

# MARIN EMERGENCY RADIO AUTHORITY

27 Commercial Blvd., Suite C, Novato, CA 94949

Phone: (415) 883-9100 FAX: (415) 883-9155

## MEMORANDUM

**DATE:** May 31, 2006  
**TO:** MERA Board of Directors  
**FROM:** Martin J. Nichols, Executive Officer  
**SUBJECT:** AGENDA ITEM H: INCREASING SYSTEM CAPACITY

---

### Recommended Actions:

1. Direct the Executive Officer, in consultation with the Project Engineer, to recruit qualified firms to conduct an independent review of MERA's system capacity; and
2. Authorize the Executive Committee to select the best-qualified vendor and approve an agreement with selected firm.

### Background:

Motorola has provided us with the attached cost proposal to increase the capacity of MERA based upon the acquisition of nine new frequencies. That estimated cost is \$3,685,000. At our meeting, Richard Chuck will be making a presentation on the capacity effects of acquiring the frequencies and obtaining the new Motorola equipment to implement them.

The policy issues for discussion by your Board are as follows:

1. Not Proceeding with the project
  - a. We could not increase the capacity of the system and make some changes to the allocation of sites between the east and west simulcast zones to increase capacity in the east simulcast zone (where most of the busy signals were occurring). We can also retrain users on the call back and tactical channel functions of MERA to improve the efficiency of the current system.

This policy option requires an assumption that MERA will not substantially increase users in the future.
  - b. If we do not implement this expansion at this time, we may lose future access to the frequencies we are now near acquiring.

Also, the Motorola equipment that will expand our capacity will not be available after the end of 2006. This means that if, in the future, we decided to expand the system and could still acquire frequencies, all new equipment would be required to increase system capacity.

2. CEQA review for the expansion Project

Based on news stories about the Board's decision to seek new frequencies, the Mt. Tiburon neighbors have advised me that they will expect MERA to fully comply with CEQA in implementation of the new system capacity.

The new frequencies will increase electromagnetic radiation (EMF) at each site. In our project EIR, we did specify EMF's at each site.

While this addition of the new frequencies will not exceed FCC guidelines, they will increase EMF's above what are quantified in our EIR. This will require a project amendment to that EIR.

If the Board does proceed with the system expansion project, very careful CEQA and legal planning will be required to proceed with the project.

The Executive Committee considered this subject at its May 17, 2006 meeting and recommends that MERA retain an independent technical consultant to review the installed network and determine the following:

- a) A system capacity baseline based on currently installed equipment
- b) Prepare an estimate of the system's capacity following full installation of all users' equipment.
- c) Analyze the new years' capacity usage and determine the contributing functions for the number of busy signals experienced.
- d) Prepare recommendations on the need to expand the capacity of the current system.
- e) Determine the availability of equipment to expand system capacity.

The Committee recommended a budget of \$25,000 for this project.