

MARIN EMERGENCY RADIO AUTHORITY

c/o Novato Fire Protection District
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GOVERNING BOARD

Minutes of October 24, 2018 Regular Meeting

Call to Order and Introductions

The meeting was called to order by President Pearce on October 24, 2018 at 3:33 p.m. at the Novato Fire Protection District Administration Office, Heritage Conference Room, 95 Rowland Way, Novato, CA 94945. Self-introductions followed.

Governing Board Members & Alternates Present:

City of Belvedere	Tricia Seyler (Alternate)
Town of Corte Madera	Todd Cusimano
Town of Fairfax	David Cron (Alternate)
City of Larkspur	Scott Shurtz
City of Mill Valley	Jacqueline Graf-Reis
City of Novato	Pam Drew
Town of Ross	Tom Gaffney
Town of San Anselmo	Doug Kelly
City of San Rafael	Robert Sinnott (Alternate)
City of Sausalito	Bill Fraass (Alternate)
Town of Tiburon	Michael Cronin
Bolinas Fire Protection District	Anita Tyrell-Brown
Inverness Fire Protection District	Jim Fox
Kentfield Fire Protection District	Mark Pomi, Ron Naso (Alternate)
Marin Community College District	Martin Langeveld
Marin Transit	Amy Van Doren
Novato Fire Protection District	L. J. Silverman (Alternate)
Ross Valley Fire Department	Tim Grasser
Southern Marin Fire Protection District	Cathryn Hilliard
Stinson Beach Fire Protection District	Kenny Stevens
Tiburon Fire Protection District	Richard Pearce
Central Marin Police Authority	Michael Norton

Governing Board Member Agencies Absent:

County of Marin
Marin Municipal Water District
Marinwood Community Services District

Staff Present:

MERA Executive Officer	Maureen Cunningham
MERA General Counsel	Trisha Ortiz
MERA Deputy Executive Officer – Next Gen Project (by phone)	Dave Jeffries
MERA Administrative Assistant Next Gen Project	Alex Anderson
MERA Operations Officer	Ernest Klock
Marin County DPW Communications Interim Representative	Ethan Simpson

Guests Present:

Federal Engineering	David Mortimer
Motorola	Mike DeBenedetti
Motorola	Rodney Hughes
Motorola	Kouros Mostashari
Motorola	Steve Gonzales
Nokia	Mayank Bhatia

A. Consent Calendar

All matters on the Consent Calendar are to be approved with one motion unless a Member of the Governing Board or the public requests that separate action be taken on a specific item:

- 1) Resolution of Commendation – Retiring Fire Chief Tom Roach -
Marinwood Community Services District,
MERA Governing Board and Executive Board Member
- 2) Minutes from September 26, 2018 Governing Board Regular Meeting
- 3) Report No. 74 on Strategic Plan Implementation

M/S/P Kelly/Norton to approve Consent Calendar Items 1-3 as presented.

AYES: All
NAYS: None
ABSTENTIONS: None
Motion carried.

Pearce commented on Roach’s retirement, wished him well, and noted his Resolution of Commendation.

B. Executive Officer's Report – (Cassingham)

1) Report No. 47 on Next Gen System Project – (Jeffries)

Jeffries noted the increased frequency of staff meetings with Motorola and the Coyote Peak meeting with MCOE. Connectivity memos for Dispatch and Fire Station Alerting (FSA) sites connection to Next Gen are still under development awaiting conclusion of CEQA for further contact with vendors.

Jeffries reported on potential Change Orders for Radio Accessories and Mobile Portable Chargers and Early Order Mobile Dual Band Radios, noting they are still under discussion with Motorola. He wanted to make sure the Governing Board was aware of them before discussing the other Change Orders (C.O.s). The Motorola Contract had minimal language about accessories and chargers were not listed as required. They have been lumped together for costing at an estimated \$2.1M. Some of this will be for non-safety radios and paid by other Reserves. Potential discounts are under discussion as well to get to final pricing for presentation at the November meeting.

Jeffries reported on the potential early order of dual-band radios, which has been previously discussed with the Governing Board. The intention was to reduce the Project Schedule by bringing in the radios earlier, ahead of cutover. The latest pricing is \$1.4M, which is a reduction from the \$2.82M earlier pricing. This will also be presented as another C.O. at the November meeting.

Gaffney asked whether these 2 new C.O.s were on top of the others. Jeffries said they were, noting the chargers are essential to system operations. The early radio order offered a strategy to significantly reduce the Schedule, but not essential to operations. Klock clarified that these would be Change Orders #10 and #11. Jeffries said there are no formal C.O.s to present at this time, but staff would be remiss for not making the Governing Board aware of them. In response to Klock, Jeffries clarified that the \$2.1M for chargers and accessories can be reduced by using non-Measure A Funds for non-safety equipment and further discussion with Motorola about discounts. The \$1.4M early radio order cost is also mitigated by reduced Schedule cost savings.

Gaffney clarified with Jeffries that these 2 new C.O.s total \$3.5M without additional discounts. Gaffney confirmed there is \$2M in the Project Budget for non-safety radios. Pearce said last month, we discussed chargers as standard equipment and part of the Project. Jeffries confirmed they are mandatory equipment for portables but ended up in the Contract as optional. Pearce requested that all future C.O.s be reviewed by the Finance Committee before presentation to the Governing Board. He urged close monitoring of C.O. costs. Kelly added that a charger for a radio should be standard.

C. Operations Reports – (Klock)

1) Next Gen Project Motorola Contract Change Orders Summary

Klock noted the Summary represents a preview of the C.O.s on the Agenda, including what is being proposed and related justification. There will be more detail in the subsequent C.O. reports.

2) Motorola Contract Change Order #5 – Tiburon and Mill Valley Equipment: M3 Core, PA Functionality

Klock said this is a zero-dollar Change Order necessary to the System and recommended Governing Board approval. The value of the equipment is estimated at \$4.6M, which does not include the value of construction costs which includes staff time and construction management needed to receive the equipment. Those costs are estimated at \$400K to \$700K for the Mill Valley and Tiburon sites. Pearce confirmed that these are the 2 sites that had to be added to meet RPC coverage requirements. Gaffney said this was confusing as presented as \$0 cost but \$400K to \$700K for construction. Klock said construction costs are a total for the 2 sites.

Van Doren asked who would do the site improvements. Klock said the equipment would be provided and installed by Motorola, which is valued at \$4.6M for both sites and includes related SUA II costs from Year 4-15. In further response to Van Doren, Klock said construction management costs are in MERA's Implementation Agreement with the County and contracts for site work would be separately bid and funded by the Project Budget site construction line item. Gaffney added that these costs were needed to make the System work.

M/S/P Cusimano/Kelly to approve Motorola Contract Change Order #5 in the amount of \$0 for inclusion of Tiburon and Mill Valley equipment, M3 Core and PA functionality into the MERA Next Gen System Project to the Board of Supervisors.

AYES: All
NAYS: None
ABSTENTIONS: None
Motion Carried.

3) Motorola Contract Change Order #6 – Sonoma Mountain Equipment and Site Readiness: Required

Klock reported Change Order #6 total cost is \$501K, which includes equipment at the Sonoma Mountain site at \$149K for the microwave link to work. The original site, OTA, is blocked by a terrain obstruction. Preliminary path surveys did not

reveal this for the Motorola Proposal. The final path survey showed the blockage. Increasing other tower site heights were reviewed to get around the obstruction but Sonoma Mountain was the most cost-effective solution for system connectivity.

Klock said the second portion of the C.O. was for site-ready services and equipment. This is necessitated due to confusion in the Motorola Contract. It is clear per the Contract Matrix, that all sites are to be made ready by MERA to receive the new equipment. Upon review of the existing sites, there is insufficient room within the enclosures to accommodate the equipment. There has been considerable discussion between MERA and Motorola about this and the level of expertise needed to perform the work given the sensitivity of the system. Motorola cost to provide these services is \$352K using their technicians and their assumption of the liability to perform the work.

In response to Kelly about the number of racks to be moved, Klock said there is a detailed report of site audits that specifies the scope of work to ready each existing site where enclosure space is not available. Pearce asked if this is a not-to-exceed cost estimate. Klock confirmed it was unless there are unforeseen conditions which he does not see happening, given the detailed floor plans for the work. An example of an unforeseen condition is a non-MERA-controlled enclosure like Big Rock, where private users change, which affects tower mapping. If the case, this would create minor costs.

Naso asked if using DPW staff would be cheaper. Klock said it may not, given the need for Motorola technicians to observe. This would muddy responsibility and liability issues. He recommended the use of Motorola services for this work.

M/S/P Cusimano/Kelly to approve Motorola Contract Change Order #6 in the amount of \$501,615.50 for inclusion of the Sonoma Site and Site-Ready Services into the MERA Next Gen System Project.

AYES: All
NAYS: None
ABSTENTIONS: None
Motion Carried.

4) Motorola Contract Change Order #7 – AES/DES Encryption, Radio Management, WiFi, OTAP – (Jeffries/Klock)

Jeffries presented Radio Management, OTAP and WiFi programming as highly recommended. He said radio management is a package that allows for tracking of each radio, radio upgrades and wireless reprogramming. Currently technicians must touch each radio that requires updating. Estimated cost for each round of reprogramming is \$75K-\$130K in technician time. In essence, this package is

purchased upfront to save costs later.

Jeffries explained Radio Management in conjunction with 2 other technologies, OTAP and WiFi, to send reprogramming out to the different radios. WiFi is the newer technology for all Next Gen portables, as well as current dual-band mobiles. WiFi requires hotspots to feed back to the MERA system.

Jeffries addressed the AES/DES encryption part of this Change Order. Gen I encryption is incompatible with Next Gen encryption. This provides for the transition of encryption capability to continue to function after cutover. Pearce asked about costs of the WiFi hotspots. Jeffries said we are researching which MERA agencies have them. Many have them, so it would be a matter of configuring them and working with members who want to take advantage of quicker reprogramming. This is not part of this proposal and would have to be estimated later. Pearce said most safety vehicles have this now. Jeffries said this would be about adding and configuring stations at public buildings.

In response to Pearce, Jeffries said Radio Management, OTAP and WiFi could reduce reprogramming time from weeks to a day or days. This would also permit focused changes without having to wait for larger reprogrammings. Cusimano asked about the frequency of reprogrammings. Jeffries recalled about 3 over the years with focused reprogrammings having to wait. Cusimano asked about the frequency of future reprogrammings with the new software. Jeffries said reprogrammings will probably be more often, as needed, since technicians won't have to wait for larger reprogrammings. In particular, there will be more template changes, especially with the addition of BayRICS. VHF channels may also require annual reprogramming.

Pearce asked if OTAP and WiFi were separate or together. Jeffries said they are 2 ways of doing the same thing. Simpson said not every radio is WiFi capable. Gaffney asked if this was recommended but not required. Jeffries said this timesaving reprogramming equipment was more appropriate now if we proceed with early radio ordering. Without it, more time would be required to reprogram at cutover along with technician time for upgrading and tracking. He acknowledged we could get Next Gen up without it.

Cusimano asked where we are with the Project Budget. Gaffney said he programmed in all the C.O.s on the agenda into cash flow projections. With these amounts, which do not include the 2 new C.O.s for \$3.5M, we are going to need a short-term borrowing of \$1M to \$1.5M due to cash flow. More cash will be needed for the additional C.O.s. There is no money to pay this off with Parcel Taxes, so members would need to be approached.

Cusimano suggested pushing back on Change Order #7 until we receive information on the others. Gaffney said this one sounds necessary, plus it saves us

money. Tyrrell-Brown said we may need to come back to these C.O.s later in the process. Pearce added we need funding horizons from Motorola to determine if these decisions need to be made now. Kelly agreed that some of the software changes are not needed now. Jeffries said after CEQA, decisions need to be made to complete customer Design Review and System Architecture.

Jeffries said Motorola can better inform us based on the estimated completion of CEQA, which is in late 2018 or early 2019, and Design Review. Timely decisions will avert another C.O. for redesign. In response to Kelly, Jeffries said timely decisions don't affect CEQA but do affect final design, Project progress and possible system redesign C.O.s. Gaffney recommended finding out costs for Change Orders #10 and #11 to determine the need for additional borrowing. Cusimano said assessing members is out of the question so this needs to be figured out. Pearce said Motorola needs to provide funding horizons for us to determine Project cash flow needs.

Jeffries responded that C.O. payment should not be needed now but deferred to the Motorola representatives. Hughes said they are asking for commitment before CY ending but shipping is not expected for 1-year plus. Gaffney confirmed these are one-time charges. Hughes said they can work with MERA on payment milestones. He confirmed these C.O.s are one-time payments per shipment. Van Doren agreed payments need to be mapped out in relation to cash flow. Gaffney, in response to Pearce, said cash flow and total funding are issues.

Gaffney suggested postponing action, noting he supported this C.O. It was agreed to table this matter after other C.O.s are considered. Possibly final action could be taken next month. Jeffries clarified Motorola is seeking decisions by year-end, so the November meeting would allow time for that. In response to Cusimano, Cassingham confirmed the Finance Committee meeting date of November 14 and that these items could be added to the agenda. Pearce asked for Motorola payment horizons to better inform Governing Board decisions.

Klock said the \$2.2M Motorola Contingency is separated from the \$8M in projected unappropriated Reserves over the life of Measure A. Gaffney said he had captured \$4.1M in C.O. costs, which are not included in his latest cash flow. He added that a decision on C.O. #8 will have considerable impact on Project costs.

5) Motorola Contract Change Order #8 – Multi-Protocol Label Switching (MPLS) for the Microwave Network – Recommended with Conditions

Klock presented C.O. #8 which changes the network architecture from Layer 2 to MPLS or Layer 3. This is recommended with conditions. Cost is \$1.967M. Of this is \$1.5M in SUA II costs, which are incurred beginning in Year 4-15, after the 3-year warranty. This C.O. insures a more secure and reliable system. During

System Design, it was discovered that the MERA System has some data services carried across its microwave network. Layer 2 is not a very secure way to handle this, which can make MERA susceptible to broadcast storms and other outages. Motorola was approached about how to deal with this, which led to the MPLS C.O.

Klock noted the Matrix addition to his staff report, which compares the Layer 2 and MPLS technology advantages and disadvantages, including better protection against human errors and broadcast storms. He further reviewed the technical advantages of MPLS, noting Layer 2 is like a loop that, if broken, could take the whole system down. Broadcast storms can be prevented by not allowing large data packets from other users entering the system.

Tyrrell-Brown asked if Gen II was more susceptible to these broadcast storm conditions. Simpson said Gen I has TDM. Gen II can provide time slots for data traffic, which can create isolation. Cusimano asked about non-LMR traffic and whether this is related to the 25 paying MERA Agencies. This seems outside MERA's scope. He asked if we would have this issue if these users were not attached to Next Gen. He realizes MPLS might be helpful to MERA in the future, but questioned if this was a MERA issue right now. Simpson said if these users were not on the system, it would not be a MERA issue. Simpson said his Shop has microwave uses that directly support MERA, like remote troubleshooting, cameras and site phones. This could affect their support services. If there is not other traffic but P25, there is no issue.

Cusimano talked about the lessons learned from Gen I to Gen II. The intention is to extend Gen II useful life and the MPLS technology could help us in the future based on where we want to be. He understands accepting this C.O. might be cheaper now. He also recognized that public safety users benefit each other but the cost of this C.O. benefits primarily others but MERA is paying for it and they aren't. He asked if there was a way to reduce this nearly \$2M expense with cost-sharing since it doesn't feel right that MERA should bear this alone.

Cusimano added he realizes that this is a best practice Motorola would have recommended with other systems as a norm. However, other users, if using the MERA system, should expect a bill or cease using it. Pearce asked Motorola again if Motorola had any history of other providers using a cost recovery mode for outside users. Hughes said Riverside County might be a reference and asked Klock if he was able to call them back. Klock said he wasn't. He added that Riverside could not share their cost recovery model with Motorola but they may with another public agency. He will contact them and include their feedback on their model in another staff report.

Cusimano said C.O. #8 cost of \$2M seems like a best practice but in comparison with other C.O.s needed now, plus 2 new C.O.s including chargers, this is

problematic for him, especially if we have to go to the Member agencies to fund these extra costs, which is a deal breaker for him. Gaffney said we should determine the costs of the new C.O.s and postpone C.O. #8 until we have all this information, which should hopefully be in just a month. Gaffney confirmed with Jeffries that we should have cost information on C.O. #10 and #11, and confirmed early-order radios expense from Motorola by then.

Cronin, in response to Gaffney, said we need to lay out what MERA does and what serves us in evaluating additional costs. Once we know what MERA's own system costs are, we will know what funding we have or don't have to accommodate other users. Much of this is timing about when payments are due. Gaffney agreed we should build the things we must have. Pearce confirmed with Gaffney that \$1.4 of the \$1.9M for C.O. #8 is spread out over years 4 through 15. Van Doren added the need to consider opportunity costs, including what may cost more in the future if issues are not decided now.

Cusimano said we need to factor in any other cost elements that may come up as we go through CEQA and site construction along with any potential cost recovery for MPLS. Pearce said adding MPLS could be a huge tool for MERA in the future as data uses are considered. Pearce asked how much the County actually used MERA's microwave at this time. Simpson confirmed the uses as video phones, County fire radios and cameras and Radio Shop troubleshooting. He noted a circuit that goes to Woodacre and Shop Analytics in support of MERA for troubleshooting.

Klock said this Change Order is integral to Motorola's design. Until this is resolved, they have been directed to stop system design. He added that if MPLS was chosen in the original design, this cost would have been included in the Contract. In response to Gaffney, Klock said Motorola can complete its design with approval of C.O. #8 and #9. Gaffney noted that the majority of C.O. #8 costs are spread out over time. Tyrell-Brown said, nonetheless, these are real future costs for which MERA must have funding. Pearce said getting through CEQA is critical to design as well, so a slight delay on C.O. #8 should not set us back.

6) Motorola Change Order #9 – Equipment Spares: Recommended

Klock said this is a clean-up C.O. that addresses additional redundancy and equipment spares not included in the original Motorola Proposal. Cost is \$214K and includes Item 1 of one additional UEM and Zone Watch licenses which allow 2 technicians at the same time to monitor the system at \$13K. He explained that this C.O. also includes 6 other items, which are equally weighted in redundancy value. Klock explained Item 2 – Redundant Voice Logging Equipment, which is the most expensive Item at \$134K, is a backup to the one voice logger in the Contract. Should the need arise to take down the primary for a software upgrade, this provides redundancy. Gaffney asked about voice logging. Norton said this is

huge for law enforcement as it provides for after-action reporting and investigation.

Pearce explained that he was sorry the C.O.s on the Agenda were not included in the original Contract and felt violated by the omissions. Cusimano asked if we were confident that there were no foreseeable equipment C.O.s upcoming beyond C.O.s #10 and #11. Klock said this was close to a complete package from Motorola. Gaffney said we are completely reliant on staff for these assurances. In response to a CEQA liability question, Klock said there is no budget for that. He added staff/consultant time cost savings can be reduced with reprogramming before cutover. Originally, \$10M was budgeted for construction, which has been reduced to \$5.3M. Current construction estimate for all sites is \$3.7M, which will be updated upon receipt of 100% plans from Motorola.

Kelly asked for budget updates from the original to better understand overages and reductions for the public's information. Pearce said the Project Oversight Committee has requested this information and will be monitoring it accordingly. Drew asked for clarification as to whether cooperation between public safety agencies is customary without payment for services they request. Kelly said the FBI is currently paying for MERA bandwidth. Jeffries clarified that this is a phone line which has minimal impact. Drew asked if we are reluctant to ask others to pay. In response to Gaffney, Hughes said he can ask other agencies about their practices. Jeffries added that compelling other users to pay can be problematic.

In response to Cronin, it was clarified that FBI and CHP use is not as impactful as fire cameras and similar data uses. Given the County is a MERA agency, cost recovery success is less likely with smaller users. Cusimano said this discussion all goes back to MERA's mission, and it does not include supporting technology outside of MERA. Klock said MERA has expressed interest in site security and video cameras would more easily use MPLS. Cusimano said if funding is there, we would support additional technology.

Cusimano said Corte Madera will support any expenditures that benefit the MERA system provided funding is there. Hughes said Hymel has supported building Next Gen for the future and MPLS accomplishes that.

Pearce said now that Motorola knows MERA's budget, they should revisit the costing of C.O.s #7 and #8 to identify where savings could be achieved, plus assist with identification of funding horizons. He also requested Motorola's assistance with refining and reducing the costs of C.O.s #10 and #11. Van Doren added a spreadsheet on what needs to be paid upfront would be very helpful to MERA's decision-making, along with identification of other upcoming expenditures. Pearce echoed Van Doren's request to identify the value of dollar spent today versus later.

M/S/P Kelly/Cusimano to approve Motorola Contract Change Order #9 in the amount of \$214,174.70 for inclusion of Equipment Spares into the Next Gen Project.

AYES: All
NAYS: None
ABSTENTIONS: None
Motion Carried.

7) CEQA Process and Schedule Update – Next Gen Project

Klock reported CEQA is generally going well, but the schedule is being pushed out 1 to 2 months due to alternative sites analysis for the SEIR. It is very important to include all the site alternatives that have been considered. He noted the community outreach and additional meetings that have been undertaken. Pending presentations are to the Marin County Board of Education in mid-November and Muir Beach in mid-December.

Klock reported that the draft SEIR will be issued by end of year, followed by required comment periods and Governing Board action in Spring. He reiterated the importance of thoroughness of the document over production schedule.

8) MERA System Operations Update – September – (Simpson)

Simpson reported on the standard activities, noting September was not too busy. As a result of scheduled weekly and quarterly maintenance tasks, a de-sense issue was discovered at Big Rock that required research to identify the source of harmful interference. Senior Technicians determined a distributed antenna system had been installed in a building in San Rafael. This is a requirement for large commercial buildings to permit in-building public safety communications and outside communications. This system was malfunctioning, which caused the de-sense. The Radio Shop needs to be aware as new buildings come online that they could be the source of these issues.

In response to Gaffney, Simpson said staff was able to sweep from Big Rock for the source of this problem. A Technician was familiar with this building project, which resulted in confirming it was the source. He added that it would be nice to have some equipment for microwave spectrum analysis at the sites which has bearing on the Layer 2 and 3 discussion.

Simpson reported on the Tamalpais Channel 6 receive reset and resolution of the ring down issue at Woodacre. The Radio Shop is still working on call reporting issues which affect usage reports. Channels are being looked at and S.O. Dispatch

is providing input. The System continues to hold up well.

9) Other Information

Pearce encouraged members to redistribute last meeting's one-page Next Gen Project Update as it still reflects the latest information on it. Klock said he is working on a \$10.5M agreement with MERA to separately cover SUA II costs. The Motorola contract included the SUA II, which was taken out of the \$40M Project costs in the Implementation Agreement. Once all the SUA II costs are known, he will present a separate SUA II Agreement for DPW to administer.

Klock reported that updates of the Mutual Aid and VHF Overlay Plans, which are to be refreshed biannually, was reviewed by the Ops Group and will be presented in the Spring. In response to Pearce on the maintenance of the Legacy System, Klock said spare parts were found in Southern California and Motorola is assisting to match these spare parts to the MERA System to keep it operating.

D. Open Time for Items Not on Agenda

None.

E. Adjournment

The meeting was adjourned at 4:48 p.m.

Respectfully submitted by:

Maureen Cassingham
MERA Executive Officer
and Secretary