

September 27, 2023

Governing Board Communication

Agenda Item C-1

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

**SUBJECT: MERA System Operations Update September 2023**

**MERA September System Maintenance Report (Prior Month August Reporting)**

**The Radio Communications division provided the following support to MERA:**

Civic Center - Mount Tam Multiplexer Lock Up - Failed card on the Fujitsu multiplexer at Civic Center. (Issue resolved by rebooting the failed card).

- o This is a major piece of equipment. Ultimately, all mobile and portable voice traffic is routed through these cards on the various MERA mountaintop sites.
- o The 1<sup>st</sup> Gen network does have redundancy capabilities, i.e., hot standby cards which are designed to take over voice traffic in the event the primary card fails. Ultimately, automatic hot standby card prevents massive system failures.
- o If both cards fail, we will lose countywide radio traffic for a few seconds. However, the microwave equipment would automatically switch to an alternate path i.e., Civic Center - Big Rock.
- o Apparently, history logs are inaccurate; therefore, it's difficult to determine why the multiplexers keep locking up.
- o Rebooting the failed card temporarily corrected discrepancies; however, these short-term fixes are not ideal or permanent.
- o Unfortunately, this issue has been ongoing for approximately 4 months without a long-term solution in sight.
- o Fortunately, rebooting these cards normally restores operations for now.

Mount Barnabe - Mount Tam Microwave Signal Loss - Sporadic or intermittent signal loss (monitoring to determine root cause).

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- o Mount Barnabe - Mount Tam microwave signal degradation is now more frequent; however, these occurrences have only taken place 1-10 seconds a couple times a day lately.
- o The Radio Communications Division technicians have been consistently monitoring these logs, alarms, and charts to isolate or determine which radio is causing the outages. Sometimes it's best to completely leave this equipment alone and wait for it to completely fail, given its age and fragility.
- o Obviously, isolation of this equipment is the preferred choice, then replacing the degraded parts with spares.
- o Again, there is redundancy within the network, but has loop protection on the microwaves. Ideally, if there is a complete radio transmissions failure, loop protection will automatically kick in and reroute radio traffic to the other direction.
- o Rerouting of radio transmission are often seamless for the subscribers and dispatchers during most of these outages.

Mount Tam - Channel 4 outage on the East Simulcast - (Spare was installed to fix the problem).

- o This outage lasted several days, which ultimately effected most portable radio traffic and coverage around Mount Tam.

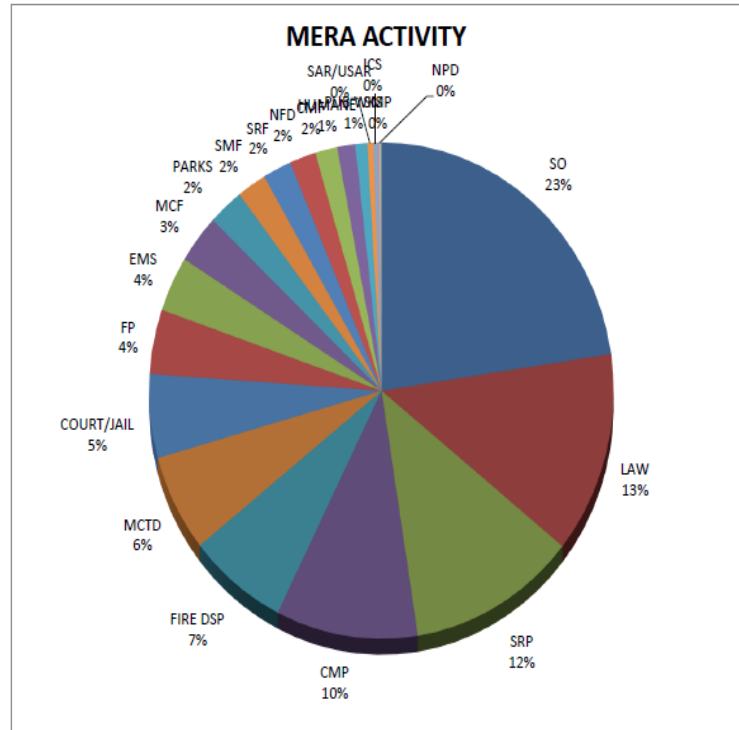


**MERA SYSTEM OPERATION**

August 2023

Agency Grouping	Radio Calls	Call Time	Busy Time
SO	47,221	141:50:57	0:00:00
LAW	27,883	82:30:57	0:00:03
SRP	26,374	73:27:52	0:00:00
CMP	20,072	61:51:49	0:00:00
FIRE DSP	17,344	43:20:32	0:00:00
MCTD	12,920	39:46:28	0:00:00
COURT/JAIL	16,335	34:12:21	0:00:00
FP	9,463	26:20:16	0:00:00
EMS	3,179	22:35:15	0:00:00
MCF	6,640	19:56:21	0:00:00
PARKS	5,205	15:23:35	0:00:00
SMF	5,164	12:53:04	0:00:00
SRF	5,494	12:30:10	0:00:00
NFD	4,272	11:26:41	0:00:01
CMF	4,070	9:36:46	0:00:00
HUMANE	2,891	7:52:38	0:00:00
PUB WKS	2,439	5:12:14	0:00:00
SAR/USAR	922	2:40:05	0:00:00
ICS	728	1:58:57	0:00:00
SMP	229	0:34:23	0:00:00
NPD	171	0:32:48	0:00:00
FIRE MSC	72	0:18:06	0:00:00
MUT AID	70	0:06:44	0:00:00
OTHER	2	0:00:09	0:00:00
<b>TOTAL:</b>	<b>219,160</b>	<b>626:59:08</b>	<b>0:00:04</b>

LAW TOTAL:	147,748	421:21:23	0:00:03
FIRE TOTAL:	47,157	135:17:00	0:00:01
PUBLIC WORKS TOTAL:	21,294	62:21:23	0:00:00
NON-MERA TOTAL:	2,961	7:59:22	0:00:00
<b>TOTAL:</b>	<b>219,160</b>	<b>626:59:08</b>	<b>0:00:04</b>





**MERA SYSTEM OPERATION**

Annual	2023		
Agency Grouping	Radio Calls	Call Time	Busy Time
SO	279,859	849:29:54	0:00:00
SRP	197,810	557:38:34	0:00:03
CMP	156,753	486:46:38	0:00:00
NPD	151,223	440:45:09	0:00:00
MCTD	122,927	390:58:52	0:00:00
FIRE DSP	134,438	338:30:15	0:00:00
COURT/JAIL	128,535	274:08:57	0:00:00
SMP	78,155	232:58:15	0:00:02
FP	73,220	201:50:04	0:00:00
EMS	24,653	171:42:38	0:00:00
MCF	46,570	142:45:02	0:00:00
LAW	50,894	140:09:21	0:00:03
PARKS	38,836	114:11:46	0:00:00
SRF	48,264	112:15:16	0:00:00
SMF	40,051	99:30:30	0:00:00
NFD	34,784	89:43:10	0:00:01
CMF	35,481	86:40:36	0:00:02
PUB WKS	29,441	74:22:11	0:00:05
HUMANE	17,760	49:35:11	0:00:00
SAR/USAR	6,148	16:41:52	0:00:00
ICS	6,472	16:38:38	0:00:00
FIRE MSC	570	1:59:59	0:00:00
MUT AID	815	1:47:55	0:00:00
OTHER	297	0:54:18	0:00:00
<b>TOTAL:</b>	<b>1,703,956</b>	<b>4892:05:01</b>	<b>0:00:16</b>

Category	Radio Calls	Call Time	Busy Time
LAW TOTAL:	1,116,449	3183:46:52	0:00:08
FIRE TOTAL:	370,959	1059:49:18	0:00:03
PUBLIC WORKS TOTAL:	197,973	597:05:45	0:00:05
NON-MERA TOTAL:	18,575	51:23:06	0:00:00
<b>TOTAL:</b>	<b>1,703,956</b>	<b>4892:05:01</b>	<b>0:00:16</b>

