

**Marin Emergency Radio Authority (MERA)**  
**April 3, 2001**

**Summary**

The Grand Jury investigated the operations of the Marin Emergency Radio Authority (MERA) and endorses the need for a new public safety communications system in Marin County. The Grand Jury further believes that the system proposed by MERA, as evidenced in the contract executed with Motorola for its design and installation, is a good system and one that is vitally needed in Marin County — sooner, not later.

We believe that MERA could have been, and indeed should have been, more proactive in anticipating the delays that have occurred in implementing the new Countywide Communications System. "Not In My Backyard", or "NIMBY", is a phenomenon that is alive and well in Marin County and has certainly contributed to MERA's problems.

MERA should have realized that this was a factor during the early stages and it should have used this to convince Motorola to be more effective in their site negotiations. If MERA had better anticipated these factors, along with their underlying causes, it would have been in a better position to have either prevented these, or mitigated their impact. The project is now almost one year behind its original schedule and threatens to experience further slippage if past performance continues.

The Grand Jury believes that it is incumbent upon MERA to ensure that additional delays do not occur and that the system is operational no later than its current target date of the end of 2002.

**Background**

The Marin Emergency Radio Authority (MERA) is a Joint Powers Authority (JPA) encompassing 25 different Public Service Agencies in the County. This JPA was formed to meet a critical need for public safety radio communications within Marin County. These various public agencies do not have a single uniform communications system.

To complicate matters even further, Marin County presents a very challenging design situation for radio communications due to topography. The topography of the County varies considerably from north to south and from west to east. Numerous hills, mountains, valleys and then more of the same over the next hill. This creates a very difficult environment for two-way radio and line-of-sight communications. The western portion of the County is sparsely populated, while the majority of the population is located in the eastern portion.

Public safety and local government agencies in Marin County currently use two-way radio systems to provide Countywide field communications. Numerous radio repeater sites provide transmit and receive capability over approximately 540 square miles, supporting over 2,000 mobile and portable radios for police, fire, public works and other local government users. There are over 200 radio channels in use by Marin County and local government agencies for internal communications as well as for mutual aid.

Currently, there are over 60 separate public safety and public service agencies operating throughout the County. The majority of police and fire agencies utilize low band VHF systems (except for the San Rafael Police Department). Emergency medical and public works agencies operate predominately in low and high band VHF. There has been increased utilization of UHF, UHF-T and 800 MHz frequencies in recent years; however, lack of available spectrum in these bands has precluded wide-scale use by public safety and public service agencies.

The existing low band radio systems utilized for police and fire department radio within the County are aging and in need of replacement (most of the County's and city's backbone infrastructure is 20 to 25 years old). The manufacturers of low band radio equipment do not produce a broad spectrum of products needed in today's public safety environment. Thus, the problem for the users of low band radio communications is what to do in the future when the existing equipment needs to be replaced.

Channel loading is a significant problem for the public safety community. Channels that are shared by several groups of users are particularly subject to increasingly heavy traffic, making communications difficult.

Often during peak periods, messages are unintelligible when multiple users attempt to simultaneously broadcast messages on a shared radio channel. Previously, acquiring new conventional radio channels in the appropriate frequency bands solved this problem.

However, Marin now finds itself experiencing the same problem many other counties face: additional conventional radio channels are impossible to obtain, especially in population centers where multiple agencies have overlapping communications systems. Channels are used on a shared basis and obtaining a new conventional frequency near an urban area is nearly impossible.

The very nature of public safety activities demands the capability to intercommunicate within an agency as well as with other local, state and federal law enforcement agencies. Interagency cooperation is required to coordinate criminal apprehension and crime prevention, perform covert enforcement operations, respond to emergencies or disasters and help ensure the safety of field personnel.

Agencies in Marin County now rely more frequently on cooperation during these and other situations, as well as to compensate for reduced budgets and limited resources. Although effective interagency communications are an essential component of these cooperative efforts, the agencies' separate and often incompatible communications create a technological environment in which it is often difficult, at times impossible, to communicate with one another.

We believe that it is informative to cite two instances where this inability of local public safety agencies to communicate with each other illustrates to us why a new public safety communications system is so badly needed. In the first case, the Mount Vision Fire in Western Marin a few years ago revealed the fact that various mutual aid fire and police agencies involved in the disaster were unable to efficiently communicate with each other and coordinate their efforts more effectively.

Earlier this year, the San Rafael Police Department was involved in a pursuit and shooting with a gunman just off Highway 101. Other police units from the County were also involved. One San Rafael Policeman believed that he had wounded the gunman, but was not able to locate him. A unit from another police department could see the gunman and believed that he was wounded or killed. *One department could not communicate directly with another department because they could not and, indeed, still cannot, access a common frequency.* While this latest incident did not result in any injuries to the police, it did put these units in harm's way because they simply could not talk to each other.

Most police and fire agencies in Marin County have at least one primary channel plus a secondary one. (The secondary channel for the San Rafael Police Department is "on loan" from Nextel, which has requested that it be returned as soon as possible. When this happens, the San Rafael Police Department will be left with only their primary channel.) Police and fire agencies each have one mutual aid channel that allows every police unit to talk to other police units (vehicle to vehicle) and allow each fire unit to talk to other fire units (unit to unit). In addition to these channels, several tactical channels are available for police and fire. It should be pointed out, however, that when one channel is in use between two parties, it is not available to anyone else.

## **Methodology**

Members of the Grand Jury interviewed MERA staff, officials from its participating agencies, as well as representatives of Motorola. Finally, Grand Jury members attended meetings of the San Rafael Planning Commission and the San Rafael City Council where significant issues affecting MERA implementation were discussed.

The Grand Jury also reviewed documents on the formation and mission of MERA, including, but not limited to the following:

- Minutes of MERA Board Meetings
- The Contract between MERA and Motorola
- The Request for Proposals prepared by the Warner Group
- The Marin County County-Wide Radio System Feasibility Study
- Numerous other related documents

## Discussion

Recognizing the problem and the need for a solution, the various public safety agencies in the County formed the MERA JPA. MERA developed the specifications for a new coordinated communications system that would:

- Optimize personnel safety and productivity
- Improve radio performance and coverage while reducing interference from outside sources
- Enable interagency communication
- Interface with selected 800 MHz, UHF and VHF systems that are currently in use
- Meet the unique operational needs of the participating agencies
- Enhance the reliability of the systems and facilitate maintenance
- Ensure physical security of radio equipment and facilities
- Utilize a technological approach that is compatible with prospective communications innovations
- Support the overall mission of the County
- Provide for future growth allowing the County to utilize the system well into the 21st Century.

The new regional radio system was designed to be a trunked, digital system that permits two-way communications between dispatch locations and user radios both individually and in talk groups. MERA has obtained FCC licenses for the necessary frequencies. The new system was designed to include all the necessary equipment and services for a turnkey solution that is composed of the following components:

- Trunked Backbone System
- Microwave Equipment
- Communications Center Equipment
- Fire Station Alerting Equipment
- Mobile Radio Equipment
- Portable Radio Equipment
- Desktop Control Stations

MERA made the decision that the contract for this system would be awarded to a single vendor: one that was capable of both designing the system and providing the equipment necessary to operate it. This was done to avoid the problems that could occur when one vendor designs the system and another provides the equipment.

MERA awarded the contract to Motorola for a total cost of \$21 million. MERA issued \$26 million in revenue bonds to finance the system.

The system was designed to utilize a number of fixed antennas on sites both within and outside Marin County. MERA has experienced significant delays caused by problems in obtaining land use approvals for several of these sites. Specifically, the Tiburon Planning Commission rejected the application for the site on Mt. Tiburon. MERA filed an appeal of this decision to the Tiburon City Council, but subsequently withdrew that appeal before it was heard.

Significant delays occurred in obtaining the land use approvals for the three antenna sites in San Rafael. The San Rafael Planning Commission conducted several public hearings on the application before finally approving land use entitlements for three sites in November 2000. The approval for the site on San Rafael Hill/Dollar Hill was appealed to the San Rafael City Council by a group of interested residents. This appeal was rejected by the City Council in January 2001. Litigation has been initiated on behalf of this group of residents.

Short of a court order preventing it, the way should now be open for MERA to promptly obtain the necessary licenses and building permits to begin construction of the three antenna facilities in San Rafael. Since these were key sites in the system, MERA can now begin to determine an alternate site for the Tiburon antenna.

There is also a problem with the proposed site at the Bolinas Fire Station. However, this site is not as critical to the operation of the entire system as are the San Rafael and Tiburon sites. The Bolinas site will only impact some limited communications in a small area of West Marin; landlines and cell phones, if necessary can handle these.

It is clear from our investigation that MERA did not do its homework. It was late in initiating an Environmental Impact Report (EIR). Given the history of Marin County for this type of study, the EIR should have been anticipated. There is also some question as to whether or not MERA did as good a job as it should have in explaining the system to the affected residents in Tiburon and San Rafael. With a little more forethought and creative thinking, some of these problems could have been avoided and the resulting delays either eliminated or reduced.

Be that as it may, those events are now in the past and it does no one any real good to dwell on them; except to make it clear to MERA that further delays to this much needed system are not acceptable as far as the safety of the citizens of Marin County is concerned.

## Findings

1. There have been charges of a conflict of interest in the recent hiring of Brock Arner as Executive Director of MERA. Prior to taking this position, and subsequent to his leaving the position of City Manager for Sausalito, Mr. Arner was hired as a paid consultant to Motorola for a period of approximately five months. Mr. Arner took this position with Motorola at the specific request of MERA and his sole duties while a consultant to Motorola were to negotiate site leases on behalf of MERA with the appropriate parties. His total billed time working for Motorola was less than 40 hours.

After questions were raised about the propriety of hiring Mr. Arner, MERA obtained an opinion from its legal counsel that no conflict of interest exists between Mr. Arner, MERA and Motorola. One caveat in this opinion is that Mr. Arner recuse himself from negotiating any Contract Change Orders to the Motorola contract in excess of \$1 million for a period of one year.

While the perception of impropriety could exist given the circumstances, the Grand Jury is convinced that no real conflict of interest occurred in the hiring of Mr. Arner as Executive Director of MERA.

2. There have been charges that the County owns over \$20 million of equipment that is growing obsolete sitting in a warehouse. To date, MERA has made two payments totaling about \$4 million to Motorola under the terms of the contract. The first was an initial payment of \$2.1 million (10%). The second payment was a progress payment, again for \$2.1 million (10%).

The system backbone equipment was ordered by MERA under the terms of the contract. This system consists of the major equipment; it does not include the towers or associated buildings (which were dependent on local land use approvals) or the actual fixed, mobile or portable radio equipment. The software is not installed until the equipment is in place.

Most of the equipment ordered is currently being held in a warehouse leased by Motorola in the Bel Marin Keys section of Novato. The Grand Jury was told that title to this equipment is held by MERA "without risk". This means that until the equipment is **installed** and **accepted**, Motorola bears the responsibility for replacement due to loss or technological obsolescence. Motorola is also responsible for any software and hardware upgrades made necessary by delays in installation. Under the terms of the contract, Motorola must assure MERA that all software is "state-of-the-art" at the time it is installed.

## Recommendations

1. MERA should take every available opportunity to make up for the impact of past delays and to prevent any future delays. The project is already almost a year behind schedule and it is vital to the safety of the citizens and the public safety workers of Marin County that this emergency

- communications system becomes operational as quickly as possible. Now that the Land Use Entitlements for the San Rafael antenna sites have been approved, MERA must choose a workable alternate site for Mt. Tiburon, an essential antenna site within the system, as quickly as possible. MERA must also take full advantage of the upcoming good weather season to begin and complete the necessary construction of the antenna sites. MERA should anticipate any further delays and develop contingency plans for them.
2. An opinion from MERA's attorney together with a written acknowledgement by Motorola, should be obtained stating that financial responsibility for the delivered equipment rests solely with Motorola and not with the County. These actions by Motorola would assure that Marin County is protected against financial loss related to the warehoused equipment under the "without risk" provision.

### **Request for Responses**

Pursuant to California Penal Code Section 933.05, the Grand Jury requests responses from MERA to the above Findings and Recommendations.