Essex County Fire
Standard Operating Guideline

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Interoperability		

Scope

This Standard Operating Guideline applies to all fire departments within Essex County.

Purpose

This guideline aims to provide a uniform means for interoperable radio communications throughout the County in Mutual Aid Situations.

Background

Individual fire departments in the County operate on locally licensed radio frequencies on VHF or UHF bands. In addition, each department has a dispatch/operations frequency, and several departments have additional fireground or utility frequencies. During Mutual Aid responses, communication can be complicated or impaired by the necessity of all departments having to program their mobile and portable radios with all the potentially usable frequencies in the County. In some cases, where responding apparatus/portable radios are on a completely different frequency band, mutual aid companies must utilize two (2) radios in order to communicate with the host community.

Furthermore, it is noted that even within each community, those departments having only one dispatch/operations frequency at their command are under significant limitations to maintain command and control of more than one incident at a time or to respond to a "May Day" declaration by shifting to an alternate radio channel to maintain incident command while activating and inserting the RIT team for firefighter rescue operations. Interrupting Fireground Tactical Communications to announce extra alarms (including paging tones, box tones, etc.) or to dispatch other emergency responses on a common channel is a distraction to the Incident Commander and firefighters engaged in the incident and can prevent critical communications from being heard.

While the Association strongly urges members to utilize the defined District fireground channels, we understand that there may be circumstances in which remaining on an agency's home channel may be necessitated. (EX: incident geography or building geography exceeds the capability of a direct fireground channel). In this case, Incident Commanders should consider the impact of routine calls for service and the impact such radio traffic, paging tones, etc., will have on their operation; where possible, agencies are urged to move their routine traffic off of their home channel to reduce the possibility of a critical fireground message being missed.

Standard Operating Guideline

When incident or event operations exceed the capabilities of one department, the procedures outlined in this guideline should be followed to ensure interoperability across multiple departments for the duration of the incident/event while ensuring day-to-day operations continue seamlessly.

In general, shifting to a Fireground Operations Channel is recommended whenever "All Companies Are Working" (Working Fire or better).

This practice ensures against confusion on the fireground from other dispatch activities simultaneously occurring in the community during an incident. In common practice, some departments shift to a fireground channel immediately after dispatch and upon arrival at the incident scene for any incident involving multiple apparatus response. Incident Commanders (ICs) should establish the practice of utilizing two (2) radios at the Command Post: one radio should be tuned to the Fireground Frequency, and one radio should be tuned to the local Dispatch Frequency. The use of scanning features should be discouraged as these can allow messages to be missed. This procedure will ensure that both routine and emergency messages from fireground personnel will not be interrupted or missed by the IC.

Procedures

Mutual Aid Response Safety

All mutual aid response "To Cover" should be conducted as a "Cold Response", with apparatus proceeding with caution and without warning lights to the destination coverage station. When the apparatus reaches the host town (city) limits, the officer should contact dispatch to announce that (Town/Unit/Number) is in the community responding to its cover assignment. Mutual Aid apparatus should remain on the Dispatch channel for the host community until assigned otherwise by local dispatch.

Host communities should avoid reassigning Mutual Aid apparatus to the fire until they reach town (city) limits if possible. Once reassigned "to the fire," mutual aid apparatus should utilize warning lights and sirens and proceed with usual caution/emergency response procedures. Responding apparatus are reminded that communities through which they pass while en route to their assignment may not be aware that an emergency exists nearby and will not be alert to emergency responses through that community.

Observance of the County Accountability SOG is mandatory in Mutual Aid Response – see **SOG-602.00 – Passport Accountability** for more information.

Communication Guidance (at various alarm levels):

Initial Alarm/Investigation: Standard response (still or box alarm) within the community with NO mutual aid response. Standard practice will be to utilize the local Dispatch channel or a fireground channel as fireground operations channel according to local SOP/SOG.

1st Alarm Incident: Response involving one (1) Mutual Aid company only (e.g., Line Box). Operate as in Level 1; Mutual Aid company will select the host community dispatch channel or fireground channel in accordance with standard practice.

2nd Alarm – 9th Alarm Incident: Multiple mutual aid responses at Working Fire or higher in accordance with the County 10-Alarm card. ALL companies (host and mutual aid) shift to County fireground frequency at the incident. Mutual Aid covering companies shift to host community dispatch channel and report to cover assignments. TAC COM unit reports to the incident and activates the cross-band repeater. The exception to this practice would be when the host community is a larger department with multiple licensed radio channels. In those cases, standard practice with common mutual aid companies would prevail.

Note: The host community may request the TAC COM anytime by contacting the Fire Control point. Dispatch of the TAC COM shall be automatic upon declaration of a 2nd Alarm by the host community, even though Phase II Mutual Aid Response may not be effective until greater alarms have been declared.

10 Alarm + Incident (or during Phase III Mutual Aid): Major incident involving Unified Command and multiple agency response. Under these conditions, the county Cross-Band repeaters are limited to the county fireground repeater function. It will be necessary to contact the Department of Fire Services and other agencies through the respective Fire Control communicators to obtain more comprehensive fire communications resources to link all agencies. Available resources include Regional Communications Unit (i.e., Field Comm 20 or Field Comm 60), DFS Comm Unit, NEMLEC Mobile Command Post, Middlesex Sheriff's units, etc. During Level 4 events, shifting radio channels to universal tactical channels (VTAC or UTAC) will likely be necessary.

Special Concerns:

1. Direct channel operations are more than adequate for operations up to one-half mile from the Cross-Band Repeater vehicle. Concerns have been expressed regarding the fact that the fireground frequencies are not repeated and that the local dispatch may not be able to hear/record fireground messages. As such, the arriving chauffeur of the Cross-Band Repeater will be assigned to monitor all radio traffic during the incident as a backup to the Incident Commander.

2. Experience will dictate whether the current placement and quantity of Cross Band repeaters are adequate for continuing operations. It is possible that some relocation of assets or an increase in numbers will be required. An example may be the City of Lawrence, where UHF/VHF interoperability is a necessity upon initial Mutual Aid. It may be advantageous for Lawrence to adopt an in-city TAC COM unit for their exclusive use.

3. It is recommended that periodic exercises be held to train personnel in deploying and utilizing the Cross-Band repeaters.

COUNTY FIREGROUND FREQUENCIES

COUNTY CHANNEL PLAN:

Member departments should program all radios following recommendations outlined in **SOG-804.00 - Radio Purchases and Programming** and **SOG-805.00 - Radio ID Plan**. Further, the ECFCA has established several direct (simplex) fireground channels that make up the *ECFCA Channel Plan.*

Each department shall be responsible for programming its radios to include the minimum channel requirements of the *ECFCA Channel Plan*. The ECFCA does not specify the zone or channel number; however, each channel should be labeled using the appropriate 8- or 15- character channel name.

Mutual Aid companies responding outside the local community be informed of the "Dispatch" channel of the community to which they are responding. The responding companies shall report "Shifting to dispatch" upon departing their own community and "In your community and on your dispatch frequency" when arriving in the host community.

During dispatch for mutual aid response, the LOCAL dispatcher should be responsible for letting the responding apparatus know which channel is being utilized, if known.

Members should be cautioned concerning the use of "Emergency" buttons on radios, if so equipped. These features typically default to the primary channel on the individual radio. Therefore, they may not be capable of reaching the desired recipient when operating at a distance from the home receiver. Declaration of a "MAY DAY" on the Fireground Channel during an emergency situation is the preferred and more reliable procedure.

ICS-217A (Channel Plan)

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A		Frequency Band **UHF/VHF**							Description **D5/15 Channels**
Short Channel Name (8 char)	**Full Channel Name (15 characters)**	**Eligible Users**	**Mobile RX Freq**	**RX Tone / NAC**		**Mobile TX Freq**	**TX Tone / NAC**	**Mode A, D, or M**	**Notes**
EC-FG-1U	EC-FIREGRND-1U	D5/15 Fire	487.3875N	229.1		487.3875N	229.1	A	UHF Simplex
EC-FG-2U	EC-FIREGRND-2U	D5/15 Fire	465.6125N	146.2		465.6125N	146.2	A	UHF Simplex
EC-FG-3U	EC-FIREGRND-3U	D5/15 Fire	460.6125N	146.2		460.6125N	146.2	A	UHF Simplex
D5-CTRL	DISTRICT 5 CTL	D5/15 Fire	460.1375N	131.8		465.1375N	D445	A	Middleton Repeater
D15-CTRL	DISTRICT 15 CTL	D5/15 Fire	460.1375N	131.8		465.1375N	D662	A	Haverhill Repeater
EC-FG-4V	EC-FIREGRND-4V	D5/15 Fire	153.8300N	77.0		153.8300N	77.0	A	VHF Simplex
EC-FG-5V	EC-FIREGRND-5V	D5/15 Fire	151.4500N	146.2		151.4500N	146.2	A	VHF Simplex
VFIRE21	VFIRE21	Fire	154.2800N	156.7		154.2800N	156.7	A	VHF Simplex / NH Tie-In
D5-CTRL	DISTRICT 5 CTL	D5/15 Fire	154.0700N	131.8		158.7300N	D226	A	Middleton Repeater
D15-CTRL	DISTRICT 15 CTL	D5/15 Fire	154.0700N	131.8		158.7300N	D343	A	Haverhill Repeater