

MERA Executive Committee Update

1. Logging recorder replacement
 - a. Equipment is in the process of being ordered by the individual agencies.
2. System mobile and portable additions.
3. Discussion of Zone Preference programming issues.
4. GGNRA Mutual Aid Use Agreement
 - a. GGNRA has submitted a new agreement for their Mutual Aid use of the MERA system.
 - b. GGNRA presently has 12 Mutual Aid radios on the MERA system.
5. System maintenance activity
 - a. Weekly, monthly and quarterly system checks have been completed.
 - b. Microwave modem was changed at Sonoma Mountain to resolve a problem at Bay Hill.
 - c. Quantar power amplifier with low power output was identified and replaced at Mt. Tiburon.
 - d. Quantar power amplifier with low power output was identified and replaced at Big Rock.
 - e. Controller power supply at Mill Valley was replaced.
 - f. Several microwave oscillators were replaced.
6. MERA System activities for July 2008:

Mobile, Portable and Control Station Allocation

<u>AGENCY</u>	<u>Original Bond</u>	<u>Actual Order</u>	<u>Dec 07</u>	<u>Jul 08</u>	<u>Pending</u>
MARIN DPW (Includes USAR)	139	156	172	189	
MARIN FIRE	131	148	153	153	1
MARIN SO	410	390	416	416	2
MARIN DA	9	10	12	12	
MARIN OPEN SPACE	30	33	33	37	
MARIN PARKS/LANDSCAPE	23	40	40	40	
MARIN FAIR/CENTER	3	3	7	7	
MARIN AG/WEIGHTS	0	2	2	2	
MARIN CORONER	0	3	3	3	
MARIN HHS-EMS/BIO/WELFARE	0	1	10	15	
MARIN PROBATION/JUVY	4	0	13	13	
MARIN IST	2	0	0	0	
HOSPITAL	3	9	9	9	
HUMANE SOCIETY	0	12	16	16	
TASK FORCE	0	24	24	24	
TRANSIT	47	47	63	65	
MMWD	20	28	59	60	
TRAINING/TESTING	54	54	33	33	
MCCD COLLEGE	11	11	13	13	
RVFD	16	23	32	32	
CMFD	2	22	33	33	
TFD	1	45	32	33	
KFD	14	16	23	23	
LFD	18	26	33	33	
MVFD	1	26	31	31	
NVFD	5	86	113	113	
SBFD	20	20	24	24	
BFD	11	16	23	23	
RFD	5	11	14	14	
SRFD	8	99	107	114	
SMFD	0	55	65	65	
IVFD	18	18	19	19	
MWCSD	16	20	21	21	
MBVFD	2	2	13	14	
NICASIO VFD	2	2	8	8	
SKYWALKER	0	0	12	13	
TOMALES VFD	2	2	3	3	
FSD	42	42	42	42	
FSD VOICE	35	35	35	35	
SRPD	142	142	194	194	
MVPD	48	48	49	49	
SPD	29	29	31	31	
BPD	9	9	11	11	Unspecified
TCPD	58	58	60	61	
RPD	14	14	14	14	

<u>AGENCY</u>	<u>Original</u> <u>Bond</u>	<u>Actual</u> <u>Order</u>	<u>Dec 07</u>	<u>Jul 08</u>	<u>Pending</u>
TPD	23	23	23	23	
FXPD	19	19	24	24	
SAPD	33	33	39	39	
NVPD	122	122	124	124	
CMPW	24	24	26	26	
LPW	21	21	22	22	
TPW	15	15	15	15	
SPW	14	14	14	14	
BPW	7	7	7	9	
FXPW	6	6	9	9	
SRPW	102	102	114	114	
SAPW	20	20	20	20	
MVPW	0	0	31	31	
NVPW	58	58	58	58	
AMR	0	0	12	12	
RED CROSS	0	0	1	1	
STATE PARKS	0	0	1	5	
CHP	0	0	2	2	
GGNRA	0	0	12	12	Unspecified
PRNSS	0	0	32	32	Unspecified
SONOMA SO	0	0	1	2	
ST. JOE AMB	0	0	6	6	
COAST GUARD	0	0	3	3	
SAN ANTONIO VFD	0	0	0	18	
Totals:	1,868	2,301	2,716	2,781	3+

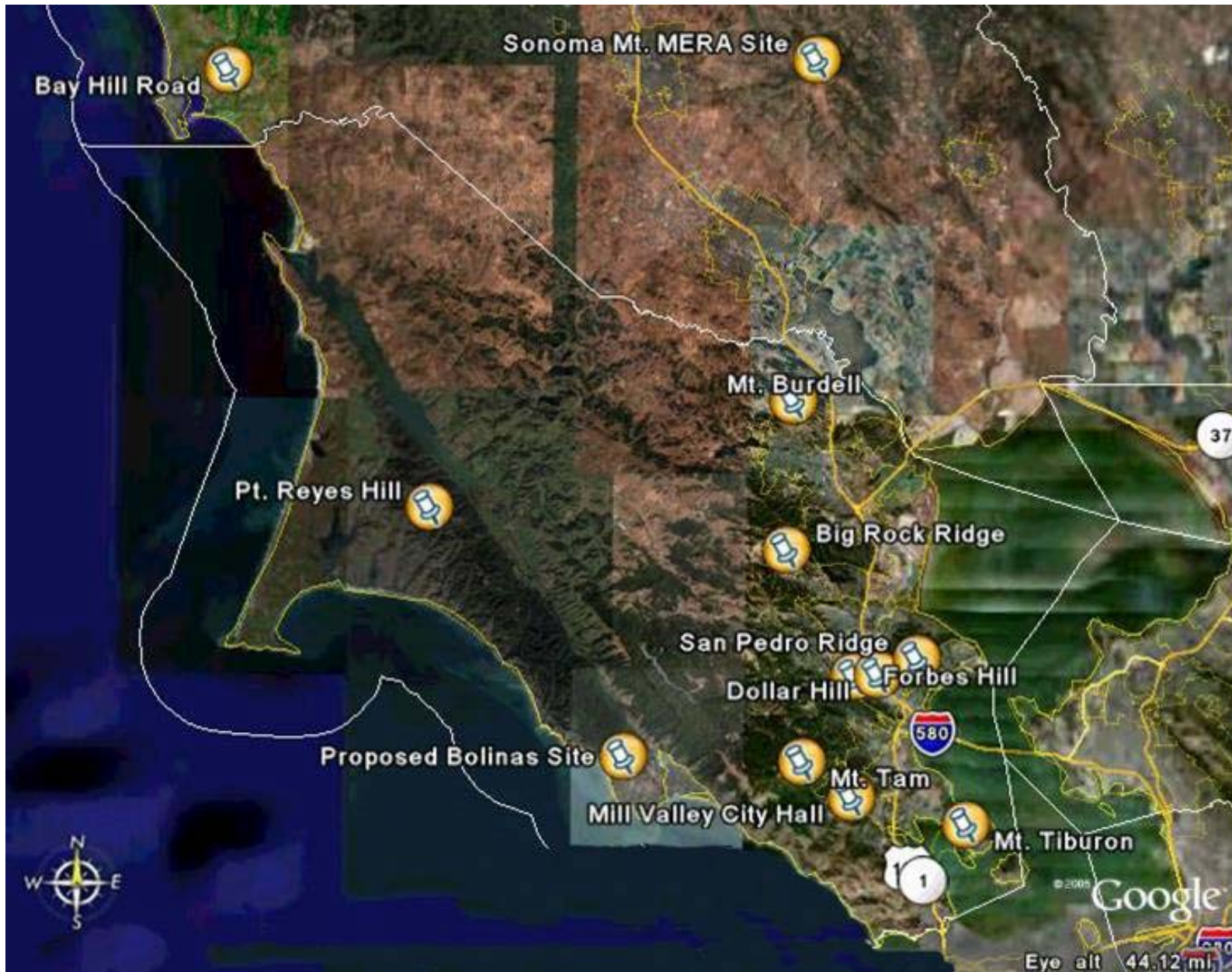
Zone Preference Issues

Issue

- Present programming has no Zone preference.
- Problems encountered include excessive system loading and scan problems.
- Want to revert to “East” preference in most new programming. (See reference chart)

Background

MERA Map



East Zone

- 101 Corridor
 - Big Rock Ridge, San Pedro Ridge, Mill Valley City Hall, Mt. Tiburon, Forbes Hill, Dollar Hill, Mt. Burdell
- 9 Channels
 - 1 Control Channel (Not available for voice)
 - 8 Voice Channels
 - Most system activity takes place in East Zone

West Zone

- Portions of West Marin County
 - Mt. Tamalpais, Mt. Barnabe, Pt. Reyes Hill
- 6 Channels
 - 1 Control Channel (Not available for voice)
 - 5 Voice Channels
 - Most West Marin and Valley activity takes place in West Zone

Sonoma Zone

- North Marin Area
 - 5 Channels
 - 1 Control Channel (Not available for voice)
 - 4 Voice Channels

Bay Hill Zone

- Bodega Bay Area
 - 5 Channels
 - 1 Control Channel (Not available for voice)
 - 4 Voice Channels

Bolinas Zone

- Bolinas Area
 - Martinalli Ranch north of Bolinas Fire Station
- 5 Channels
 - 1 Control Channel (Not available for voice)
 - 4 Voice Channels

Programming

- Each mobile radio, portable and control station in the MERA system is required to be programmed with a “Zone Preference”.
- The preference programming is by individual zone and each must be programmed with one of the following; None, Least, Preferred or Always.

No Preference (None)

- The radio roams from zone to zone.
 - Advantage is that it switches zones quicker.
 - We actually do very little switching.
 - Radio affiliates to a zone it usually stays.
 - Disadvantage is that it indiscriminately affiliates with any zone irregardless of available channel capacity.
 - Mt. Tam on West sees all of San Rafael.
 - Mt. Sonoma sees most of north Marin.

Least Preference (Least)

- The radio will avoid this zone unless no other zone is available.
 - Presently not used.

Preferred

- The radio will always seek this zone unless another zone is at least two levels better in signal quality.
- Most radios should be programmed for “East” preference.
 - “East” zone has the most capacity and handles virtually all traffic generated on the system.
 - Scanning is more reliable since almost all traffic is heard on the “East” zone at all times.

Always Preferred

- The radio will only go to this zone.
 - Not used in this system.

Background

- All radios were initially programmed with “East” preference.
 - East zone has the most channels and is designed to handle the most amount of traffic.
 - West, Sonoma, Bay Hill and Bolinas are designed with less capacity for those radios which cannot access the “East” zone due to geographic coverage limitations.

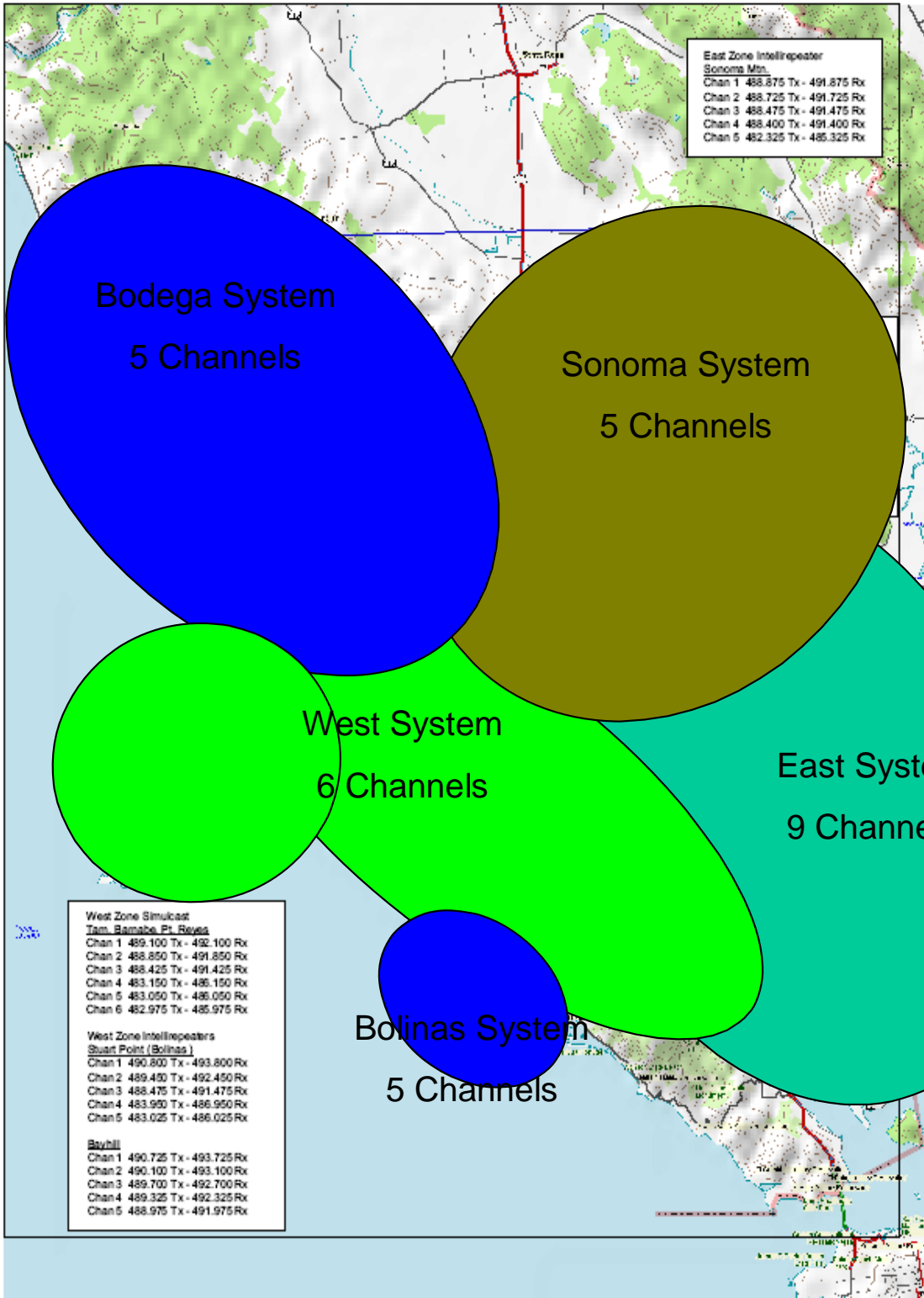
Background

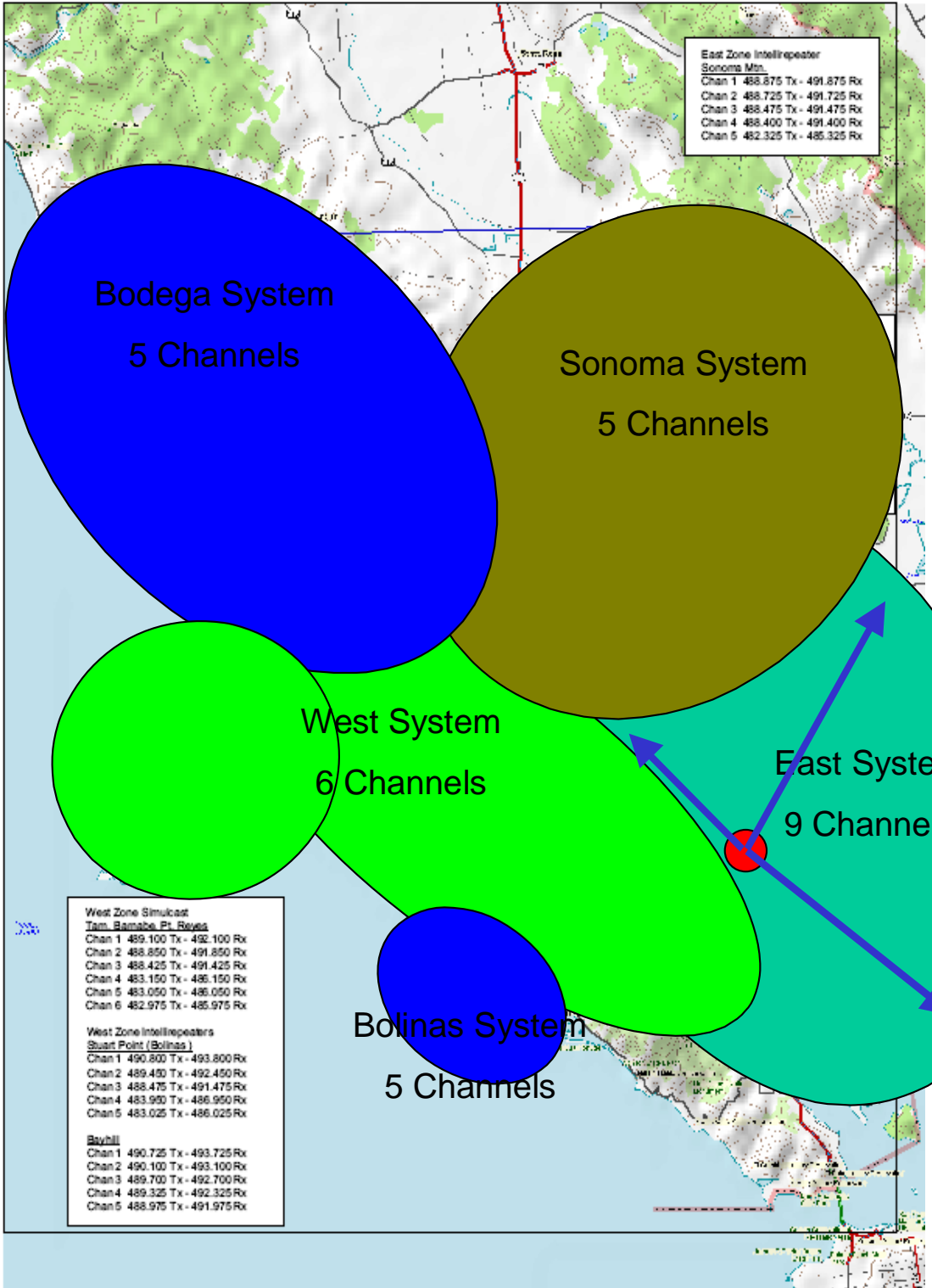
- Motorola's prescription for north county coverage problems was to program all radios to have no preference.
 - Radios in north county would switch to Sonoma faster.
 - Resulted in capacity (increased busies) and scanning problems.

System Zones

- 5 individual “Zones” comprise the MERA network
 - East, West, Sonoma, Bay Hill, Bolinas
 - All work as one network due to computers at Prime Site
 - The network is transparent to radio users
- 30 Radio channels are used overall
 - Channels are allocated by “Zone”

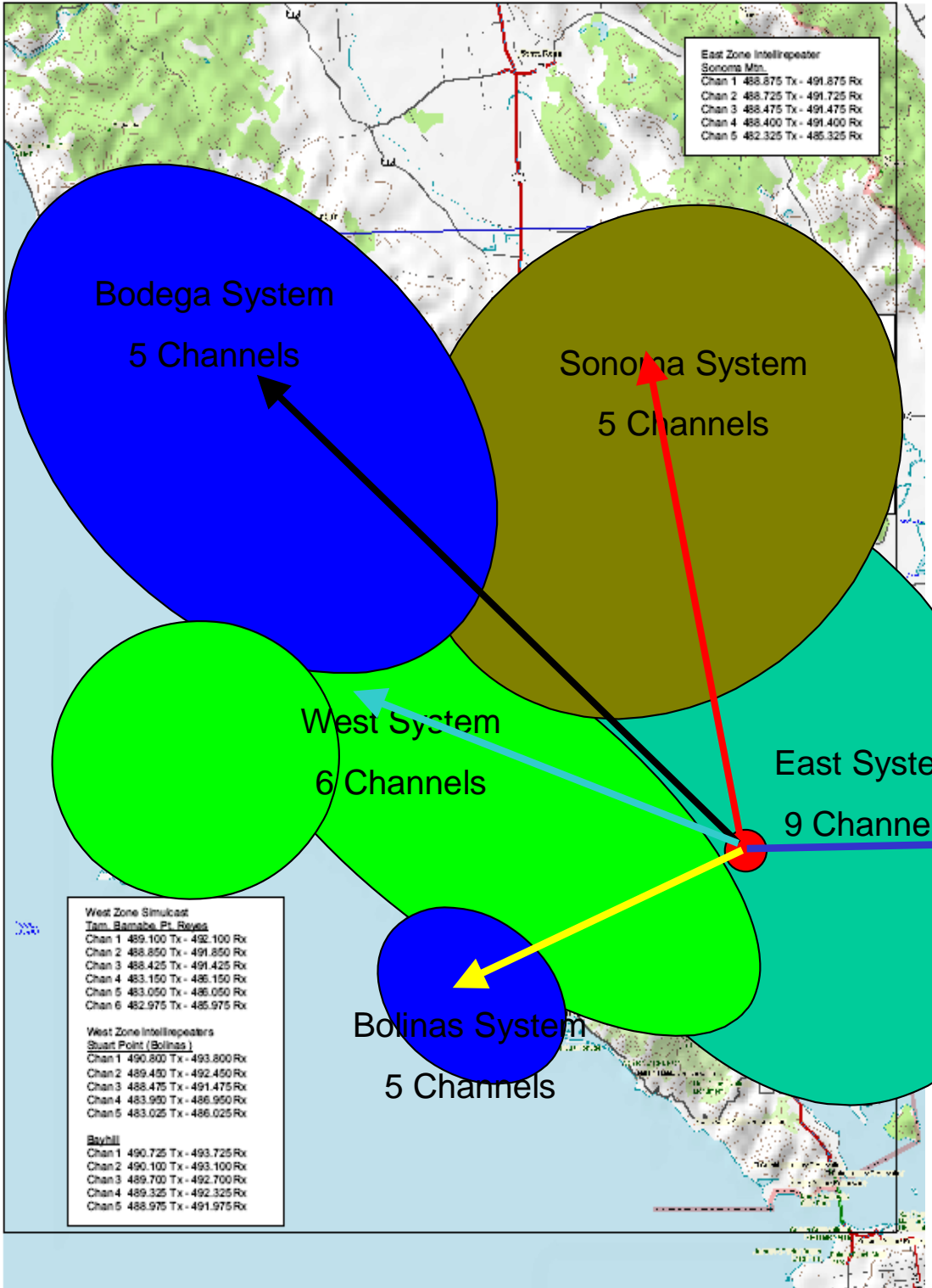
MERA Sites and Channels





MERA Sites and Channels

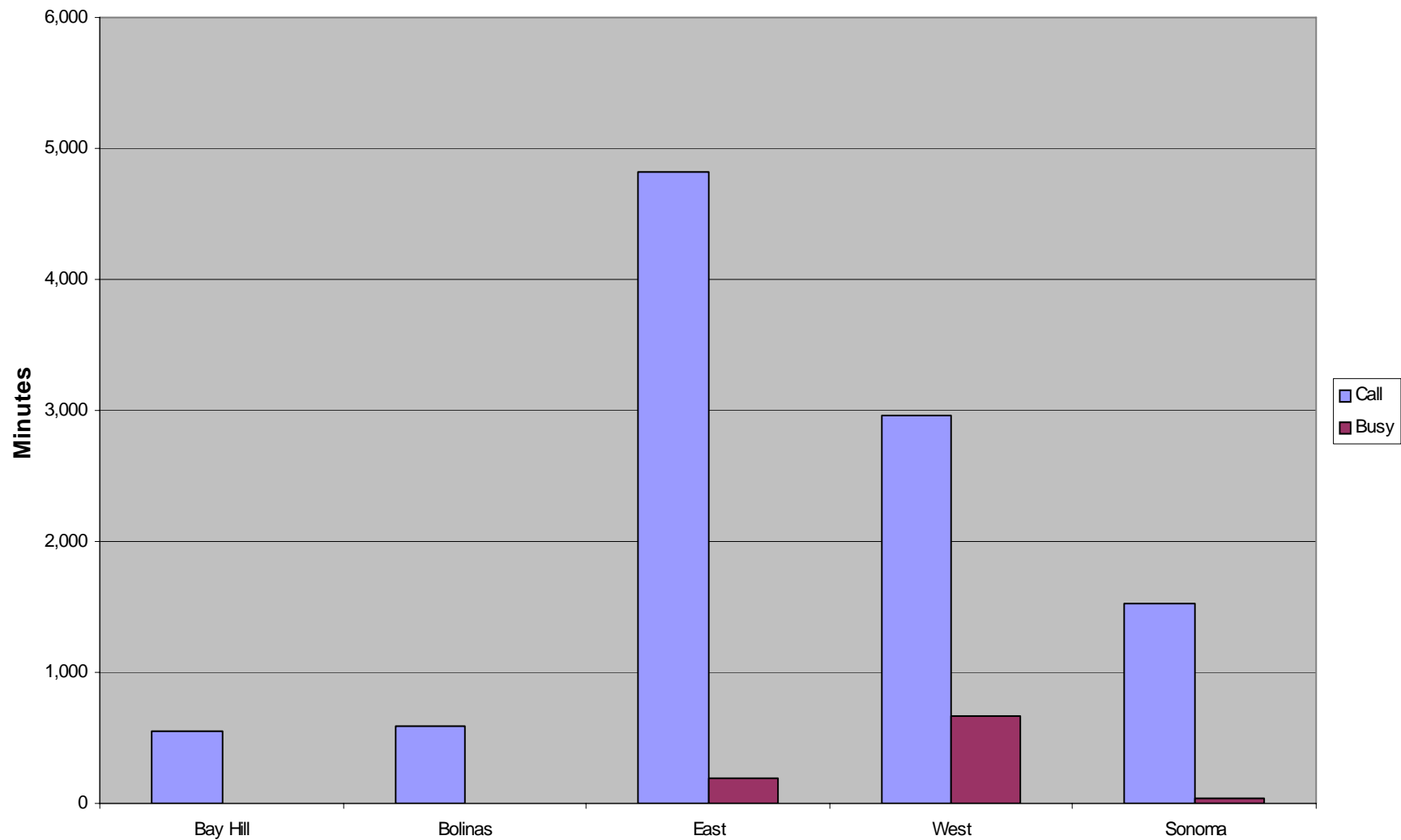
Example 1:
 San Rafael radio with
 East preference
 All calls stay in the
 East Zone.



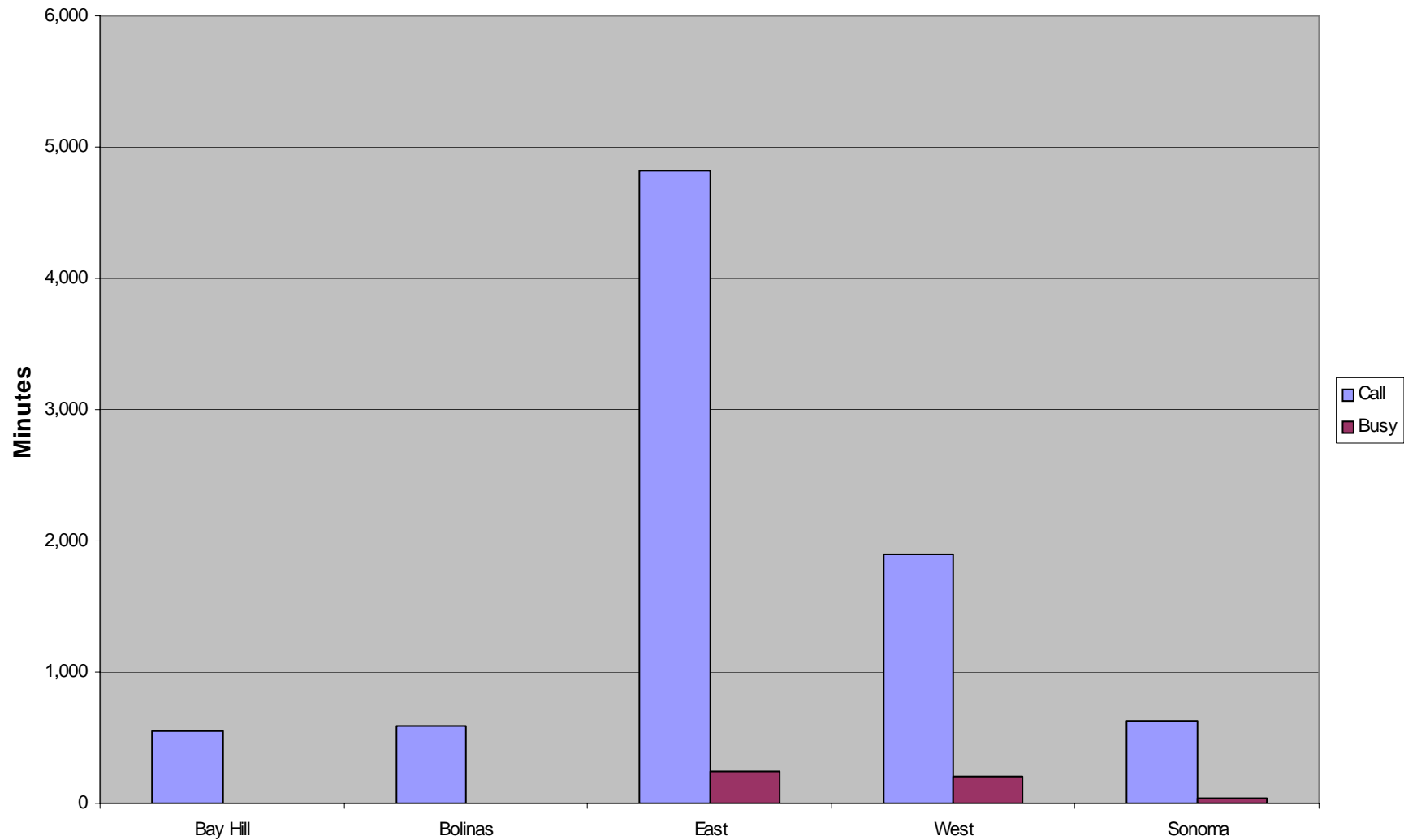
MERA Sites and Channels

Example 2:
 San Rafael radio
 with No preference
 Calls take one
 channel from each
 zone in the system.

Typical Zone Usage



Predicted Zone Usage “East Preferred”



Recommendations

- Immediately program Courts, Jail, Whistle Stop (mobiles), San Rafael Police, San Rafael Fire, San Rafael Public Works with “East” preference.
- Use “East” preference for all radios with the following exceptions:
 - West Marin volunteers should remain “No Preference” due to geographic restrictions.
- Change remaining radios during next scheduled system reprogramming.
- Review specific needs on a case by case basis.

MERA System Activity

For the Month of : **July 2008**

	Radio Calls	Radio Hours	Busy Count	Busy Seconds	Busy Sec. Per Count	Busy Sec. Per Call	Percent Busy
SO	39,901	152.5	104	239	2.298	0.006	0.044
SRP	33,422	122.9	79	163	2.063	0.005	0.037
SMP	28,275	107.1	64	134	2.094	0.005	0.035
NPD	28,617	97.6	12	26	2.167	0.001	0.007
MCTD	51,532	93.5	330	555	1.682	0.011	0.165
TCP	20,565	69.7	48	103	2.146	0.005	0.041
JAIL	17,498	44.1	19	30	1.579	0.002	0.019
SAP	12,776	40.3	53	129	2.434	0.010	0.089
MCF	10,994	38.4	57	102	1.789	0.009	0.074
SRF	9,603	27.5	41	95	2.317	0.010	0.096
FP	8,481	27.2	22	67	3.045	0.008	0.068
FSA	4,814	23.1	37	112	3.027	0.023	0.135
PARKS	6,007	21.9	24	43	1.792	0.007	0.055
LAW OTHER	5,951	21.8	12	18	1.500	0.003	0.023
EMS	6,153	18.7	28	27	0.964	0.004	0.040
SMF	5,943	17.5	19	30	1.579	0.005	0.048
COURT	4,389	16.0	37	84	2.270	0.019	0.145
CMF	5,013	15.6	23	45	1.957	0.009	0.080
PUB WKS	4,857	15.0	39	55	1.410	0.011	0.102
MMWD	3,750	14.2	27	60	2.222	0.016	0.117
NFD	4,099	13.8	7	16	2.286	0.004	0.032
HUMANE	6,911	12.9	19	17	0.895	0.002	0.036
FD DSP	3,842	12.4	84	137	1.631	0.036	0.307
ICS	6,968	12.2	11	4	0.364	0.001	0.009
MUT AID	823	2.0	4	2	0.500	0.002	0.028
FIRE OTHER	503	1.0	2	0	0.000	0.000	0.000
MWCSD	129	0.3	0	0	0.000	0.000	0.000
TEST	3	0.0	0	0	0.000	0.000	0.000
RPD	2	0.0	0	0	0.000	0.000	0.000
CHP	1	0.0	0	0	0.000	0.000	0.000
OTHER	0	0.0	0	0	0.000	0.000	0.000
SCHOOL	0	0.0	0	0	0.000	0.000	0.000
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Totals:	331,822	1,039	1,202	2,293	1.908	0.007	0.061
Previous Month:	318,324	998	1,419	3,405	2.400	0.011	0.095
Change:	13,498	40.8	-217	-1,112	-0.492	-0.004	-0.033

MERA SYSTEM USAGE - JUNE 2008

