there yet.
- We had 17 participants with 16 on emergency power.
- The contact with Kalamazoo on the 04 repeater was successful from the EOC. The Coldwater hospital had difficulty. Virtually everything on simplex and D-Star failed. We question band conditions because this has not been particularly problematic in the past. Will test again in November.
- Checking into the MACS Net went well. We received 4 pieces of traffic and we sent 1 response to the SEOC. Over all, my impression was that the HF link to limited stations who communicated with the SEOC worked very well. This moved the gridlock away from the SEOC. I did not have the chance to listen to anything but the MACS Net, so things may have gone to hell in a hand basket elsewhere.

At least there were trained traffic handlers at the SEOC and at the helm of the HF Nets. This exercise illustrates that ARES and RACES groups need a ton of work on how to properly and accurately formulate and relay written messages to another operator. This is Deja vu all over again!!!!

- Our monthly Tornado Siren Test went off well, after the power cable of the signaling equipment at the 911 Center was plugged back in. It turns out that some things at 911 had been rearranged and they neglected to plug the unit back in. Good thing they test things!!!!
- Moving frequencies off usual freqs created considerable confusion.
- I was a W8DC, and was assigned to monitor 3932 KHz, but signals were so weak I could hardly hear anyone. So, I moved here to 3553 KHz for QMN, even though QMN was supposed to be for District 1 only (at least that was my impression.) Best laid plans of mice and men often go astray in emergency.
- Moving to 7 MHz was a fine idea, but I wasn't sure everyone heard the QNC to move, so I voluteered to run a parallel session on 3.5 MHz. I found W8OAK, quite weak, but he was able to hear enough to move to 7068 KHz and, apparently moved his traffic.
- The SEOC had a good signal during the two hours I operated. Conditions were fair to good. No problems here.
- It's refreshing to know that we have sufficient depth of operators with CW skills so that a CW operator at the SEOC is available for the exercise.
- The segregated net concept, that is, a watch frequency for the SEOC and a separate net frequency for QMN was problematic. While this may have worked well for the voice nets, which tend to have a larger contingent of operators, it tended to divide the limited resources of QMN. Rather than resulting in greater efficiency, it resulted in a cumbersome flow of traffic and duplication of resources.
- Operations during the 8:00-AM to 8:20-AM EDT time frame on 3563 was hampered by strong digital interference. I did not have the capabilities to decode the traffic. However, it was quite strong at my location. It seems to me the risk of such frequency conflicts is greater when nets are moved off their normal frequencies or when special nets are established without thought given to frequency coordination and potential conflicts. For example, when the QMN frequencies were selected (both primary and alternate), considerable time and monitoring was invested to make sure the conflict with other nets throughout the day would be minimized. Of course, there are no guarantees, but it seems to me such interference could have been problematic in a real communications emergency.
- The procedures and message traffic originated and relayed was quite good. All operators involved did a fine job.

- Message 001: The x-ray at the conclusion of the text and before the second break (to signature) was unnecessary.
- In time of emergency, and therefore in drills and exercises, the message should have included a time of origination.
- Message 007: No time of origin. This is a potential problem in an Emergency Operations Center when multiple messages may be received about a single event. In order for an agency or individual to construct a coherent understanding of an event, it is necessary to know the sequence of the event components, inquiries, and actions that take place. Otherwise, errors in judgment occur. The time of origin should reflect the time at which the message was drafted by the signatory. As such, automatic time stamp at time of entry into a network is inaccurate and inappropriate (e.g. packet time stamp, e-mail time stamp, etc.).
- Message 007: Who is requesting the information? If I were to contact my local DPW or Road Commission and make this inquiry, someone is bound to ask "on whose authority are you making this request and who wants the information?" It is also likely to generate a reply; to whom is that reply addressed? When a message is originated on behalf of the SEOC, it should have an authorizing signature. Obviously, no harm no foul as this was a drill message, but in real life, it should include a name, title and agency in the signature line.
- I attempted to access the W8HVG link system, but the St. Joseph repeater was locked key-down all day. Not sure if this was an interference problem or malicious.
- Thank you to K8KIC for checking in on behalf of District One! A life-saver. We need more members in District One.

B.2. General Comments from Evaluators

Most evaluator comments are included in *Section 4, "Analysis of Capabilities"*. However, evaluators were also given the opportunity to provide general observations. Those observations are listed below.

- All major players need three HF rigs and 3 VHF
- One HF rig at DEC went down and was out of use two hours in a real emergency I would have brought in my HF mobile
- Alt NCS training heeded. DEC 7 pri op saw no need for alt NCS/Alt freq until instructed by DEC to open one
- I think master list of participant rigs would be useful. Until drill I never knew RLI and I use same rigs
- Interoperability priority needed

- Communications involving SET - with other nets that usually meet during this time period woule solve a lot of time and net problems - reference the Old Geisers net - Communications with them ahead of time about the SET so they could QSY the net ahead of time
- Traffic being repeated at too fast a pace verbally - repeated msg incorrect - District not getting the State traffic in a timely fashion - reliability and accuracy
- Operators need more practice copying messages - station on freq not prepared to copy - xray in message not being put into word count causing confusion
- Some stations monitoring both VHF and HF copying their traffic ahead of time to insure accuracy
- Confusion about abbreviations in text of message and not what to do about it. Ref Msg No. 46 - E Power
- I couldn't stand by idly; I ended up making transmissions to help patch and relay traffic. I ended up somewhat of a coordinator.
- I was on 3952. I spoke to NKX and K8YYZ
- 60 meters needs to be tested. Thinking knee-jerk to run to 40 meters is not the only alternative to 75 meters.
- It became obvious that the 5th District has a big administrative communications problem. It wasn't for lack of trying to get the SET word out. The problem was that 2 of 4 counties, Allegan and Calhoun, kept their operations a secret. Allegan Co. Operated in a vacuum but had a busy county-only exercise. There ids a 5th district yahoo egroup the works well if people use it."
- As Kalamazoo County EC, NK8X read all of the traffic from the SEOC on the local VHF-FM net frequency. NK8X also assisted the NCS on 3952 as a relay. 75 meters pooped out around 10:30AM."

C. Exercise Evaluation Guide

Each evaluator was provided with an Exercise Evaluation Guide (EEG) to guide the observations during the exercise.

C.1. Mission

Common Capabilities

C.1.1. Target Capability - Planning

C.1.1.1. Task

ComA2.4.3.1 - Develop Standard Operating Procedures and Standard Operating Guides in support of Emergency Operations Plans

C.1.1.1.1. Preparedness Measure

Continuity of Operation (COOP) plans describe how personnel, equipment, and other resources support sustained response/survivability and recovery for all sectors

C.1.1.1.1.1. Things to look for

- Are stations using appropriate procedures and protocols
- Are net controls and operators being rotated
- Is there evidence of a plan to rotate operators
- Is there evidence of a plan to provide operators with personal needs (food, drink, rest, etc.)
- Is there evidence that emergency power/portable operations are planned
- Are plans in place to provide support personnel (runners, etc.)

C.1.1.1.1.2. Observations

- Observation 1: .....
- Observation 2: .....
- .....

C.1.1.1.2. Preparedness Measure

Emergency response plans address substantial loss of public safety response capabilities during catastrophic events (to include special needs populations and people with disabilities)

C.1.1.1.2.1. Things to look for

- Are stations using emergency power
- Are stations operating from field/temporary locations
- Are operations reliant on permanent infrastructure

C.1.1.1.2.2. Observations

- Observation 1: .....
- Observation 2: .....
- .....

C.1.2. Target Capability - Communications

C.1.2.1. Task

ComC1.2.2 - Develop common communication and data standards to facilitate the exchange of information in support of response management

C.1.2.1.1. Preparedness Measure

Operable communications systems that are supported by redundancy and diversity, that provide service across jurisdictions, and that meet everyday internal agency requirements, are in place

C.1.2.1.1.1. Things to look for

- Is there consistency across the procedures used by the various jurisdictions
- Is there evidence of interface with government or non-government responders
- Is there evidence of any plan to use different modes and/or frequencies when conditions warrant

C.1.2.1.1.2. Observations

- Observation 1: .....
- Observation 2: .....
- .....

C.1.2.1.2. Preparedness Measure

Redundant and diverse interoperable communication systems are available

C.1.2.1.2.1. Things to look for

- Are multiple modes and frequencies in use
- Is there evidence of temporary, portable or mobile operation
- Are appropriate equipment manuals accessible where needed

C.1.2.1.2.2. Observations

- Observation 1: .....
- Observation 2: .....
- .....

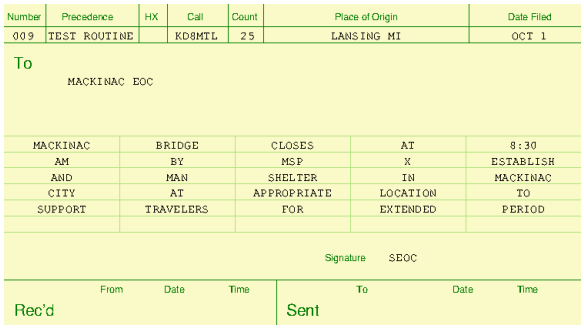
D. Exercise Events Summary Table

Time	Scenario Event, Simulated Player Inject, Player Action	Event/Action
0745	Scenario Event	National Weather Service DTX advises GLETN of pending severe winter weather event including widespread icing.
0800	Player Action	SEOC station activates, notifies net liaisons of weather. Land line telephone service already severely comprimised.
1030	Scenario Event	Conditions have deteriorated significantly. Power outages become widespread, high profile antennas are damaged.
1045	Player Action	Local jurisdictions switch to emergency power, simplex where local repeaters have damage and/or power loss.

Table D.1. Exercise Events Summary

E. Master Scenario Event List

The injects for the exercise actually consisted of a series of radiograms transmitted from the State EOC to the nets at various times during the exercise. This appendix lists those messages.



Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
009	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

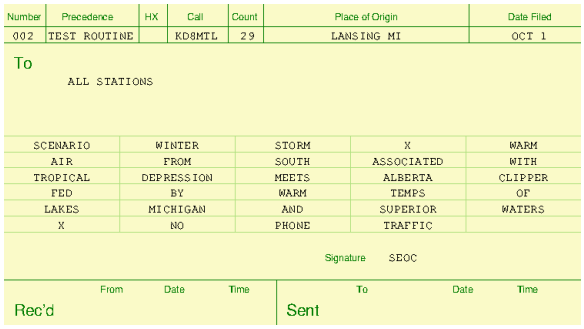
To
MACKINAC EOC

MACKINAC	BRIDGE	CLOSES	AT	8:30
AM	BY	MSP	X	ESTABLISH
AND	MAN	SHELTER	IN	MACKINAC
CITY	AT	APPROPRIATE	LOCATION	TO
SUPPORT	TRAVELERS	FOR	EXTENDED	PERIOD

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 1.



Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
002	TEST ROUTINE		KD8MTL	29	LANSING MI	OCT 1

To
ALL STATIONS

SCENARIO	WINTER	STORM	X	WARM
AIR	FROM	SOUTH	ASSOCIATED	WITH
TROPICAL	DEPRESSION	MEETS	ALBERTA	CLIPPER
FED	BY	WARM	TEMPS	OF
LAKES	MICHIGAN	AND	SUPERIOR	WATERS
X	NO	PHONE	TRAFFIC	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 2.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
005	TEST ROUTINE		KD8MTL	9	LANSING MI	OCT 1

To
ALL STATIONS

SEE	MIDTN	FOR	FURTHER	NWS
POSTS	THROUGHOUT	THE	DRILL	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 3.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
007	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
ALL STATIONS

MDOT	ORDERS	ALL	AVAILABLE	SALT
TRUCKS	ON	MAJOR	HWAYS	X
CONTACT	LOCAL	ROAD	COMMISSIONS	FOR
ANY	SPARE	EQUIPMENT	AVAILABLE	FOR
DEPLOYMENT	AND	ADVISE	THIS	STATION

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 4.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
008	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
ALL STATIONS

MDOT	ORDERS	ALL	AVAILABLE	SALT
TRUCKS	ON	MAJOR	HWAYS	X
CONTACT	LOCAL	ROAD	COMMISSIONS	FOR
ANY	SPARE	EQUIPMENT	AVAILABLE	FOR
DEPLOYMENT	AND	ADVISE	THIS	STATION

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 5.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
006	TEST ROUTINE		KD8MTL	9	LANSING MI	OCT 1

To
ALL STATIONS

SEE	MIDTN	FOR	FURTHER	NWS
POSTS	THROUGHOUT	THE	DRILL	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 6.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
001	TEST ROUTINE		KD8MTL	29	LANSING MI	OCT 1

To
ALL STATIONS

SCENARIO	WINTER	STORM	X	WARM
AIR	FROM	SOUTH	ASSOCIATED	WITH
TROPICAL	DEPRESSION	MEETS	ALBERTA	CLIPPER
FED	BY	WARM	TEMPS	OF
LAKES	MICHIGAN	AND	SUPERIOR	WATERS
X	NO	PHONE	TRAFFIC	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 7.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
003	TEST ROUTINE		KD8MTL	26	LANSING MI	OCT 1

To
DISTRICT 8 STATIONS

BLIZZARD	WARNING	ISSUED	BY	MQT
YOUR	AREA	BEGINNING	7:30	AM
1	FOOT	PER	HOUR	SNOW
FALL	X	SIGNIFICANT	WIND	DAMAGE
FROM	ALBERTA	CLIPPER	LOCATED	ONTONAGON
COUNTY				

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 8.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
004	TEST ROUTINE		KD8MTL	24	LANSING MI	OCT 1

To
DISTRICT 7 STATIONS

BLIZZARD	WARNING	ISSUED	BY	MQT
YOUR	AREA	BEGINNING	7:30	AM
UPPER	LOWER	MICHIGAN	IS	BEGINNING
TO	EXPERIENCE	HIGH	WINDS	WITH
GUSTS	TO	70	MPH.	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 9.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
010	TEST ROUTINE		KD8MTL	19	LANSING MI	OCT 1

To
MIDLAND EOC

MDOT	REQUESTS	EMERGENCY	SUPPLIES	OF
CALCIUM	CHLORIDE	FOR	ROADWAYS	FROM
MIDLAND	DOW	PLANT	X	PLEASE
REPLY	AVAILABILITY	THIS	STATION	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 10.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
011	TEST ROUTINE		KD8MTL	23	LANSING MI	OCT 1

To
CRAWFORD EOC

I75	CLOSING	AT	8:30	AM
BY	MSP	X	ESTABLISH	AND
MAN	SHELTER	IN	GRAYLING	AT
APPROPRIATE	LOCATION	TO	SUPPORT	TRAVELERS
FOR	EXTENDED	PERIOD		

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 11.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
012	TEST ROUTINE		KD8MTL	23	LANSING MI	OCT 1

To
BAY EOC

I75	CLOSING	AT	8:30	AM
BY	MSP	X	ESTABLISH	AND
MAN	SHELTER	IN	GRAYLING	AT
APPROPRIATE	LOCATION	TO	SUPPORT	TRAVELERS
FOR	EXTENDED	PERIOD		

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 12.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
013	TEST ROUTINE		KD8MTL	22	LANSING MI	OCT 1

To
BENZIE EOC

FREIGHTER	REPORTED	GROUNDED	OFF	BETSIE
POINT	CONFIRM	CONDITIONS	SUITABLE	FOR
SMALL	BOAT	EVACUATION	OF	CREW
TO	BETSIE	LAKE	X	RESPOND
THIS	STATION			

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 13.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
014	TEST ROUTINE		KD8MTL	24	LANSING MI	OCT 1

To
ALPENA EOC

CONFIRM	STATUS	OF	RESCUED	DIVERS
FROM	THUNDER	BAY	UNDERWATER	PRESERVE
X	SEND	DRIVERS	LICENSE	NO
AND	STATUS	THIS	STATION	X
NO	NAMES	PSE	X	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 14.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
015	TEST ROUTINE		KD8MTL	26	LANSING MI	OCT 1

To
CHARLEVOIX EOC

CONFIRM	AVAILABILITY	OF	BOAT	AND
PARAMEDIC	TEAM	FOR	BEAVER	ISLAND
RESCUE	X	STUDENT	WITH	PANCREATITIS
IN	SERIOUS	CONDITION	MUST	BE
SEEN	BEFORE	NOON	RESPOND	THIS
STATION				

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 15.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
016	TEST ROUTINE		KD8MTL	23	LANSING MI	OCT 1

To
CHEYBOYGAN EOC

ADVISE	STATUS	OF	CHEYBOYGAN	COUNTY
AIRPORT	RUNWAYS	FOR	EMERGENCY	LANDING
OF	PIPER	CUB	WITH	ICED
WINGS	X	ADVISE	PELLSTON	REGIONAL
AIRPORT	OF	CONDITIONS		

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 16.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
017	TEST ROUTINE		KD8MTL	21	LANSING MI	OCT 1

To
EMMET EOC

ADVISE	PELLSTON	REGIONAL	AIRPORT	TO
CONTACT	CIVIL	AIR	PATROL	WITH
FLIGHT	PLANS	FOR	PILOT	ISSUING
MAY	DAY	AND	COPY	THIS
STATION				

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 17.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
018	TEST ROUTINE		KD8MTL	21	LANSING MI	OCT 1

To
GRAND TRAVERSE EOC

ADVISE	TRAVERSE	CITY	STATE	FOREST
TO	CLOSE	AND	OVERSEE	THE
EVACUATION	OF	SCOUTS	FROM	THE
PARK	X	ADVISE	WHEN	COMPLETED
X				

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 18.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
019	TEST ROUTINE		KD8MTL	26	LANSING MI	OCT 1

To
MONTMORENCY EOC

CIVIL	AIR	PATROL	ADVISES	PIPER
CUB	CRASH	LANDED	IN	PIGEON
RIVER	STATE	FOREST	AREA	X
PSE	ADVISE	WHICH	GROUP	BEST
SUITED	FOR	GROUND	SEARCH	OF
AREA				

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 19.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
020	TEST ROUTINE		KD8MTL	23	LANSING MI	OCT 1

To
ROSCOMMON EOC

PSE	ADVISE	WHAT	FACILITIES	ARE
SERVICEABLE	FOR	HELICOPTER	REFUELING	AT
ROSCOMMON	CONSERVATION	AIRPORT	X	CAP
SEARCH	OF	MONTMORENCY	EXPECTED	TO
OVERLOAD	AREA	AIRPORTS		

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 20.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
021	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
WEXFORD EOC

131	TO	BE	CLOSED	BY
MSP	BY	9	AM	SET
UP	AND	MAN	SHELTER	CADILLAC
TO	SUPPORT	STRANDED	TRAVELERS	FOR
EXTENDED	PERIOD	ADVISE	WHEN	ESTABLISHED

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 21.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
022	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
ARENAC EOC

ADVISE	TIMING	AND	SUITABILITY	OF
SMALL	BOAT	RESCUE	OF	PARTY
OF	6	SCOUTS	ON	CHARITY
ISLAND	FROM	YOUR	LOCATION	X
NO	KNOWN	INJURIES	IN	PARTY

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 22.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
023	TEST ROUTINE		KD8MTL	19	LANSING MI	OCT 1

To
LAPEER EOC

MSP	TO	SHUT	DOWN	I69
AT	8:30	AM	ESTABLISH	AND
MAN	SHELTER	AT	IMLAY	CITY
AND	ADVISE	WHEN	READY	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 23.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
025	TEST ROUTINE		KD8MTL	19	LANSING MI	OCT 1

To
OGEMAW EOC

MSP	TO	SHUT	DOWN	I75
AT	8:30	AM	ESTABLISH	AND
MAN	SHELTER	AT	WEST	BRANCH
AND	ADVISE	WHEN	READY	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 24.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
026	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
SAGINAW EOC

MSP	REPORTS	ACCIDENTS	BOTH	SIDES
OF	ZILWAUKEE	BRIDGE	AND	DAMAGE
TO	MEDIAN	ON	S	BOUND
LANE	ADVISE	READINESS	OF	675
BYPASS	FOR	SERVICE	BOTH	LANES

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 25.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
027	TEST ROUTINE		KD8MTL	20	LANSING MI	OCT 1

To
TUSCOLA EOC

RESUMPTION	OF	POWER	YOUR	AREA
NOT	EXPECTED	FOR	2	DAYS
X	ADVISE	CURRENT	OUTAGES	AND
NEED	FOR	SHELTERS	YOUR	AREA

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 26.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
028	TEST ROUTINE		KD8MTL	18	LANSING MI	OCT 1

To
INGHAM EOC

MSP	TO	SHUT	DOWN	I69
AT	8:30	AM	ESTABLISH	AND
MAN	SHELTER	AT	LANSING	AND
ADVISE	WHEN	OPEN		

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 27.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
029	TEST ROUTINE		KD8MTL	17	LANSING MI	OCT 1

To
DISTRICT 6 STATIONS

QUARTER	INCH	ICING	ACROSS	SOUTHERN
THIRD	LOWER	MI	X	DTX/GRR
ISSUE	ICE	STORM	WARNINGS	ENTIRE
CWAS				

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 28.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
030	TEST ROUTINE		KD8MTL	17	LANSING MI	OCT 1

To
DISTRICT 7 STATIONS

QUARTER	INCH	ICING	ACROSS	SOUTHERN
THIRD	LOWER	MI	X	DTX/GRR
ISSUE	ICE	STORM	WARNINGS	ENTIRE
CWAS				

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 29.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
031	TEST ROUTINE		KD8MTL	18	LANSING MI	OCT 1

To
JACKSON EOC

MSP	TO	SHUT	DOWN	I94
AT	8:30	AM	ESTABLISH	AND
MAN	SHELTER	AT	JACKSON	AND
ADVISE	WHEN	OPEN		

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 30.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
032	TEST ROUTINE		KD8MTL	23	LANSING MI	OCT 1

To
LENAWEE EOC

CONSUMERS	ADVISES	PLAN	4	DAYS
OUTAGE	DUE	TO	LINEMAN	SHORTAGES
X	ALL	LENAWEE	STATIONS	MUST
OPERATE	ON	E	POWER	FOR
REMAINDER	THIS	DRILL		

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 31.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
033	TEST ROUTINE		KD8MTL	23	LANSING MI	OCT 1

To
LIVINGSTON EOC

CONSUMERS	ADVISES	PLAN	4	DAYS
OUTAGE	DUE	TO	LINEMAN	SHORTAGES
X	ALL	LIVINGSTON	STATIONS	MUST
OPERATE	ON	E	POWER	FOR
REMAINDER	THIS	DRILL		

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 32.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
034	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
CLARE EOC

MSP	CLOSING	127	AT	8:30
AM	X	ESTABLISH	AND	MAN
SHELTER	IN	HARRISON	AT	APPROPRIATE
LOCATION	TO	SUPPORT	TRAVELERS	FOR
EXTENDED	PERIOD	ADVISE	WHEN	OPEN

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 33.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
035	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
ISABELLA EOC

MSP	CLOSING	127	AT	8:30
AM	X	ESTABLISH	AND	MAN
SHELTER	IN	HARRISON	AT	APPROPRIATE
LOCATION	TO	SUPPORT	TRAVELERS	FOR
EXTENDED	PERIOD	ADVISE	WHEN	OPEN

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 34.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
036	TEST ROUTINE		KD8MTL	20	LANSING MI	OCT 1

To
LAKE EOC

RESUMPTION	OF	POWER	YOUR	AREA
NOT	EXPECTED	FOR	2	DAYS
X	ADVISE	CURRENT	OUTAGES	AND
NEED	FOR	SHELTERS	YOUR	AREA

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 35.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
037	TEST ROUTINE		KD8MTL	20	LANSING MI	OCT 1

To
MASON EOC

FREIGHTER	REPORTED	GROUNDED	OFF	LUDDINGTON
CONFIRM	CONDITIONS	SUITABLE	FOR	SMALL
BOAT	EVACUATION	OF	CREW	TO
LUDDINGTON	X	RESPOND	THIS	STATION

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 36.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
038	TEST ROUTINE		KD8MTL	20	LANSING MI	OCT 1

To
MONTCALM EOC

RESUMPTION	OF	POWER	YOUR	AREA
NOT	EXPECTED	FOR	2	DAYS
X	ADVISE	CURRENT	OUTAGES	AND
NEED	FOR	SHELTERS	YOUR	AREA

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 37.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
039	TEST ROUTINE		KD8MTL	15	LANSING MI	OCT 1

To
NEWAYGO EOC

CONFIRM	REPORTS	OF	HARDY	DAM
FLOODING	DUE	TO	ICE	FLOWS
X	REPORT	BACK	THIS	STATION

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 38.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
040	TEST ROUTINE		KD8MTL	15	LANSING MI	OCT 1

To
OSCEOLA EOC

ADVISE	GROUP	BEST	SUITED	TO
SEARCH	FOR	2	HIKERS	STRANDED
IN	PERE	MARQUETTE	STATE	FOREST

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 39.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
041	TEST ROUTINE		KD8MTL	28	LANSING MI	OCT 1

To
ALL STATIONS

ANY	STATION	WITHOUT	E	POWER
IS	OFF	LINE	FOR	DURATION
OF	DRILL	X	ANY	STATION
WITH	AN	ANTENNA	OVER	399
FT	IS	OFF	LINE	FOR
DURATION	OF	DRILL		

Signature

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 40.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
042	TEST ROUTINE		KD8MTL	28	LANSING MI	OCT 1

To
ALL STATIONS

ANY	STATION	WITHOUT	E	POWER
IS	OFF	LINE	FOR	DURATION
OF	DRILL	X	ANY	STATION
WITH	AN	ANTENNA	OVER	399
FT	IS	OFF	LINE	FOR
DURATION	OF	DRILL		

Signature

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 41.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
043	TEST ROUTINE		KD8MTL	20	LANSING MI	OCT 1

To
HOUGHTON EOC

RESUMPTION	OF	POWER	YOUR	AREA
NOT	EXPECTED	FOR	2	DAYS
X	ADVISE	CURRENT	OUTAGES	AND
NEED	FOR	SHELTERS	YOUR	AREA

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 42.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
044	TEST ROUTINE		KD8MTL	13	LANSING MI	OCT 1

To
MARQUETTE EOC

ADVISE	SUITABILITY	OF	SMALL	BOAT
RESCUE	OF	STRANDED	BOATERS	ON
LITTLE	PRESQUELLE	ISLE		

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 43.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
045	TEST ROUTINE		KD8MTL	14	LANSING MI	OCT 1

To
ALGER EOC

ADVISE	GROUP	BEST	SUITED	TO
SEARCH	FOR	2	HIKERS	STRANDED
IN	HIAWATHA	NATIONAL	FOREST	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 44.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
002	TEST ROUTINE		KD8MTL	30	LANSING MI	OCT 1

To
ALL STATIONS

SCENARIO	WINTER	STORM	X	WARM
AIR	FROM	SOUTH	ASSOCIATED	WITH
TROPICAL	DEPRESSION	MEETS	ALBERTA	CLIPPER
FED	BY	WARM	TEMPS	OF
LAKES	MICHIGAN	AND	SUPERIOR	WATERS
X	NO	PHONE	TRAFFIC	X

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 45.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
002	TEST ROUTINE		KD8MTL	30	LANSING MI	OCT 1

To
ALL STATIONS

SCENARIO	WINTER	STORM	X	WARM
AIR	FROM	SOUTH	ASSOCIATED	WITH
TROPICAL	DEPRESSION	MEETS	ALBERTA	CLIPPER
FED	BY	WARM	TEMPS	OF
LAKES	MICHIGAN	AND	SUPERIOR	WATERS
X	NO	PHONE	TRAFFIC	X

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 46.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
004	TEST ROUTINE		KD8MTL	24	LANSING MI	OCT 1

To
DISTRICT 7 STATIONS

BLIZZARD	WARNING	ISSUED	BY	MQT
YOUR	AREA	BEGINNING	7:30	AM
UPPER	LOWER	MICHIGAN	IS	BEGINNING
TO	EXPERIENCE	HIGH	WINDS	WITH
GUSTS	TO	70	MPH.	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 47.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
041	TEST ROUTINE		KD8MTL	28	LANSING MI	OCT 1

To
ALL STATIONS

ANY	STATION	WITHOUT	E	POWER
IS	OFF	LINE	FOR	DURATION
OF	DRILL	X	ANY	STATION
WITH	AN	ANTENNA	OVER	399
FT	IS	OFF	LINE	FOR
DURATION	OF	DRILL		

Signature

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 48.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
041	TEST ROUTINE		KD8MTL	28	LANSING MI	OCT 1

To
ALL STATIONS

ANY	STATION	WITHOUT	E	POWER
IS	OFF	LINE	FOR	DURATION
OF	DRILL	X	ANY	STATION
WITH	AN	ANTENNA	OVER	399
FT	IS	OFF	LINE	FOR
DURATION	OF	DRILL		

Signature

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 49.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
046	TEST ROUTINE		KD8MTL	28	LANSING MI	OCT 1

To
ALL STATIONS

ANY	STATION	WITHOUT	E	POWER
IS	OFF	LINE	FOR	DURATION
OF	DRILL	X	ANY	STATION
WITH	AN	ANTENNA	OVER	399
FT	IS	OFF	LINE	FOR
DURATION	OF	DRILL		

Signature

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 50.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
001	TEST ROUTINE		KD8MTL	30	LANSING MI	OCT 1

To
ALL STATIONS

SCENARIO	WINTER	STORM	X	WARM
AIR	FROM	SOUTH	ASSOCIATED	WITH
TROPICAL	DEPRESSION	MEETS	ALBERTA	CLIPPER
FED	BY	WARM	TEMPS	OF
LAKES	MICHIGAN	AND	SUPERIOR	WATERS
X	NO	PHONE	TRAFFIC	X

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 51.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
001	TEST ROUTINE		KD8MTL	30	LANSING MI	OCT 1

To
ALL STATIONS

SCENARIO	WINTER	STORM	X	WARM
AIR	FROM	SOUTH	ASSOCIATED	WITH
TROPICAL	DEPRESSION	MEETS	ALBERTA	CLIPPER
FED	BY	WARM	TEMPS	OF
LAKES	MICHIGAN	AND	SUPERIOR	WATERS
X	NO	PHONE	TRAFFIC	X

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 52.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
001	TEST ROUTINE		KD8MTL	30	LANSING MI	OCT 1

To
ALL STATIONS

SCENARIO	WINTER	STORM	X	WARM
AIR	FROM	SOUTH	ASSOCIATED	WITH
TROPICAL	DEPRESSION	MEETS	ALBERTA	CLIPPER
FED	BY	WARM	TEMPS	OF
LAKES	MICHIGAN	AND	SUPERIOR	WATERS
X	NO	PHONE	TRAFFIC	X

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 53.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
007	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
ALL STATIONS

MDOT	ORDERS	ALL	AVAILABLE	SALT
TRUCKS	ON	MAJOR	HWAYS	X
CONTACT	LOCAL	ROAD	COMMISSIONS	FOR
ANY	SPARE	EQUIPMENT	AVAILABLE	FOR
DEPLOYMENT	AND	ADVISE	THIS	STATION

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 54.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
007	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
ALL STATIONS

MDOT	ORDERS	ALL	AVAILABLE	SALT
TRUCKS	ON	MAJOR	HWAYS	X
CONTACT	LOCAL	ROAD	COMMISSIONS	FOR
ANY	SPARE	EQUIPMENT	AVAILABLE	FOR
DEPLOYMENT	AND	ADVISE	THIS	STATION

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 55.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
007	TEST ROUTINE		KD8MTL	25	LANSING MI	OCT 1

To
ALL STATIONS

MDOT	ORDERS	ALL	AVAILABLE	SALT
TRUCKS	ON	MAJOR	HWAYS	X
CONTACT	LOCAL	ROAD	COMMISSIONS	FOR
ANY	SPARE	EQUIPMENT	AVAILABLE	FOR
DEPLOYMENT	AND	ADVISE	THIS	STATION

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 56.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
005	TEST ROUTINE		KD8MTL	9	LANSING MI	OCT 1

To
ALL STATIONS

SEE	MIDTN	FOR	FURTHER	NWS
POSTS	THROUGHOUT	THE	DRILL	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 57.

Number	Precedence	HX	Call	Count	Place of Origin	Date Filed
005	TEST ROUTINE		KD8MTL	9	LANSING MI	OCT 1

To
ALL STATIONS

SEE	MIDTN	FOR	FURTHER	NWS
POSTS	THROUGHOUT	THE	DRILL	

Signature SEOC

From	Date	Time	To	Date	Time
Rec'd			Sent		

Message 58.

Table E.1. Inject Messages

F. NTS to District Assignments

The following diagram illustrates the assignment of NTS nets to ARES Districts:

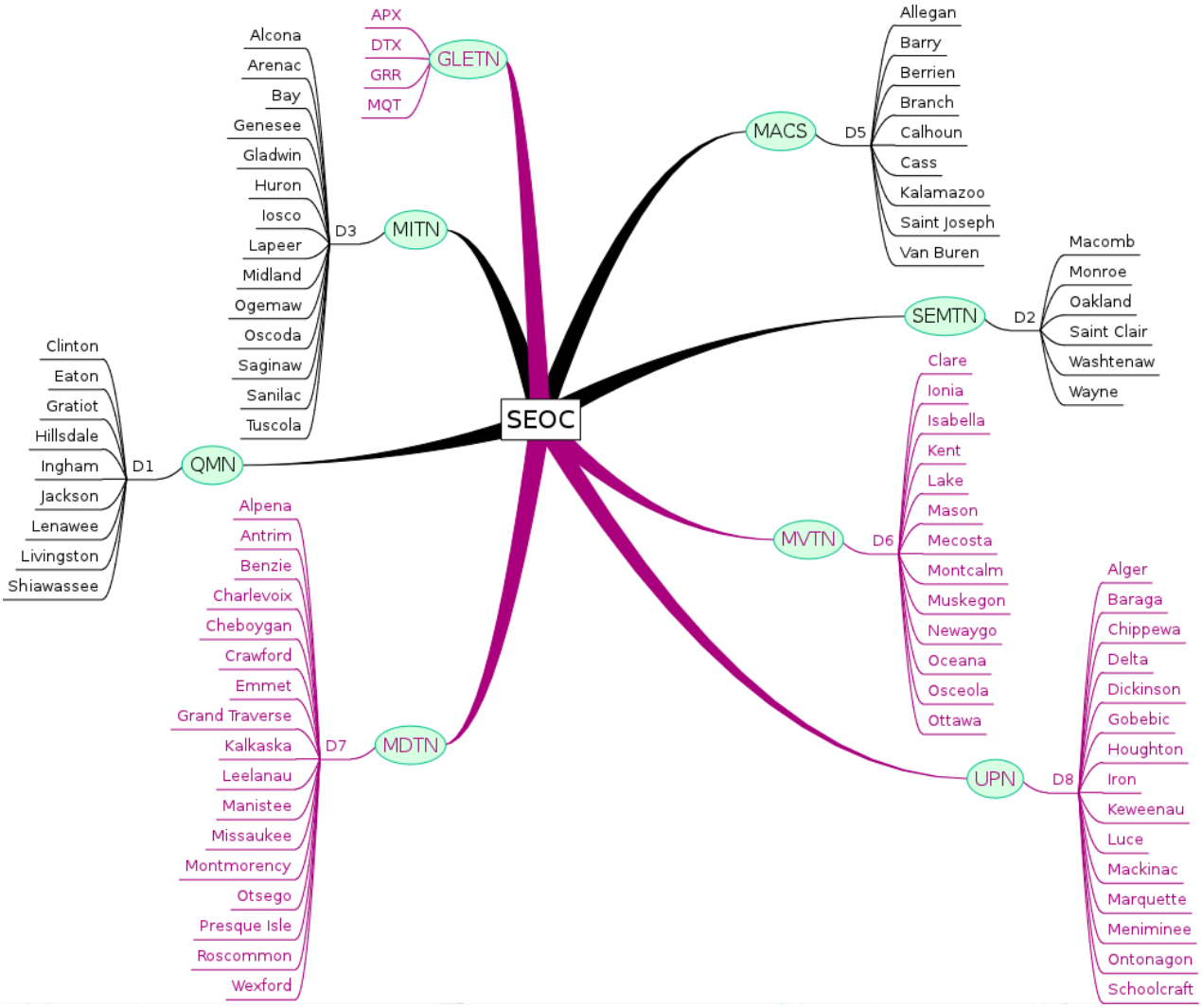


Figure F.1. Traffic Flow

Black lines indicate liaison with SEOC on 3.563 MHz, while violet lines indicate contact on 3.932 MHz.

G. List of Contributors

The following individuals contributed to this document:

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- **AC8AR**, Flora Jean Young - Net Manager
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- **KD8DQA**, Blaine A. Jenks - Evaluator
- **WA8DHB**, Aileen J. Gagnon - Net Manager
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- **WA8RLI**, Thomas M. Duggan - District Emergency Coordinator
- **WA8SCO**, George E. Brand, III - Evaluator
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- **WB8WKQ**, Jeffrey S. Miller - Net Manager
- **K8YZA**, Joseph W. Pullen - District Emergency Coordinator
- **N8ZSA**, Theodore N. Davis - District Emergency Coordinator

H. Acronyms

Acronym	Meaning
ARES	Amateur Radio Emergency Services
ARPSC	Amateur Radio Public Service Corps; incorporates ARES, RACES, NTS and SKYWARN
DTX	White Lake NWS office
EEG	Exercise Evaluation Guide
EOC	Emergency Operations Center
GLETN	Great Lakes Emergency and Traffic net
MSEL	Master Scenario Event List
NGO	Non Government Organization
NTS	National Traffic System
RACES	Radio Amateur Civil Emergency Service
SEOC	State Emergency Operations Center

Table H.1. Acronyms used in the document

I. Revision History

Revision 1.0	Thu Feb 2 2012	John McDonough *wb8rcr@arrl.net*

		Various typos Remove draft tag - reviews by evaluators, Net Managers and DECs complete	
Revision 0.5	Tue Jan 3 2012	John McDonough *wb8rcr@arrl.net*	
		Draft conclusions	
Revision 0.4	Wed Dec 14 2011	John McDonough *wb8rcr@arrl.net*	
		Draft improvement plan	
Revision 0.3	Tue Dec 13 2011	John McDonough *wb8rcr@arrl.net*	
		Draft analyses and recommendations	
Revision 0.2	Sat Nov 26 2011	John McDonough *wb8rcr@arrl.net*	
		Add index entries Add list of contributors	
Revision 0.1	Tue Nov 15 2011	John McDonough *wb8rcr@arrl.net*	
		Initial draft	
Revision 0.0	Thu Oct 27 2011	John McDonough *wb8rcr@arrl.net*	
		Initial template instantiation	

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