



RADIO CAPACITY SURVEY

SUMMARY

REPORT DATE

May 12, 2019

INTERVAL

PREPARED BY

Shanna Kuempel, Task Force

SUMMARY

On January 7, 2019, Cal OES distributed a FIRESCOPE radio capacity survey to assess the status of agencies mobile and portable radio channel capacity. As of May 12, 2019, two-hundred thirty-one (231) agencies have responded to the survey. In summary 66% of agencies have at least 400 channel capacity in their portable radios and greater than 55% have the capacity in the Mobile radios. The following summary will break down the results by region and number of responses.

Note: Agencies that completed the survey more than once were not counted twice. This survey represents a sample of 21% of agencies that could potentially participate in mutual aid in the state.

REGION SURVEY SUMMARY

The survey was open to all respondents from January 7th until May 7th of 2019. In total there were 231 agency responses with duplicate responses removed. Including all regions and responses, the overall percentage of apparatus with mobile radios in compliance was 52%. This percentage reflects 4,068 apparatus of which 2,115 are fully compliant.

The following results are summary of data by Region. The total number of respondents reflects a sample of agencies in the state. Many agencies upgrade their mobile radios as that apparatus is replaced. Portable radios are replaced on a more frequent cycle. The results in terms of percentages reflects both the results by individual agencies and by the number of apparatus that would potentially need to be upgraded. In the case of some agencies this may impact a few apparatus. In most regions partial compliance was left out of total percentages for clarity.

Region I had 32 responses.

- % of Agencies with Portable Radios with at least 400 channel capacity = 88 %
- % of Agencies with Mobile Radios with at least 400 channel capacity = 68%
- % of total number of apparatus_with at least 400 channel capacity, Mobile radio 83%

Region II had 68 responses.

- % of Agencies with Portable Radios with at least 400 channel capacity: 72%
- % of Agencies with Mobile Radios with at least 400 Channel 63%
- % of total number of apparatus with at least 400 channel capacity Mobile radio 85.26%

Region III had 37 responses

- % of Agencies with Portable Radios with at least 400 channel capacity: 35%
- % of Agencies with Mobile Radios with at least 400 Channel 21%
- % of total number of apparatus with at least 400 channel capacity Mobile radio 17%

Region IV had 36 responses

- % of Agencies with Portable Radios with at least 400 channel capacity: 55%
- % of Agencies with Mobile Radios with at least 400 Channel 39%
- % of total number of apparatus with at least 400 channel capacity Mobile radio 12%
- % of total number of apparatus that are partially compliant 73%

Region V had 18 responses

- % of Agencies with Portable Radios with at least 400 channel capacity: 50%
- % of Agencies with Mobile Radios with at least 400 Channel 33%
- % of total number of apparatus with at least 400 channel capacity Mobile radio 29%

Region VI has 40 Responses

- % of Agencies with Portable Radios with at least 400 channel capacity: 68%
- % of Agencies with Mobile Radios with at least 400 Channel 45%
- % of total number of apparatus with at least 400 channel capacity Mobile radio 33%

COMMENTS

Comments sections and contact information were provided as part of the survey. All respondents except one left contact information and were willing to be contacted. In general, the comments were positive and provided feedback related to several main topics:

- Budgeting and grant funding sources.
- Seeking recommendations on standard hardware /software.
- Difficulty in keeping up with new technology and access to annual programming. Both regional and small agencies.
- Desire to standardize purchases to be identical to larger agencies equipment (e.g. CAL FIRE)
- Discussed the agencies progress toward radio upgrades, regional grant applications and timelines.
- Questions regarding requirements if the agency does not leave their jurisdiction.

RECOMMENDATIONS

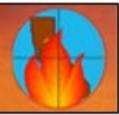
The FIRESCOPE Task force recognizes the need to increase the radio channel capacity in order for agencies to have common communications, especially in the initial attack stages of an event. The survey data included agencies from all Regions (231/1100) of all individual agencies recognized in the State. There was representation from both large metropolitan and small volunteer agencies. The survey identified agencies that would need to upgrade or purchase new equipment based on an increase in channel requirements. The survey identified the financial issues that agencies will face including the need to potentially apply for grant funding and time to budget for the upgrade. It is the Task Force recommendation to require the increase in channel capacity in five years. This will extend the deadline from 2023 to 2024 as originally proposed. The extension will allow agencies more time to appropriately plan, budget, and potentially apply for regional funding sources. A final recommendation is to consider methods to offer education and assistance to agencies applying or seeking grant funding. The FIRESCOPE task force also recognizes the need to identify a contingency plan to assist agencies in this transition.

CONTINGENCY PLAN

The current status of radio capacity in California is that some agencies have equipment that has a maximum capacity of less than the proposed 400 channels. The first step in the plan is to identify and prioritize channels within the MACS 441-1 document. Beginning in 2020, the Macs 441-1 will list channels in three priorities. These channels will be identified as the number one, required (need to have), number two, highly recommended (should have) and number three, the nice to have channels. This prioritization will allow agencies with limited capacity to have a standardized load and agencies with increased capacity will also have a standardized load. The second part of the contingency plan is to recommend to agencies to predesignate specific apparatus for mutual aid and prioritize those apparatus and within their agency to upgrade. For example, an agency with 22 front line apparatus and 5 reserve apparatus could potentially phase in and prioritize the upgrade based on certain specific apparatus being designated as mutual aid companies, or strike team houses based on the ability to meet the increases requirement in 2024.



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WHITE PAPER

October 10, 2018

TO: FIRESCOPE Board of Directors, THROUGH CHANNELS
2524 Mulberry Street
Riverside, CA 92501

FROM: Tim Kelly, Chair
FIRESCOPE Task Force

SUBJECT: CHANNEL LIMITATIONS IN THE STATEWIDE GROUP 3 LOAD

SUMMARY

In 2016, the Communications Specialist Group provided the Task Force with a White Paper on the need to increase the channel capacity on mobile and portable radios to accommodate the statewide increase in use of initial attack channels in the Group 3 Statewide Load.

This proposal recommends an increase in the channel capacity requirement for mobile and portable radios from the current 240-channel requirement to a 400-channel minimum requirement. The proposed channel load increase would take effect in the year 2023, allowing agencies sufficient time to allocate funds through normal budgetary processes and/or to submit grant application(s) to offset costs associated with the new requirement. In the year the new channel load requirement becomes effective, the *MACS 441-1 FIRESCOPE Radio Communications Guidelines* will be the primary source document to communicate the changes.

RECOMMENDATIONS

The following recommendations are respectfully submitted for review and approval:

- That the FIRESCOPE Operations Team and Board of Directors approve a survey to be distributed with input from the Operations Area Coordinators and Office of Emergency Services Regional Assistant Chiefs to determine the full scope of the impact to individual agencies and the Mutual Aid System.
- That the FIRESCOPE Operations Team and Board of Directors, approve the following survey that includes, but not limited to, the following survey fields:
 - Agency name and location, including Region
 - Agency size (total firefighters)
 - Paid, volunteer, combination



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- - Annual budget
 - Type and number of apparatus deployable for Mutual Aid
 - Total number of apparatus affected in agency fleet.
 - Current make and model(s) of mobile radio in apparatus: List all that apply
 - Estimated number of apparatus that will require an upgrade of the mobile radio to meet the 400-channel capacity requirement.
 - Number of portable radios in agency that would require upgrade.
 - Open comment section to provide feedback as to impact of recommendation.
- That the FIRESCOPE Operations Team and Board of Directors require the comments, feedback and survey results to be analyzed and a written summary be prepared by December 2018. This report will be used to determine the feasibility of implementing the proposed channel load requirement and to identify any adverse impacts to the Mutual Aid System.
 - That a communication contingency plan be developed to identify a recommended channel load for those agencies that, in the interim, cannot meet the channel load requirement due to budgetary constraints, shortfalls, or other financial limitations.
 - That the FIRESCOPE Operations Team and Board of Directors approve the channel load proposal and implement it in accordance with the method outlined in the Communications Specialist Groups White Paper, provided a favorable feasibility report is received.

FINDINGS

The Task Force has engaged in numerous discussions on the proposal over the course of several months and has come to a consensus that more information was needed relative to the financial impact to individual participating agencies, as well as the potential adverse effects the requirement may have on the Mutual Aid System. It was agreed that the most effective way to gauge the impact of such a proposal was to solicit all agencies affected, especially those that would be most financially impacted.

While increasing the channel load requirement has obvious benefits to improving interoperability and the effectiveness and efficiency of incident communications, the Task Force recognizes that the information gathered through the proposed process will allow for a more informed decision insofar as determining the feasibility of the proposed requirement.

CONCLUSION

Once the desired information is received, and it is determined that the Mutual Aid System will not be adversely affected or participating agencies unduly burdened, the Task Force recommends adopting the revised version of the MACS 441-1 that includes language outlining the future channel load requirement for agencies who participate in the Statewide Mutual Aid System.



FIRESCOPE COMMUNICATION SPECIALIST GROUP

March 7, 2018

To: FIRESCOPE Board of Directors

Through: FIRESCOPE Task Force

From: Pete Lawrence, Battalion Chief, Oceanside Fire Department
Chair, FIRESCOPE Communications Specialist Group

Subject: Channel Limitations in the Statewide Group 3 Load

At the January 2016 Communications Specialist Group (CSG) meeting, the annual review and approval of the Statewide Group 3 VHF radio load took place. With the increasing numbers of CALFire and local agency VHF channels, the ability to come up with a single, comprehensive statewide mutual aid channel load has become very difficult. The primary reason for this difficulty is the space limitation caused by older model radios containing only 254 channels (e.g. Kenwood TK-790 mobile and BK-GPH portable).

In the past, a 240 channel radio was deemed sufficient to cover the state. However, with the addition of more VFIRE and VTAC channels, as well as additional CALFire and local government Command, Tactical and Air-to-Ground VHF channels, a 240 channel radio has become insufficient for the future of the California Fire Service. Every year, a significant debate on the pros and cons of adding or deleting channels belonging to State, Federal and Local partner agencies takes place. Additionally, as more channels are added to the statewide load, the ability for each agency to add their "local" load to their radio diminishes. After a while, this lack of channel capacity will cause agencies to individually pick and choose the statewide frequencies they wish to include in their annual load and the value of a statewide load forming the basis for mutual aid responses begins to fall apart. The most recent NIFC document for minimum standards for portable radio requirements for federal fires already meet or exceed the 400 channel requirements.

After significant debate, the CSG came to consensus that a minimum of a 400 channel mobile radio is needed as the statewide standard. As such, the CSG is requesting that the FIRESCOPE Board of Directors, via the Task Force, approve the following statement for inclusion in the next revision of the MACS 441-1 FIRESCOPE Radio Communications

Guidelines and have the Chief, OES Fire and Rescue, disseminate this statement to all members of the California Fire Service:

Currently, the minimum channel capacity for a radio in California is 240 channels (CFAA Appendix D, covers the mandatory load and local load requirements). Beginning in 2023, the required FIRESCOPE frequency load will be 400 channels. As such, agencies will be required to provide a mobile radio in all responding units with a channel capacity of at least 400 channels. This information is being provided in advance to give participating agencies sufficient time to facilitate this transition.

We understand that this may cause some agencies to incur costs to replace older radios. However, we also believe that the failure to keep pace with the overall needs of the California Fire Service, and especially our robust and noteworthy mutual aid system, has a cost and impact of its own.