

June 28, 2023

Governing Board Communication

Agenda Item C-1

TO: MERA Governing Board
FROM: Todd Williams - Operations Officer

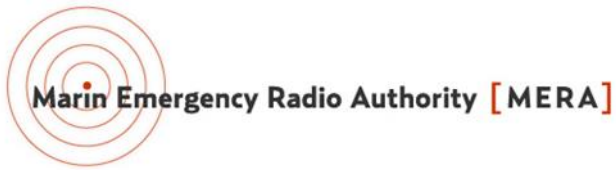
SUBJECT: MERA System Operations Update June 2023

MERA May System Maintenance Report (Prior Months May/June Reporting)

The Telecommunications Division provided the following support to MERA:

Mount Burdell - Defective Channel 4 Station Control Module. (Issued solved via replacement of controller board).

- o During preventive maintenance audio output checks on all MERA base stations the channel 4 module was identified as defective. Oddly, there were no known alarms or indicators alerting system vulnerabilities. Persistence and detailed trouble shooting were the keys to mitigating, identifying, and correcting the discrepancy promptly.
- o The module was replaced with a share to resolve the issue. Upon replacement, radio alignment procedure was performed to validate proper service functionality.
- o These efforts were the final checks for all failed audio output modules. There seem to be trends with degraded or inoperable modules leading to entire network module testing and/or validation. There were 114 total MERA base stations tested; however, 7 of 114 modules were found inoperable (i.e., not able to pass audio traffic).
- o Testing of all the degraded modules took several months to complete; however, we are now confident that all the MERA system base station repeaters are functioning properly. We anticipate that the 1st Gen network is now performing at its near best in 20+ years.



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Forbes - Degraded batteries at the Forbes mountaintop site displayed reading levels below acceptable (Issued solved with battery replacements).

- o A couple power plant batteries were discovered to be deficient during routine quarterly maintenance checks at the Forbes mountaintop site.
- o The 2 replacement batteries were installed resolving the vulnerability.

East Simulcast - Channel 8 on the MERA East Simulcast was down for 2 days. (Issued solved with a replacement module).

- o A bad power output module was found to be in alarm mode at the San Pedro site.
- o The spare module was replaced, and a performance alignment was also conducted to bring the channel back into service.

Civic Center - Failed card on the Fujitsu multiplexer at Civic Center. (Issued solved by rebooting the failed card).

- o This is a major piece of equipment. All MERA mobile and portable voice traffic for the entire County is routed through these cards via mountaintop sites.
- o The 1st Gen network has redundant capabilities i.e., hot standby cards built in to take over voice traffic in the event the primary card fails. Ultimately, automatic hot standby card prevented system failures.
- o Re booting the failed card corrected the errors bring the network back in service.



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Big Rock - Replacement of 2 microwave dish covers at Big Rock on 06/07/2023.

- o Microwave covers were damaged during high winds a few months ago. To replace these covers contractors will need to shut down portions of the MERA microwave network.
- o However, the microwave links do have loop protection, meaning if one direction of the microwave path goes down the voice traffic will go through the other direction. If everything works as designed, we do not expect outages and/or vulnerabilities.
- o One of the dishes points from Big Rock to Mt Barnabe. If things do not work out as designed when we shut this link down most of West Marin will lose radio coverage. This would include the areas of Pt. Reyes, San Geronimo, Inverness, Nicasio and Woodacre Fire Dispatch.
- o The second dish points at Sonoma Mountain and Bayhill. This area includes the entire North end of the County. These dishes will also require shut down for a few hours. An email will be sent out to Dispatchers a few days in advance to prevent service or coordination vulnerabilities.

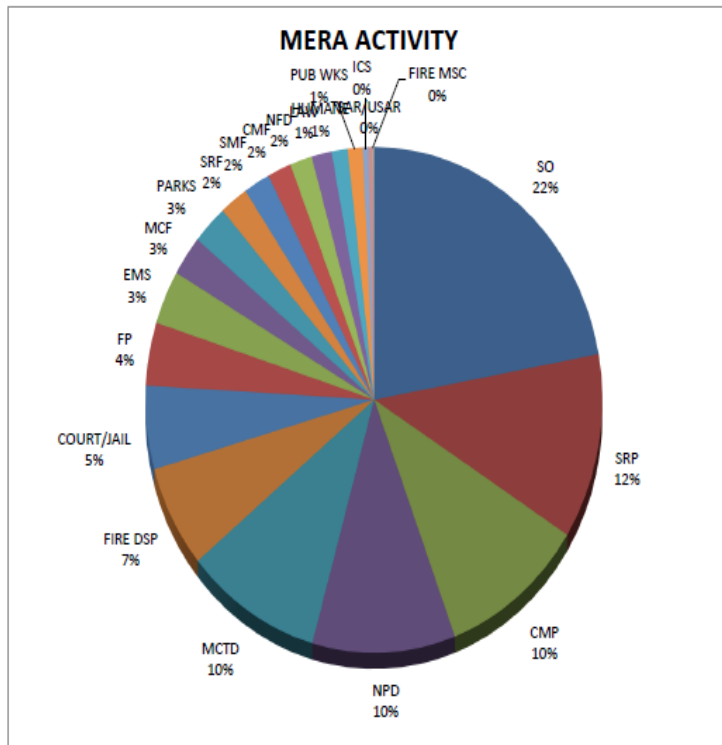


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MERA SYSTEM OPERATION

May	2023		
Agency Grouping	Radio Calls	Call Time	Busy Time
SO	45,125	138:21:37	0:00:00
SRP	26,539	74:11:45	0:00:00
CMP	20,629	64:28:21	0:00:00
NPD	21,672	63:11:04	0:00:00
MCTD	18,963	60:22:35	0:00:00
FIRE DSP	16,465	40:59:05	0:00:00
COURT/JAIL	15,606	33:25:19	0:00:00
FP	9,238	25:11:38	0:00:00
EMS	3,132	21:33:35	0:00:00
MCF	5,395	16:00:53	0:00:00
PARKS	5,586	15:54:19	0:00:00
SRF	5,685	12:35:23	0:00:00
SMF	4,614	11:41:11	0:00:00
CMF	4,249	10:29:46	0:00:00
NFD	3,945	9:45:51	0:00:00
LAW	3,426	8:51:38	0:00:00
HUMANE	2,530	7:05:00	0:00:00
PUB WKS	2,893	6:33:47	0:00:00
ICS	1,004	2:38:16	0:00:00
SAR/USAR	723	1:51:00	0:00:00
FIRE MSC	70	0:15:25	0:00:00
MUT AID	119	0:13:35	0:00:00
OTHER	24	0:05:23	0:00:00
SMP	30	0:03:04	0:00:00
TOTAL:	217,662	625:49:30	0:00:00

Category	Radio Calls	Call Time	Busy Time	Percent Usage
LAW TOTAL:	142,265	407:44:26	0:00:00	65.2
FIRE TOTAL:	44,278	125:12:09	0:00:00	20.0
PUBLIC WORKS TOTAL:	28,470	85:34:20	0:00:00	13.7
NON-MERA TOTAL:	2,649	7:18:35	0:00:00	1.2
TOTAL:	217,662	625:49:30	0:00:00	100.0





MERA SYSTEM OPERATION

Annual	2023		
<u>Agency Grouping</u>	<u>Radio Calls</u>	<u>Call Time</u>	<u>Busy Time</u>
SO	200,483	609:25:40	0:00:00
SRP	121,189	341:49:44	0:00:03
NPD	106,520	309:41:24	0:00:00
CMP	96,411	300:46:06	0:00:00
MCTD	80,291	259:01:24	0:00:00
FIRE DSP	82,999	209:21:09	0:00:00
COURT/JAIL	80,411	172:04:49	0:00:00
FP	45,664	125:14:13	0:00:00
EMS	15,108	105:16:01	0:00:00
MCF	27,417	85:32:06	0:00:00
SRF	30,104	69:57:36	0:00:00
PARKS	23,209	68:08:55	0:00:00
SMF	24,801	61:28:39	0:00:00
CMF	22,981	56:56:32	0:00:02
PUB WKS	21,628	56:01:06	0:00:05
NFD	21,541	55:54:06	0:00:00
SMP	14,473	41:56:06	0:00:02
LAW	16,604	41:21:07	0:00:00
HUMANE	9,752	27:13:06	0:00:00
SAR/USAR	4,449	12:07:07	0:00:00
ICS	2,301	5:41:02	0:00:00
MUT AID	527	1:12:33	0:00:00
FIRE MSC	312	1:08:26	0:00:00
OTHER	183	0:34:38	0:00:00
TOTAL:	1,049,358	3017:53:35	0:00:12

<u>Category</u>	<u>Radio Calls</u>	<u>Call Time</u>	<u>Busy Time</u>
LAW TOTAL:	681,755	1942:19:09	0:00:05
FIRE TOTAL:	229,712	657:41:42	0:00:02
PUBLIC WORKS TOTAL:	127,612	389:27:05	0:00:05
NON-MERA TOTAL:	10,279	28:25:39	0:00:00
TOTAL:	1,049,358	3017:53:35	0:00:12

