

WX1GYX – 2018 SET After Action Review

2018 was the third year that the WX1GYX SKYWARN Amateur Radio Club participated in the Maine SET, and it was a good learning experience for everyone involved. We went into it with the intention of using it as a training exercise, especially since we had so many new hams involved. The SET built upon a successful Regional Sheltering Exercise, that we participated in together with Cumberland County EMA, in August, and a year-round Winlink training exercise with NH ARES.

For this year, we collaborated with the Wireless Society of Southern Maine Emergency Communications Team, which supports the Cumberland County EMA, in their plan to activate every FEMA/Red Cross shelter throughout Cumberland County with the hopes of identifying shelters that might require permanent antennas on site, relay links utilizing the county's communications trailer, or Key Stations. We requested the exchange of weather reports from each location as well as signal reports at various power levels (5 watts, 25 watts, and 50 watts). We also added DMR simplex into the mix, since DMR has become an important method for collecting weather reports during regular SKYWARN activities.

As an added component, we also incorporated Winlink and NBEMS as much as possible, and we were successful in doing so.

The county sent a message that 9 of the 11 regional shelters were activated, and we were successful in contacting each of them direct via FM Simplex and DMR (where applicable), during the SET. This is an improvement over last year. Although we contacted each shelter, Brunswick High School, and Lakes Region High School were difficult to copy on the mid to low power levels.

As an added bonus, we were successful in communicating between the NWS and EOC via GMRS during our first attempt.

Areas of improvement that we identified during the exercise, include:

- Reaffirmed need to assemble 50W capable backpack stations that can be deployed to a shelter
- Consider installing permanent antennas at Brunswick and Lakes Region High Schools
- Expand our digital capabilities among portable/mobile stations
- Formalize the transition from standard communications to those requiring a Net Control

For our third year participating, we had a lot of fun, learned a lot, and look forward to the next challenge!

2018 EC SET Report (FORM A)

Please fill out this report in triplicate (one copy to ARRL Headquarters, one copy to your SEC or DEC, one copy for your files). Attach newspaper clippings, photos, remarks, suggestions and any other material to be used in the write-up. Deadline for reporting is February 1, 2018. Please send to sewald@arrl.org at ARRL HQ. Thank you.

ARRL Section: Maine (ME)

Area of Jurisdiction: Androscoggin, Cumberland, Franklin, Kennebec, Knox, Lincoln, Oxford, Sagadahoc, Somerset, Waldo, and York Counties in Maine, and ALL of NH

Call Sign Used: WX1GYX

Email Address: mainehamradio@gmail.com

Date of local SET: October 27, 2018

	Computation of score:			Points
A	Number of amateurs who participated in the test	10	X 2	20
B	Number of new amateurs (licensed since 2013) participating	8	X 3	24 KC1XT KB1HBM KC1HJN KC1AOT W1CJC KC1HJK KC1JMH K1GJY
C	Number of formal 3rd party written traffic messages originated or delivered during the SET on behalf of served agencies	18	X 1	18
D	Were TACTICAL communications conducted on behalf of served agencies? (1 hour or more, score 20 points; 1/2 hour to 1 hour, score 10; less than 1/2 hour, score 5.)		N/A	N/A
E	Number of stations on emergency power during the test	9	X 2	18
F	Number of emergency-powered repeaters used during the test • Give call signs of repeaters:	0	X 10	0 We used no repeaters, as per the Maine SET rules
G	Is <i>dual</i> membership in ARES and RACES actively encouraged? If YES, score 10 points.	Yes		10

H	Was liaison maintained during the SET with an NTS section or local net? If YES, score 10 points. • Give call signs of station(s) performing liaison:	Yes		10 KB1HNZ
I	Were digital modes utilized at any time during the exercise? If YES, score 10 points • Name the digital modes utilized:	Yes		10 DMR, PSK250RC5 Winlink HF & VHF
J	Number of different agencies for which communications were handled • Name the agencies served:	3	X 5	15 Cumberland County EMA American Red Cross National Weather Service
K	Number of communities in which agencies were contacted. (If none, score MINUS 10) • Name the communities served:	10	X 10	100 Gray Windham South Portland Portland Cumberland Falmouth Gorham Naples Brunswick New Gloucester
L	Was a press release submitted? If YES, score 10 points, attach copy.	Yes		10 (see attached)
	TOTAL NUMBER OF POINTS			235

1. Incident Name (optional): 2018 Maine SET		
2. To (Name and Position): WS1EC, KBLTCE, KX1EMA, W1WDW, N1WJO, KS1R		
3. From (Name and Position): WX1GYX	NATIONAL WEATHER SERVICE GRAY	
4. Subject : SKYWARN ACTIVATED	5. Date : 2018-10-27 6. Time 1205L	
7. Message :		
AS OF 1100 UTC, SKYWARN HAS BEEN ACTIVATED WITH OPS AT THE NATIONAL WEATHER SERVICE IN GRAY, ME.		
PLEASE SEND REPORTS OF SEVERE WEATHER AND DAMAGE TO WX1GYX VIA WINLINK. MOST LIKELY HAZARDS INCLUDE:		
SLEET OR FREEZING RAIN WIND IN EXCESS OF THIRTY (30) MILES PER HOUR DOWNED TREES OR POWER LINES IMPASSABLE OR CLOSED ROADS		
PLEASE ALSO REPORT ANY CHANGES IN PRECIPITATION.		
8. Approved by: Name : ERIC EMERY Signature : _____ Position/Title : SKYWARN LIAISON		
9. Reply :		
10. Replied by: Name : _____ Position/Title : _____ Signature: _____		
ICS-213 Date/Time : _____		

GENERAL MESSAGE (ICS-213)

1. Incident Name (optional): 2018 Maine SET		
2. To (Name and Position): WX1GYX, N1WJO		NWS, MEMA
3. From (Name and Position): WS1EC		CUMBERLAND COUNTY EOC
4. Subject : SHELTERS OPEN		5. Date : 2018-10-27 6. Time 11:40L
7. Message : THIS IS AN EXERCISE MESSAGE. THE FOLLOWING REGIONAL SHELTERS ARE OPENED AND COMMUNICATIONS HAS BEEN ESTABLISHED BETWEEN EACH SHELTER AND THE CUMBERLAND COUNTY EOC IN WINDHAM: BRUNSWICK HIGH SCHOOL EASTPOINT CHURCH FALMOUTH HIGH SCHOOL GORHAM MIDDLE SCHOOL GRAY / NEW GLOUCESTER HIGH SCHOOL GREELY MIDDLE SCHOOL LAKES REGION HIGH SCHOOL PORTLAND EXPO BUILDING SOUTH PORTLAND HIGH SCHOOL SOUTH PORTLAND COMMUNITY CENTER WINDHAM HIGH SCHOOL END OF EXERCISE MESSAGE.		
8. Approved by: Name : CJ CARLSSON Signature : _____ Position/Title : HAM RADIO OP W1CJC		
9. Reply :		
10. Replied by: Name : _____ Position/Title : _____ Signature: _____ ICS-213 Date/Time : _____		

GENERAL MESSAGE (ICS-213)

1. Incident Name (optional): 2018 Maine SET		
2. To (Name and Position): WS1EC, WX1GYX		CUMBERLAND COUNTY EOC, NWS
3. From (Name and Position): KB1HNZ		HAM RADIO OP
4. Subject : TREE DOWN		5. Date : 2018-10-27 6. Time 9:24L
7. Message : THIS IS AN EXERCISE MESSAGE. LARGE OAK TREE BLOCKING INTERSECTION OF WOODVILLE ROAD AND FIELD ROAD IN FALMOUTH. SEND WORK CREW TO CLEAR TREE. WATCH OUT FOR DOWNED POWER LINES IN AREA. END OF EXERCISE MESSAGE.		
8. Approved by: Name : TIM WATSON Signature : _____ Position/Title : HAM RADIO OP KB1HNZ		
9. Reply :		
10. Replied by: Name : _____ Position/Title : _____ Signature: _____ ICS-213 Date/Time : _____		

GENERAL MESSAGE (ICS-213)

1. Incident Name (optional): 2018 Maine SET		
2. To (Name and Position): WS1EC		CUMBERLAND COUNTY EOC
3. From (Name and Position): KB1HNZ		HAM RADIO OP
4. Subject : CASCO BAY BRIDGE CLOSED		5. Date : 2018-10-27 6. Time 1215L
7. Message : THIS IS AN EXERCISE MESSAGE. CASCO BAY BRIDGE HAS BEEN CLOSED DUE TO SEVERE ICING ON ROAD SURFACE. END OF EXERCISE MESSAGE.		
8. Approved by: Name : TIM WATSON Signature : _____ Position/Title : HAM RADIO OP KB1HNZ		
9. Reply :		
10. Replied by: Name : _____ Position/Title : _____ Signature: _____ ICS-213 Date/Time : _____		

Message ID: 3ICDPGL2NV3Q
Date: 2018/10/27 19:47
From: KB1TCE
To: WX1GYX
Source: KB1TCE
Downloaded-from: Telnet:cms.Winlink.org
Subject: Re: //WL2K SKYWARN Activation

Thank you for your notification.

73, Steve KB1TCE KN83

----- Message from WX1GYX sent 2018/10/27 16:11 -----

Message ID: 09ZN0IW1SNTT
Date: 2018/10/27 16:11
From: WX1GYX
To: WS1EC; KB1TCE; KX1EMA; W1WDW; N1WJO; KB1HNZ; N1XP; KC1HJK
Source: WX1GYX
Subject: //WL2K SKYWARN Activation

See attached ICS-213 message.

73'

WX1GYX

National Weather Service
Gray, ME

[illegible]

2018 WX1GYX

Preliminary Outline:

The goal of the 2018 **Maine Simulated Emergency Test (SET)**, for the National Weather Service SKYWARN station, WX1GYX, will be to establish two-way communications between ourselves and WS1EC, operating from Cumberland County EMA, and each of the thirteen regional shelters within Cumberland County.

Portable / Mobile stations at each shelter location will attempt to make contact via 2 Meter FM Simplex, DMR Simplex, and if equipped, send/receive a digital message. Suggested traffic will be a weather report from each location, requests for supplies, or anything else relevant to the exercise scenario, which is an Ice Storm.

Our objective is to help WSSM-ECT reaffirm which shelters will require more than a 5W HT to communicate with either the EOC or NWS, and also determine if a permanent antenna installation is required / recommended at any of the shelter locations.

Initial contacts and coordination will take place on **146.580** FM Simplex. The recommended DMR Simplex frequency will be **145.790**. We will also attempt to make contact via GMRS if time allows.

Other components of the SET will be to establish contact with MEMA on the ARES HF SSB net (if one takes place), and also to be ready to send and receive traffic via Winlink on HF.

Once all shelter traffic is completed, it will be recommended for operators at both CCEMA and NWS to attempt contacts with adjacent counties to assist in any way with their SET efforts, before securing the station.

The time frame for previous SETs was 8AM-12PM, although nothing firm has been announced yet about the 2018 schedule. As we get closer, we'll set a schedule for our own activities.

Maintain Contact with WS1EC

WS1EC – Cumberland County EOC			
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 8:09am	Report: 59
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 8:07am	Report: 59
<input checked="" type="checkbox"/>	Received Digital Message		<input checked="" type="checkbox"/> Sent Reply

Maintain Contact with MEMA

Maine Emergency Management Agency			
<input type="checkbox"/>	Contacted via FM Simplex	Time:	Report:
<input type="checkbox"/>	Contacted via HF	Time:	Report:
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/> Sent Reply

Maine ARES HF Frequencies: 3940 kHz (SSB), 7262 kHz (SSB), 3583 kHz (Digital Traffic)

Contact with Adjacent County

County: York		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 9:44am Report: 59
<input type="checkbox"/>	Contacted via FM Repeater	Time: Report:
<input type="checkbox"/>	Contacted via HF	Time:
<input type="checkbox"/>	Received Digital Message	<input type="checkbox"/> Sent Reply

Contact with Adjacent County

County:		
<input type="checkbox"/>	Contacted via FM Simplex	Time: 10:44am Report:
<input type="checkbox"/>	Contacted via FM Repeater	Time: Report:
<input type="checkbox"/>	Contacted via HF	Time:
<input type="checkbox"/>	Received Digital Message	<input type="checkbox"/> Sent Reply

Contact with Adjacent County

County:		
<input type="checkbox"/>	Contacted via FM Simplex	Time: Report:
<input type="checkbox"/>	Contacted via FM Repeater	Time: Report:
<input type="checkbox"/>	Contacted via HF	Time:
<input type="checkbox"/>	Received Digital Message	<input type="checkbox"/> Sent Reply

Notes:

Attempted to contact MEMA on both published ARES HF frequencies throughout the SET, but nothing was heard. Not sure if it was just poor conditions or if there really wasn't anyone there.

HF Contact with WS1EC at 11:23am on 3940 kHz 57 report both ways

Brad, WRAT256 at CCEMA, contacted Tim WQKD305 at NWS at 10:50am via GMRS



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2018 WX1GYX SET Worksheet**WX1GYX – National Weather Service
Gray, ME**Number of participants: 10Number of communities served: 10Number of agencies served: 3Number of digital messages exchanged: 8Total number of messages exchanged: 18**Shelter Locations:**

Brunswick High School			Portable / Mobile Station: KC1XT & KC1HBM		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 9:37am	Report (5W): 59	(25W): 59	(50W): 59
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 9:39am	Report (5W): 59	(25W): 59*	(50W): 59*
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

38 degrees, overcast, no precipitationNotes: * DMR Simplex medium and high power levels were: 30W and 45W

Eastpoint Church			Portable / Mobile Station: KC1JMH		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 9:19am	Report (5W): 59	(25W):	(50W): 59*
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 9:37am	Report (5W): 59	(25W):	(50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

39 degrees, overcast, light breezeNotes: *Brad's high power output was 40W

Falmouth High School		Portable / Mobile Station: KB1HNZ		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 9:08am	Report (5W): 59	(25W): 59 (50W): 59
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 9:11am	Report (5W): 33	(25W): (50W):
<input checked="" type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply

WX Report Received:

37 degrees, heavy overcast, light wind, no precipitation

Notes: Tim was using a 5W HT for DMR simplex. Copyable, but with some digital hash

Gorham Middle School		Portable / Mobile Station: KC1HJN		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 9:49am	Report (5W): N/A	(25W): 44* (50W): 57
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 9:35am	Report (5W): 55	(25W): (50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply

WX Report Received:

Exercise message: Trees down, 0.25" of ice covering tree branches, power lines, and road signs

Actual report: 37 degrees, very light wind, no precipitation

Notes: *Waylon's medium power output was 10W

Gray / New Gloucester High School		Portable / Mobile Station: KB1HNZ		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 10:36am	Report (5W): 59	(25W): 59 (50W): 59
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 10:41am	Report (5W): 59	(25W): (50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply

WX Report Received:

39 degrees, moderate rain, no wind, nothing severe

Notes: Tim was using a 5W HT for DMR simplex

Greely Middle School			Portable / Mobile Station: KB1HNZ		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 10:07am	Report (5W): 59	(25W): 59	(50W): 59
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 9:59am	Report (5W): 59	(25W):	(50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

40 degrees, light wind, heavy overcast, no precipitation

Notes: Tim was using a 5W HT for DMR simplex

Lakes Region High School			Portable / Mobile Station: KC1AOT		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 10:22am	Report (5W): N/A	(25W): 59	(50W): 59*
<input type="checkbox"/>	Contacted via DMR Simplex	Time:	Report (5W):	(25W):	(50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

39 degrees, overcast, no wind, no precipitation

Notes: Ron's high power output was 65W

Portland Expo Building			Portable / Mobile Station: KC1JMH		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 9:15am	Report (5W): 55	(25W):	(50W): 59*
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 9:18am	Report (5W): 57	(25W):	(50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

40 degrees, steady light rain, diagonal at times, NW breeze

Notes: *Brad's high power output was 40W

Scarborough High School			Portable / Mobile Station: Not Activated		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time:	Report (5W):	(25W):	(50W):
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time:	Report (5W):	(25W):	(50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

Notes:

South Portland High School			Portable / Mobile Station: KC1JMH		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 10:11am	Report (5W): 59	(25W):	(50W): 59*
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 10:16am	Report (5W): 59	(25W):	(50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

43 degrees, cloudy, light SE wind, rain starting

Notes:

*Brad's high power output was 40W

South Portland Community Center			Portable / Mobile Station: KC1JMH		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 9:44am	Report (5W): 59	(25W):	(50W): 59*
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 9:50am	Report (5W): 59	(25W):	(50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

43 degrees, wind increasing

Notes:

*Brad's high power output was 40W

Westbrook High School			Portable / Mobile Station: Not Activated		
<input type="checkbox"/>	Contacted via FM Simplex	Time:	Report (5W):	(25W):	(50W):
<input type="checkbox"/>	Contacted via DMR Simplex	Time:	Report (5W):	(25W):	(50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

Notes:

Windham High School			Portable / Mobile Station: KC1HJN		
<input checked="" type="checkbox"/>	Contacted via FM Simplex	Time: 8:44am	Report (5W):	(25W):	(50W):
<input checked="" type="checkbox"/>	Contacted via DMR Simplex	Time: 8:39am	Report (5W):	(25W):	(50W):
<input type="checkbox"/>	Received Digital Message		<input type="checkbox"/>	Sent Reply	

WX Report Received:

Actual report: 39 degrees, light rain

Notes:

*Waylon's medium power output was 10W



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NWS Radio Operators Participate in Statewide Exercise

On Saturday, October 27th, members of the WX1GYX SKYWARN Amateur Radio Club, that supports SKYWARN operations for the National Weather Service, in Gray, Maine, will participate in a statewide drill to test their communications capabilities. The drill, known as the Simulated Emergency Test, or SET, is an annual exercise, sponsored by the American Radio Relay League, which encourages amateur radio operators from across the country test their communications skills during a mock disaster.

During the SET, hams are required to quickly establish communications between various Emergency Operations Centers and exchange formal messages and traffic, which contain requests for supplies, medical or weather information, or other things that may be of importance during a disaster. They do this via voice, Morse code, and digital two-way radio, on bands ranging from HF to UHF, as required.

“The scenario for this year is an ice storm, which is a real possibility in Maine,” says Eric Emery, of New Gloucester. Emery is a volunteer amateur radio operator, who provides communications for the National Weather Service’s SKYWARN program during severe weather events throughout the year. “The SET tests how we respond during large-scale disasters, where commercial infrastructure has failed. In these events, hams are often the only source of communications.”

“SKYWARN is a program where ham radio operators provide real-time weather reports to the National Weather Service. Part of our goal during this exercise is to maintain the flow of reports to the NWS, despite the challenging conditions,” adds Emery. “Amateur radio has a long history of volunteerism. Sure, it’s a hobby and there’s some fun things that we do like mountaintop expeditions or competitive events like contesting, but so many like to stay sharp by providing support for programs like SKYWARN and community events, and drills like this, so they’ll be ready to offer their time and expertise when disaster strikes.”

The SKYWARN group is participating in the SET for the third time. “Last year went really well, and we have a solid plan and a list of goals to accomplish for 2018,” says Emery.

After the event, the participants will do an assessment to determine how well they performed and look for areas to improve on. “There’s always new things to learn and ways to improve,” adds Emery. “But the important thing to know is that we’ll be ready to help.”

For more information about amateur radio, or the WX1GYX SKYWARN Amateur Radio program, please visit their website at: <http://www.ws1sm.com/SKYWARN.html>