

**AGENDA
REGULAR MEETING
YECA GOVERNING BOARD
May 5, 2021
2:00 P.M. Public Session**

Woodland Police Department, 1000 Lincoln Ave, “Community Room,” Woodland, CA 95695

NOTE: This meeting is being agendized to allow Board Members, staff, and the public to participate in the meeting via teleconference, pursuant to the Governor’s Executive Order N-29-20 (March 17, 2020), available at the following link:

Teleconference Options to join Zoom meeting:
By PC: <https://us02web.zoom.us/j/84256097223>
Meeting ID: 842 5609 7223
Or
By Phone: (669) 900-6833
Meeting ID: 842 5609 7223

ALL ITEMS ARE FOR ACTION UNLESS OTHERWISE NOTED WITH AN ASTERISK (*)

1. Call to Order (2:00 PM)

2. Approval of the Agenda

3. Announcements

4. Public Comment

Speakers must state their name and city of residence for the record and limit their remarks to three minutes. Members of the public audience may address the Governing Board on any item not on today’s agenda. No response is required and no action can be taken, however, the Governing Board may add the item to the agenda of a future meeting.

5. Consent Agenda

Consent Agenda items are considered to be routine and will be considered for adoption by one motion. There will be no separate discussion of these items unless a member of the Governing Board, member of the audience, or staff requests that the Governing Board remove an item. If an item is removed, it will be discussed in the order in which it appears on the Agenda.

- a. Approval of the Minutes from the March 3, 2021, Regular Meeting
- b. Operations Division Report
- c. Current Year Budget Status Update
- d. 2021 1st Quarter – Dispatch to Queue
- e. FY21 Budget Adjustments

6. Old Business

- a. YECA Building Remodel
- b. Records Management System Update
- c. ALERTWildfire Camera Program Status

7. Regional Radio Needs Assessment Presentation from CSI Telecommunications, Craig Trygstad, Principal Engineer - Info Only

- a. Radio Needs Assessment Report

8. Closed Session

- a. Public Employee Performance Evaluation (GC54957)
Position Title: Executive Director

9. Next Scheduled JPA Board Meeting Date May 12, 2021 at 2pm, "Special Meeting"

10. Items for Special Meeting Agenda

- a. YECA Re-Org
- b. T-Mobile Lease

11. Adjournment

I declare under penalty of perjury that the foregoing agenda was available for public review and posted on/or before April 30, 2021 on the bulletin board outside of the Yolo County, Erwin Meier Administration Center, 625 Court St., Woodland, California and on the agency website:



Dena Humphrey, Executive Director

PUBLIC PARTICIPATION INSTRUCTIONS:

Based on guidance from the California Department of Public Health and the California Governor's Office, in order to minimize the spread of the COVID 19 virus, please do the following:

- 1. You are strongly encouraged to observe the live stream of the meeting at <https://us02web.zoom.us/j/784256097223>, Meeting ID: 842 5609 7223 or by phone at (669) 900-6833 Meeting ID: 842 5609 7223.

2. If you are joining the meeting via zoom and wish to make a comment on an item, press the "raise a hand" button. If you are joining the meeting by phone, press *9 to indicate a desire to make comment. The chair will call you by name or phone number when it is your turn to comment. Speakers will be limited to 3:00 minutes.
3. If you choose not to observe the meeting but wish to make a comment on a specific agenda item, please submit your comment via email by 5:00 p.m. on the Monday prior to the meeting. Please submit your comment to the Dena Humphrey at dhumphrey@yolo911.org. Your comment will be placed into the record at the Board meeting.
4. If you are watching/listening to the live stream of the meeting and wish to make either a general public comment or to comment on a specific agenda item as it is being heard, you may also submit your comment, limited to 250 words or less, to the Dena Humphrey at dhumphrey@yolo911.org noting in the subject line: For Public Comment. Every effort will be made to read your comment into the record, but some comments may not be read due to time limitations. Comments received after an agenda item will be made part of the record if received prior to the end of the meeting.

If you are a person with a disability and you need disability related accommodations to attend the meeting, please contact Corina Macias at (530) 666-8919 or (530) 666-8909 (fax). Requests for accommodations must be made at least two full business days before the start of the meeting.

**YOLO EMERGENCY COMMUNICATIONS AGENCY (YECA)
GOVERNING BOARD
March 3rd, 2020
2:00 P.M. Public Session
Minutes**

The YECA Governing Board met on Wednesday March 3rd, 2020 at the Woodland Police Department 1000 Lincoln Ave – Community Room, Woodland. Chair Derrek Kaff called the meeting to order at 2:00 p.m.

This meeting was formatted to allow Board Members, staff, and the public to participate in the meeting via teleconference, pursuant to the Governor’s Executive Order N-29-20 (March 17, 2020), was available at the following link:

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PRESENT: Primary Board Members: Derrek Kaff, City of Woodland, Dena Humphrey, YECA Executive Director, Steve Binns, City of West Sacramento, Rebecca Ramirez, Yocha Dehe Wintun Nation

Joined via ZOOM: Tom Lopez, Yolo County

Absent: John Miller, City of Winters

Entry No.2

Minute Order No. 2021-32

Approval of the Agenda - [Approved as presented](#)

MOTION: Ramirez SECOND: Binns AYES: Kaff, Binns, Ramirez, Lopez Absent: Miller

Entry No. 3

Minute Order NO. 2021-33

Announcements – Dena has an announcement

- a. Resolution: Proclamation “National Public Safety Telecommunications Week April 18th-24th.
- b. YECA 2020 Dispatcher of the Year “Dave Hetland”

Entry No. 4

Public Comment – None

Entry No. 5

Minute Order No. 2021-34; Approval of Consent Agenda - [Approved](#)

- a. Approval of the Minutes from the February 3, 2021, Regular Meeting
- b. Operations Division Report
- c. Current Year Budget Status Update

MOTION: Lopez SECOND: Binns AYES: Kaff, Ramirez, Binns, Lopez Absent: Miller

Entry No. 6

Old Business

- a. Radio Encryption and Radio Needs Assessment for Strategic Planning Craig Trygstad, designer of YECA's current radio infrastructure and provided a proposed assessment plan. Dena outlined the initial timeline plan to determine radio needs. Initial plan includes sending survey to Law and Fire agencies. Tentative plan is to create work groups in the 3rd and 4th week of March with the 4th week combining Law and Fire. The assessment and recommendations is planned for May based on the survey and work group results.

Entry No. 7

Introduction to the ALERTWildfire Camera Program for Early Detection- Info Only

- a. Patrick Ellis, Public Safety Specialist from PG&E to provide background on program. To date 355 cameras installed with 135 cameras PG&E plans to install in 2021 and 2022. For our jurisdiction currently looking at setting up cameras in the areas of Capay, Brooks, and Winters. PG&E would provide cameras and maintenance. Lopez questioned who would have access to cameras. Ellis confirmed that while we could view footage 24hrs a day, control of camera placement would be at PG&E control center. Likewise, Lopez advised that YECA's radio team confirm with PG&E that system does not interfere with radio traffic. Board member Binns questioned associated fees. Dena confirmed costs would be minimal with PG&E picking up costs of power. Chair Kaff requested that we bring this agenda item back to the board for the status as discussed in the later Entry No. 10, item D.

Public Comment- Bruce Andreozzi shared that this project started in the Lake Tahoe basin and expanded to Oregon and Utah. In addition, Bruce felt this is a good system where the public can have access to snapshots of the area and that this system will be useful for monitoring fire direction and for evacuations of the public. Bruce questioned where in Capay Valley PG&E will be setting up these cameras.

Dena advised cameras would be set up in the Bald Mountain and Winters area.

Entry No. 8

Minute Order NO. 2021-34

FY21/22 Final Budget - Approved

- a. FY21/22 Budget – Ramirez commended staff for maintaining budget with all the increased costs due to COVID 19. Chair Kaff thanked Dena for meeting the City Managers group target for a 5% budget reduction for FY20/21 and for returning to authorized staffing. Binns thanked all staff.
- b. FY21/22 CIP
- c. FY21/22 Position Table

MOTION: Ramirez SECOND: Binns AYES: Kaff, Binns, Lopez, Ramirez Absent: Miller

Entry No. 9

Next Scheduled JPA Board Meeting- Next Meeting May 5, 2021

Entry No.10

Items for Future Agenda

- a. Radio Needs Assessment Status

- b. T-Mobile Amendment
- c. Executive Director Annual Evaluation
- d. PG&E MOU

**Entry No. 11 Meeting Adjourned at 2:46 p.m.
Minutes submitted by Tianna Dumas**

STAFF REPORT

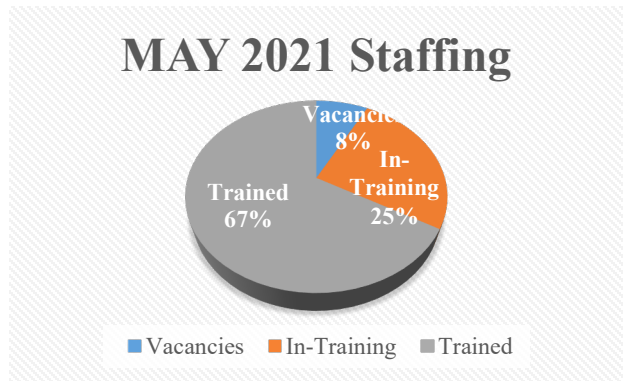
Agenda Item: 5.b

Date: May 5, 2021
To: YECA Governing Board
Thru: Dena Humphrey, Executive Director
From: Leah Goodwin, Operations Manager
Subject: February-March 2021 Combined Operations Division Report
Recommendation: No action required; information only.
Summary: Operations staff is currently engaged in the following:

Staffing:

1. Out of 39 funded operations positions:

Classification	Filled	Funded	Vacant
Supervisor	4	4	0
Dispatcher III	3	4	1
Dispatcher I/II	25	26	1
Dispatch Assistant	4	5	1
TOTAL	36	39	3



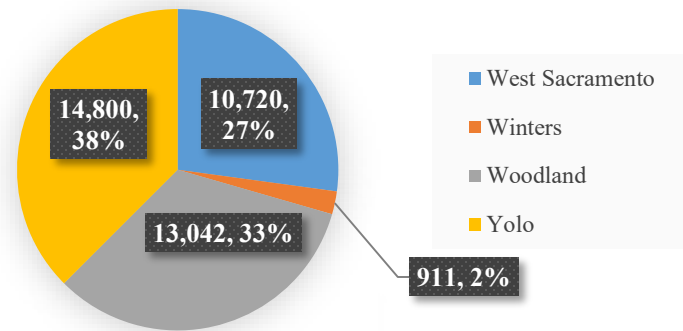
- a. Bailey Clemons has promoted to Dispatcher I and has begun training on the YSO/WNP radio (1st console).
 - b. Naiya Johnson is in training on the WDP radio (4th and final console).
 - c. Brittany Bray has completed training on the WSP radio and has begun training on the Fire radio (2nd console).
 - d. Former YECA Dispatcher Brenda DaPrato, has returned to YECA, and has completed training on all radios.
 - e. New dispatchers, Gabriel Hernandez and Nikole Patterson, have completed their call taking training and are scheduled to begin training on their first radios.
 - f. New staff: Cody Wooten, Beverly Franks and Natalie Lorenzo have completed their in-house academy and will begin Emergency Medical Certification and on the console training in the call taking phase in May.
2. Two staff members have left to pursue opportunities with other dispatch agencies.
 3. Recruitment is open for an anticipated academy in August 2021.

Statistical Information:

Monthly Phone Statistics:

	Jan	Feb	Mar	YTD
9-1-1	4,766	4,019	4,594	13,379
7-Digit Emergency	960	768	835	2,563
AMR	124	118	159	401
West Sacramento	3,772	3,412	3,536	10,720
Winters	298	286	327	911
Woodland	4,397	4,222	4,423	13,042
Yolo	4,979	4,609	5,212	14,800
Outgoing	5,453	4,936	5,658	16,047
TOTAL	24,749	22,370	24,744	71,863

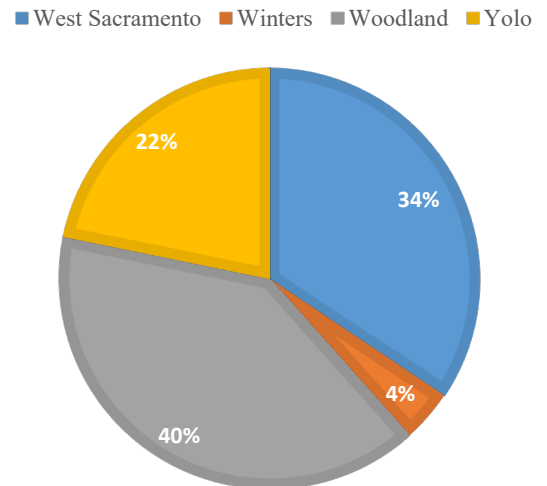
**2021 YTD
Incoming Non-Emergency
Lines**



Monthly CAD Events:

	Jan	Feb	Mar	YTD
West Sacramento				
TOTAL	5,671	5,799	5,272	16,742
Winters				
TOTAL	620	591	737	1,948
Woodland				
TOTAL	6,664	6,254	6,487	19,405
Yolo				
TOTAL	3,285	3,290	4,061	10,607
Yocha Dehe				
TOTAL	36	28	37	101
Arbuckle				
Outside Agency/non-geo validated				
TOTAL	153	133	189	474
UCD				
TOTAL	103	87	89	279
GRAND TOTAL	16,575	16,218	16,904	49,667

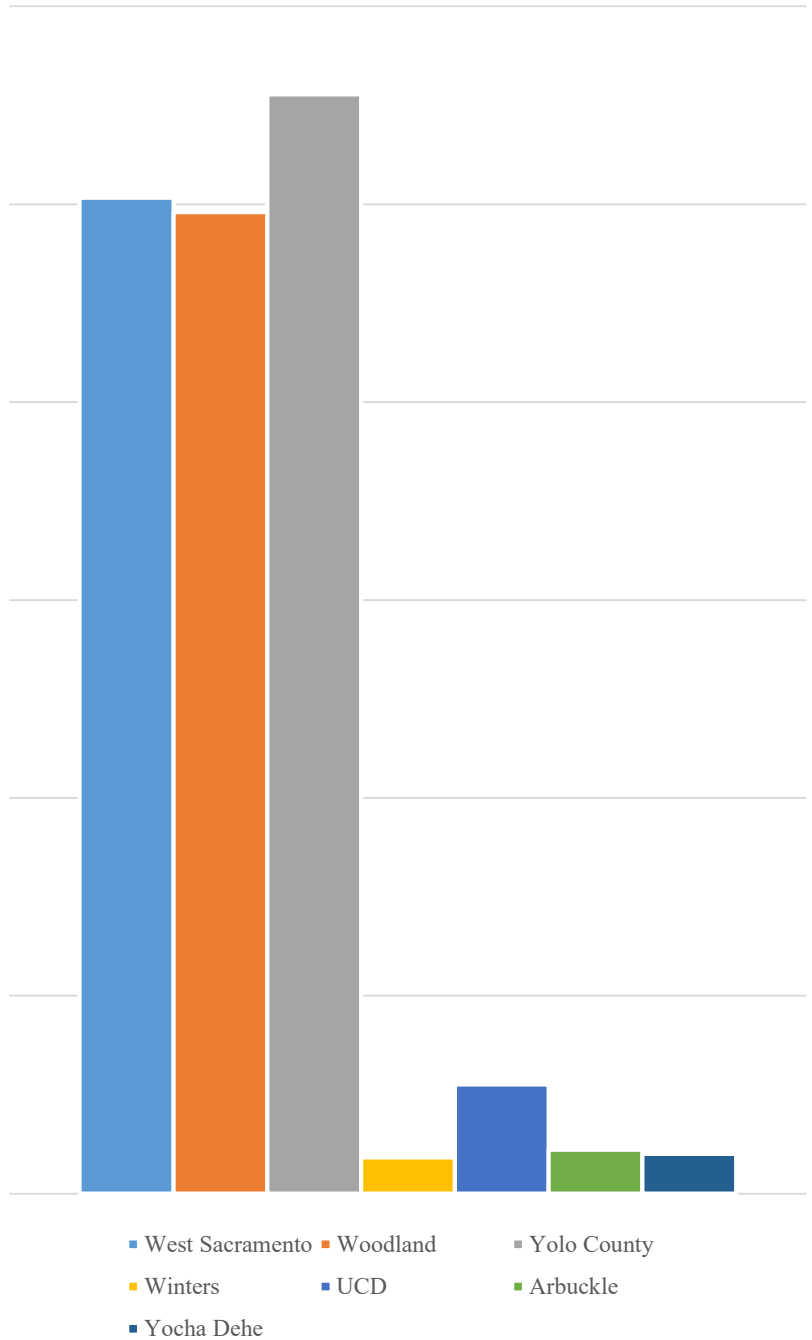
2021 YTD CAD EVENTS



Fire CAD Events:

	Jan	Feb	Mar	YTD
West Sacramento				
Fire	412	282	383	1,077
Medical	521	423	495	1,439
TOTAL	933	705	878	2,516
Winters				
Fire	76	67	73	216
Medical	38	21	33	92
TOTAL	114	88	106	308
Woodland				
Fire	452	364	382	1,198
Medical	470	376	436	1,282
TOTAL	922	740	818	2,480
Yolo				
Fire	751	834	912	2,497
Medical	93	83	104	280
TOTAL	844	917	1,016	2,777
Yocha Dehe				
Fire	17	16	14	47
Medical	19	12	23	54
TOTAL	36	28	37	101
Arbuckle				
Fire	22	16	16	54
Medical	21	20	16	57
TOTAL	43	36	32	111
UCD				
Fire	77	65	72	214
Medical	23	22	17	62
TOTAL	100	87	89	276
ALL				
Fire	1,807	1,644	1,857	5,308
Medical	1,180	952	1,119	3,251
TOTAL	1,180	2,596	2,976	6,752

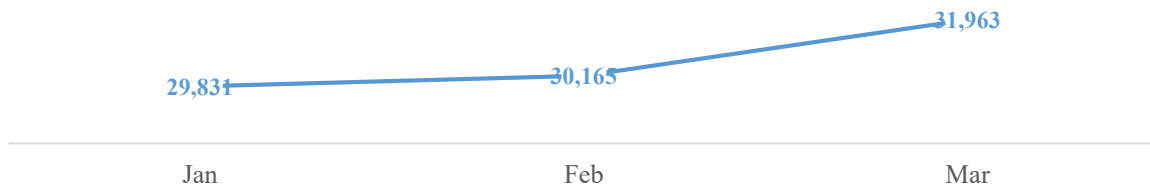
2021 Fire Events



CLETS Inquiries/Returns:

	Jan	Feb	Mar	YTD
Inquiries	29,831	30,165	31,963	91,959
Returns	48,211	48,751	51,657	148,619

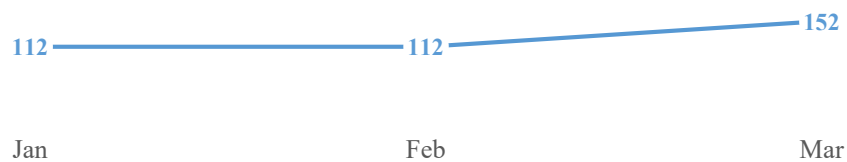
2021 YTD CLETS INQUIRIES



Confidential Records Requests (Audio & CAD Print out):

Jan	Feb	Mar	YTD
112	112	152	376

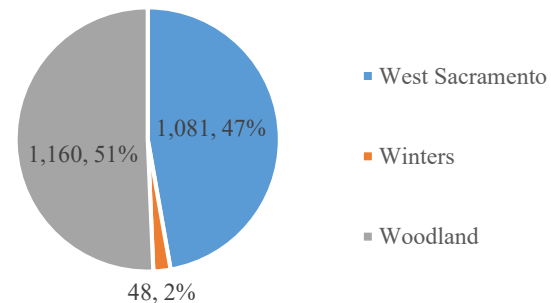
2021 RECORDING REQUESTS



After-Hours Records Entries:

	Jan	Feb	Mar	YTD
West Sacramento	403	295	383	1081
Winters	19	8	21	48
Woodland	303	400	457	1160
TOTAL	725	703	861	2,289

2021 YTD Records Entries



Text to 9-1-1:

	Jan	Feb	Mar	Total YTD
TOTAL	16	29	32	77

IROC:

Jan	Feb	Mar	YTD
	16	5	21

Projects:

1. Leadership Development Training
2. EMD-QA – Supervisor Hoyt has taken over reviews during pandemic due to YEMSA unavailability.
3. Policy Manual Revisions
4. Disaster Recovery Plan
 - a. Cases completed, initial phase of staff training completed, full recovery set up scheduled for testing May 5, 2021
5. Recruitment – in progress
6. Succession Planning
7. 2021 In-Service Training Plan
8. CalOES GIS Pilot Project
9. Next Gen 9-1-1 Equipment Installations
10. CPE Replacement Planning

Agenda Item: 5.c

YECA BUDGET MANAGEMENT SUMMARY 5.c

2020 / 2021 As of 3/31/2021

	8% JUL-20	17% AUG-20	25% SEPT-20	33% OCT-20	42% NOV-20	50% DEC-20	58% JAN-21	67% FEB-21	75% MAR-21	83% APR-21	92% MAY-21	100% JUN-21
360 3601-8350 ADMINISTRATION												
Appropriations	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278	\$ 1,899,278
Encumbrances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Expenditures	\$ 96,692	\$ 159,362	\$ 305,569	\$ 351,056	\$ 713,040	\$ 751,246	\$ 823,470	\$ 924,639	\$ 1,052,931	\$ 1,142,361	\$ -	\$ -
Unencumbered	\$ 1,802,586	\$ 1,739,916	\$ 1,593,709	\$ 1,548,222	\$ 1,186,238	\$ 1,339,224	\$ 1,075,808	\$ 974,639	\$ 846,347	\$ 756,917	\$ 1,899,278	\$ 1,899,278
Percent Expended	5%	8%	16%	18%	38%	40%	43%	49%	55%	60%	0%	0%
360 3602-8351 OPERATIONS - DISPATCH												
Appropriations	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668	\$ 4,275,668
Encumbrances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Expenditures	\$ 361,308	\$ 598,771	\$ 1,057,943	\$ 1,245,250	\$ 1,638,950	\$ 1,881,630	\$ 2,111,185	\$ 2,377,171	\$ 2,761,034	\$ 3,049,092	\$ -	\$ -
Unencumbered	\$ 3,914,360	\$ 3,676,897	\$ 3,217,725	\$ 3,030,418	\$ 2,636,718	\$ 2,394,038	\$ 2,164,483	\$ 1,898,497	\$ 1,514,634	\$ 1,226,576	\$ 4,275,668	\$ 4,275,668
Percent Expended	8%	14%	25%	29%	38%	44%	49%	56%	65%	71%	0%	0%
360 3601-8356 INFORMATION TECHNOLOGY												
Appropriations	\$ 661,300	\$ 661,300	\$ 661,300	\$ 661,300	\$ 661,300	\$ 661,300	\$ 661,300	\$ 661,300	\$ 661,300	\$ 661,300	\$ 661,300	\$ 661,300
Encumbrances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Expenditures	\$ 53,708	\$ 136,056	\$ 175,536	\$ 423,919	\$ 443,043	\$ 479,803	\$ 521,096	\$ 542,219	\$ 646,983	\$ 661,659	\$ -	\$ -
Unencumbered	\$ -	\$ 525,244	\$ 485,764	\$ 237,381	\$ 218,257	\$ 181,497	\$ 140,204	\$ 119,081	\$ 14,317	\$ (359)	\$ 661,300	\$ 661,300
Percent Expended	8%	21%	27%	64%	67%	73%	79%	82%	98%	100%	0%	0%
TOTAL for all budget units - B/U 30- Administration; 40- Operations Dispatch; 50-Information Technology												
Appropriations	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246
Encumbrances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Expenditures	\$ 511,708	\$ 894,189	\$ 1,539,048	\$ 2,020,225	\$ 2,795,033	\$ 3,112,679	\$ 3,455,751	\$ 3,844,028	\$ 4,460,949	\$ 4,853,112	\$ -	\$ -
Unencumbered	\$ 6,324,538	\$ 5,942,057	\$ 5,297,198	\$ 4,816,021	\$ 4,041,213	\$ 3,723,567	\$ 3,380,495	\$ 2,992,218	\$ 2,375,297	\$ 1,983,134	\$ 6,836,246	\$ 6,836,246
Percent Expended	7%	13%	23%	30%	41%	46%	51%	56%	65%	71%	0%	0%
Estimated Revenue	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246	\$ 6,836,246
Realized Revenue	\$ 300,000	\$ 2,677,946	\$ 4,362,273	\$ 4,437,257	\$ 4,966,996	\$ 5,529,575	\$ 5,529,575	\$ 5,529,575	\$ 6,626,998	\$ 6,649,043	\$ -	\$ -
Unrealized Revenue	\$ 6,536,246	\$ 4,158,300	\$ 2,473,973	\$ 2,398,989	\$ 1,869,250	\$ 1,306,671	\$ 1,306,671	\$ 1,306,671	\$ 209,248	\$ 187,203	\$ 6,836,246	\$ 6,836,246
Percent Realized	4%	39%	64%	65%	73%	81%	81%	81%	97%	97%	0%	0%



Quarter 1, 2021 Law Call Statistics

Call Processing Time - All Calls

Average Seconds from First Keystroke to Pending Queue Entry										
PRIORITY	WDP		WNP		WSP		YSO		Total	
	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls
1	77	146	88	6	79	238	86	127	80	517
2	120	1,521	108	101	118	1,541	104	409	117	3,572

Queue Entry to First Unit Dispatched - Units Available

Average Seconds from Pending Queue Entry to First Unit Dispatched										
PRIORITY	WDP		WNP		WSP		YSO		Total	
	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls
1	77	123	25	6	65	205	60	127	66	461
2	165	1,284	82	101	184	1,271	153	396	169	3,052

Queue Entry to Law Supervisor Notified - No Units Available

Average Seconds from Pending Queue Entry to the Law Supervisor Notification of No Units Available										
PRIORITY	WDP		WNP		WSP		YSO		Total	
	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls
1	126	23	0	-	134	33	0	-	130	56
2	285	237	0	-	288	270	192	13	284	520

Queue Entry to First Unit Dispatched After Law Supervisor Notification - No Units Available

Average Seconds from Pending Queue Entry to First Unit Dispatched after Law Supervisor Notification has Occurred										
PRIORITY	WDP		WNP		WSP		YSO		Total	
	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls
1	294	23	0	-	344	33	0	-	324	56
2	916	237	0	-	1026	270	495	13	963	520

Queue Entry to First Unit Dispatched - All Calls - Including Available and Unavailable Units

Average Seconds from Pending Queue Entry to First Unit Dispatched										
PRIORITY	WDP		WNP		WSP		YSO		Total	
	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls
1	111	146	25	6	104	238	60	127	94	517
2	282	1,521	82	101	331	1,541	164	409	284	3,572



Quarter 1, 2021 Fire Call Statistics

Call Processing Time - All Fire Calls

Average Seconds from First Keystroke to Pending Queue Entry												
PRIORITY	WDL		WNF		WSF		YDF		County		Total	
	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls
Code 2	40	602	54	35	52	588	94	5	75	137	49	1,367
Code 3	60	1,490	64	137	60	1,742	43	80	66	822	61	4,271

Queue Entry to First Unit Dispatched - All Fire Calls

Average Seconds from Pending Queue Entry to First Unit Dispatched												
PRIORITY	WDL		WNF		WSF		YDF		County		Total	
	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls
Code 2	20	602	19	35	24	588	24	5	32	137	23	1,367
Code 3	20	1,490	20	137	21	1,742	21	80	25	822	21	4,271

Call Processing Time - Fire and Medical

Average Seconds from First Keystroke to Pending Queue Entry													
Call Type	PRIORITY	WDL		WNF		WSF		YDF		County		Total	
		Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls
Fire Call Types	Code 2	30	288	63	12	47	207	98	3	76	73	43	583
	Code 3	68	392	74	55	69	529	45	26	64	481	67	1,483
Medical Aid Call Types	Code 2	50	314	49	23	56	381	89	2	74	64	55	784
	Code 3	58	1,098	58	82	56	1,213	42	54	67	341	58	2,788

Queue Entry to First Unit Dispatched - Fire and Medical

Average Seconds from Pending Queue Entry to First Unit Dispatched													
Call Type	PRIORITY	WDL		WNF		WSF		YDF		County		Total	
		Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls	Average	# of Calls
Fire Call Types	Code 2	20	288	15	12	33	207	18	3	44	73	28	583
	Code 3	21	392	23	55	26	529	22	26	29	481	25	1,483
Medical Aid Call Types	Code 2	20	314	21	23	19	381	33	2	19	64	19	784
	Code 3	18	1,098	18	82	19	1,213	18	54	20	341	19	2,788

STAFF REPORT

Agenda Item: 5.e

Date: May 5, 2021

To: YECA Governing Board

From: Dena Humphrey, Executive Director

Subject: FY21 Budget Adjustments – Summary Report

Summary:

The following summary report details the necessary FY21 budget adjustments made with the in/out flows throughout the year. This summary of adjustments provides a record of the changes that took place from the original FY21 final budget approved by the Board for audit purposes. Some of the reasons included e.g., new grants received after the final budget is approved or Board approvals for increases to Reserve Funds.

Fund	Division	Cost Center	Account	Amount	Notes
10	60	18	75110	\$ (68,901.00)	Increase to FY18 Homeland Security Grant Award Approved
10	60	18	81170	\$ 5,674.00	Increase to FY18 Homeland Security Grant Award Approved
10	60	18	84800	\$ 63,227.00	Increase to FY18 Homeland Security Grant Award Approved
10	60	50	75090	\$ (56,727.00)	Awarded FY20 PSPS Resiliency Funds
10	60	50	84800	\$ 56,727.00	Awarded FY20 PSPS Resiliency Funds
10	60	60	77000	\$ (8,400.00)	Awarded FY20 YCPARMIA
10	60	60	81140	\$ 8,400.00	Awarded FY20 YCPARMIA

YOLO EMERGENCY COMMUNICATIONS AGENCY STAKEHOLDER SURVEY AND DISCUSSION

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Background

The Yolo Emergency Communications Agency (YECA) requested that CSI review the current Capital Improvement Plan, including any possible system upgrades which may be needed. Specifically, potential upgrades to address the California Department of Justice's memo requiring secure communication of any CJIS information transmitted over the air. Many local agencies are encrypting their voice communications to meet the DOJ's requirement to mitigate any increased operational difficulties to communicate this information. Also, the movement of the City of Davis and UC Davis to the Sacramento Regional Communications System (SRRCS), has sparked discussion of YECA member agencies in addition to West Sacramento moving to that system as well. These events, in conjunction of the agencies within Solano County effort to create its own regional system and Napa County moving to Project25 (P25), have created a decision point for YECA to choose how it will move forward as well. The intent of this report is to show YECA what options are open to them, the advantages and disadvantages of each, and a Rough Order of Magnitude (ROM) estimate of these options.

Data for this report was gathered via a survey and subsequent discussions with member and nearby agencies, including Yolo Sheriff, Woodland Police, Winters Police, West Sacramento Police, Yolo District Attorney's Office, Yolo County Probation, Davis Police, Yolo Public Works, Woodland Fire, West Sacramento Fire, Winters Fire, UC Davis Fire, Yocha Dehe Fire, Clarksburg Fire, West Plainfield Fire, and YECA staff. After an initial survey was completed, the results were discussed in two breakout meetings with Law Enforcement and with Fire and Public Works. A final discussion was held with all participants to review the conclusions drawn from the survey and two initial discussions. The material in this report are the results of that final discussion.

Current System

YECA agency members' are dispatched either via the SRRCS (West Sacramento) or a set of VHF simulcasted and non-simulcasted analog channels. The SRRCS has recently migrated to Project25. The VHF analog channels utilize Tait 8100 stations. The sites used vary from channel to channel with a few exceptions yielding different coverage footprints for each channel.

The surveys and discussions reported that there are coverage issues with the VHF channels and vary depending on the channel. Preliminary analysis points to two factors creating this variability: different sites being used and the ad-hoc nature of the initial and subsequent simulcast optimization efforts. The overall coverage issues can also be attributed to areas shielded by terrain in the northern part of the county as well as simulcast interference in the Sacramento Valley portion of the county. The Tait 8100 stations are scheduled to be out of production at the end of 2021 which means that they will continue to be supported for service and repairs until the 2028 (assuming Tait follows the 7-year guideline originally established in APCO-16A). The multiplexer supporting the links to these sites has been recently replaced and is capable of support analog and/or P25 channels. The microwave radios are out of production, but the vendor (Nokia) has made guarantees to support them through 2027. They are also capable of supporting analog and/or P25 channels.

The primary repeater of the Woodland PD Dispatch channel is located at the police building with its associated antenna on a relatively short monopole. The construction of the new courthouse nearby has shielded the antenna from a relatively large portion of the city. The Gold repeater is at the YECA Dispatch in the northwest corner of the city which is not ideal for coverage to the southern portion of the city.

Dispatch console equipment is the MCC7500 and is supported via a System User Agreement (SUA) between the SRRCS and Motorola which includes technology refreshes as needed. The annual SUA subscription fees are paid by the SRRCS to Motorola and are passed on to SRRCS members via the monthly radio subscription fees.

SWOT Discussions

Survey questions and subsequent discussions addressed the Strengths, Weaknesses, Opportunities, and Threats of the YECA radio system.

Strengths (the positive aspects internal to the system) were identified by stakeholders as:

- YECA Staff and Management
- JPA Structure
- Simple to use subscriber (mobile and portable) radios

Weaknesses (the adverse aspects internal to the system) were identified as:

- Coverage issues
- Inconsistent coverage across county-wide channels
- Simulcast audio quality
- Lack of channels
- County split between VHF analog conventional and 700/800 MHz P25 trunking
- Limited Budget for improvements

The Opportunities (the potentially beneficial items external to the system) were identified as:

- Availability of dual-band radios
- SRRCS extending into Yolo County
- The need for interoperability is often attractive to grant programs
- Neighboring jurisdictions (SRRCS, Solano, Napa) move to P25

The Threats (the potential challenges to overcome external to the system) were identified as:

- Need for encryption for law enforcement
- New developments and buildings, especially in southern Woodland
- Megafires requiring more interoperability
- Neighboring jurisdictions (SRRCS, Solano, Napa) move to P25

Please note that the regional move to Project25 can be seen as both an opportunity as well as a threat as the need to move to Project25 is more urgent to support interoperability, but the suite of Project25 standards provides a common platform that is supported across multiple vendors.

Potential Options Moving Forward

Please note that some of these options can be used in combination with one another though some are mutually exclusive.

The Rough Order of Magnitude estimate of the cost of the options below is relative to the existing CIP, i.e. in addition to the costs currently listed in the CIP. The existing CIP anticipates the replacement of the Tait 8100 stations in FY 2024/2025 of \$235,000 based on a like-for-like replacement as well as a total of \$360,000 in FY 2026/27 for other related simulcast equipment (channel banks, GPS clocks, and comparators).

1. Status Quo

The current CIP is based on replacement of the Tait stations in FY 26/27 for \$380K. The system could remain as is, without addressing any of the items noted above.

- Benefits:
 - No additional costs added to the CIP
- Shortcomings:
 - Does not address the need for encryption
 - Does not improve coverage/audio quality
 - Does not increase the number of talkpaths (e.g. channels or trunked talkgroups)
 - Interoperability declines due to nearby counties moving to P25
- **Rough Order Magnitude of Costs:** **\$0**

2. Optimize Existing Simulcast Channels

The simulcast system was originally optimized in an ad-hoc fashion, without the benefit of computer analysis by an engineer. There were subsequent attempts to optimize the system, again without the benefit of an engineered solution. A simulcast could be performed with the benefit of computer predictive software which would optimize the system with the combination of launch delay settings for each site as well as potentially different antenna patterns to maximize capture in areas which are out of phase and conversely, equalize the phase delay in areas which do not benefit from capture.

- Benefits:
 - Relatively quick to implement
 - Improvements would benefit a potential future P25 VHF simulcast channel
 - Would allow Green Fire to enable the transmitter at the Port of Sacramento to match YSO channel configuration
 - Relatively low cost
- Shortcomings:
 - Does not address coverage issues in terrain blocked areas which need additional sites for coverage
 - Does not address the need for encryption by itself
 - Does not increase the number of talkpaths
 - Interoperability declines unless other actions taken

- Does not fully address coverage variability across all countywide VHF channels
- **Rough Order Magnitude of Cost:** **\$50K - \$150K**
(includes engineering, some replacement antennas, and implementation)

3. Improve and Standardize All Simulcast Channels

The number of transmit sites for the four current VHF countywide channels (YSO Dispatch, YSO TAC, Green Fire, Grey Fire) vary with SO Dispatch and Grey Fire transmitting from 6 sites, Green Fire transmitting from 5 sites, and SO TAC transmitting from four sites. Green Fire is equipped for the sixth site, and Option 2 would bring that to six sites as well, leaving SO TAC as the outlier. This option would add the additional transmitters at Bald and the Port of Sacramento and in conjunction with an engineered simulcast optimization, create a consistent coverage across all four channels.

- **Benefits:**
 - Coverage improvements in conjunction with Option 2
 - Consistent coverage for Sheriff Primary, Sheriff TAC, Green Fire, and Grey Fire
 - Could be used in concert with move to Project25
- **Shortcomings:**
 - Does not address coverage issues in terrain blocked areas which need additional sites for coverage
 - Does not increase the number of talkpaths
 - Does not address Woodland PD primary channel.
 - If channels stay analog, equipment may be short lived due to other upgrades
- **Rough Order Magnitude of Cost:** **\$150K - \$200K**
(includes a new station at Bald and Port of Sacramento, other miscellaneous equipment, engineering, and implementation – this option includes the scope and cost associated with Option 2 so would be chosen instead of Option 2 to get the additional scope).

4. Migrate the YSO Dispatch Channel to Project25

To meet the DOJ requirement for encrypted CJIS information, YECA could migrate the YSO Dispatch channel only to Project25. This would minimize the initial cost of moving to P25 by limiting the upgrade to one channel. The station which would be used if Tait were continued to be used would be their 9400 model. This model chassis accommodates two channels, so it may be a better value to replace two channels at the same time. The P25 option is a software option, so the software license for the second channel could either be purchased with the YSO Dispatch channel or purchased later. There are various options for other vendors including a single channel chassis as well as a dual channel chassis also being available. Radio users in the field will experience improved audio quality once they become accustomed to the digitized audio in most of the coverage area. However, in areas of poor audio quality, the P25 audio will be worse and/or non-existent. Therefore, it is generally recommended to address coverage concerns prior to migrating to P25. Addressing simulcast optimization is critical, however either addressing problem areas in the Rumsey area, for example, should be done prior to moving to P25 or at least a plan should be created to work around potential situations where the coverage holes become

worse. One other benefit if Tait is selected is that the dual-channel radio takes up approximately the same rack space as the existing 8100 base stations, making a cutover plan easier.

- Benefits:
 - Addresses CJIS privacy requirements
 - Limit costs to one or two channels
 - Audio quality improvements in most areas
 - Could be part of a phased migration plan – starts to phase out 8100 stations
 - Tracks with other agencies with their moves to P25
- Shortcomings:
 - Does not address coverage issues in terrain blocked areas which need additional sites for coverage
 - Areas in current poor coverage zones could worsen
 - Does not increase the number of talkpaths
 - Does not address Woodland PD primary channel
 - Does not address coverage variability across all countywide channels and increases variability of overall user experience
 - Other jurisdictions are moving to leave their primary dispatch channel unencrypted for interoperability concerns and to select a different channel or talkgroup to encrypt for CJIS information.
- **Rough Order Magnitude of Cost:** **\$250K - \$500K**
(includes new stations at each simulcast site, other miscellaneous equipment, engineering, and implementation)

5. Move or Add Site for Woodland PD and Gold Fire

This addresses the growth to the south of Woodland. Because coverage design is yet to be performed, a firm recommendation for a single site or two site solution for Woodland PD, Woodland TAC, and Gold Fire cannot be made at this time. CSI anticipates that a two-site simulcast system would most likely fully cover the city. A simulcast site at YECA Dispatch in the northwest part of town in conjunction with a site in the southern portion of town would be ideal. The Sheriff campus would be a good candidate to develop an RF site, for example. A taller tower outside of the downtown area would incrementally improve coverage within town at potentially a lower cost. For example, the tower at Fire Station 3 could be evaluated for city wide coverage.

- Benefits:
 - Potentially addresses CJIS privacy requirements for Woodland PD
 - Costs limited to Woodland PD only
 - Coverage improvements throughout Woodland
 - Could be part of a phased migration plan – starts to phase out 8100 stations
 - Tracks with other agencies with their moves to P25
 - Avoids ongoing, monthly cost per radio as well as any one-time cost to connect to a regional system

- Either VHF or 700/800 MHz channels could be used. 700/800 MHz channels have better coverage performance for in-building penetration and a lower noise-floor.
- Shortcomings:
 - Less interoperability with Davis, UC Davis, and West Sacramento relative to being on a common trunked system
 - Does not increase the number of talkpaths
 - Does not address countywide channels
 - May require additional backhaul
 - May require site development or site improvements
- **Rough Order Magnitude of Cost:** **\$200K - \$1M**
(range reflects range of possibilities of site improvements/development and potential new backhaul).

6. Add SRRCS Site(s) for Woodland PD and Gold Fire

There are, again, several possibilities for this option. Depending on expected radio traffic and the existing traffic on the Davis/UC Davis simulcast sub=system, one or more site could be added to that subsystem to create a single, wider coverage footprint across the southwest corner of Yolo County. Another option would be to install a single-site or small simulcast subsystem for the Woodland area if expansion of the existing Davis/UC Davis simulcast system is not pragmatic due to traffic or cost. Backhaul already exists to the SRRCS and there may be an opportunity to create loop diversity yielding better backhaul reliability.

- Benefits:
 - Addresses CJIS privacy requirements for Woodland PD
 - Costs limited to Woodland PD only
 - Coverage improvements throughout Woodland
 - Greater interoperability with Davis, UC Davis, and West Sacramento
 - The SRRCS system would also benefit in better coverage from the Sacramento County line to the Yolo Jail for prisoner transport.
- Shortcomings:
 - Ongoing per radio monthly fees to SRRCS in addition to one-time costs
 - Less interoperability with YSO unless dual-band radios are used, some patching quirks between conventional and trunked systems
 - Does not address countywide channels
 - May require additional backhaul
 - May require site development or improvement
 - Potentially locked into one vendor (Motorola) unless subsystem separate from Davis is created and connected via the ISSI (Inter-Sub-System Interface) Project25 standard.
- **Rough Order Magnitude of Cost:** **\$2.5M - \$4M**
(recent Motorola project to add a single standalone site to the East Bay Regional Communications System was \$1.9M, with many items/tasks given to the customer to address. Change orders were also added as the microwave backhaul proposed was not sufficient for public safety radio. This ROM reflects the possibility of two sites and some

costs for site development, and should cover almost all contingencies but is not absolutely a worst-case scenario. This also does not include the SRRCS ongoing cost per radio).

7. Create Trunking Subsystem(s) and connect them to a Regional System (SRRCS)

Build out a countywide system based on it being a subsystem to a regional system. The subsystem could use VHF channels (if licensable) and/or 700/800 MHz channels. If a combination of bands were used, they would be brought into the regional system as two separate subsystems. This option could involve extending the Davis/UC Davis simulcast system northward as discussed in Option 6, but other configurations are possible.

One variant to this option that may not be pragmatic, but possible, would be to split the county where Woodland and West Sacramento is tied to SRRCS and the western portion of the county is connected to Solano. This may help those individual agencies in those areas with interoperability, but would most likely impact countywide interoperability unless ISSI was used between the two regional systems. This variant is not included in the Benefits/Shortcomings/ROM below.

- **Benefits:**
 - Avoid cost of a “P25 Core” assuming Motorola or a similar centralized system is employed by using another agency’s Core.
 - Greater interoperability with that regional system
 - Potential coverage improvements, depending on the system configuration
 - Greater interoperability with Davis, UC Davis, and West Sacramento
 - Could potentially be able to add a VHF subsystem in rural areas to the 700/800 MHz system, may be difficult due to licensing requirements for trunked systems, etc.
- **Shortcomings:**
 - Ongoing per radio monthly fees to SRRCS in addition to one-time costs; unknown what the cost structure of Solano will be
 - May require additional sites and backhaul for coverage improvements
 - May require site development or improvement
 - Potentially locked into one vendor (Motorola) unless subsystem separate from Davis is created and connected via the ISSI Project25 standard.
- **Rough Order Magnitude of Cost:** **\$10M - \$20M**
(See notes for option above. Most likely \$10M - \$15M to convert system as is with no additional fill-in sites.)

8. Create a YECA P25 Trunked System

This would give YECA the greatest flexibility for system choices: configuration, policies, radio vendor, etc. One of the strengths mentioned in the stakeholder’s surveys and discussion was the JPA and its governance. This would keep the radio system fully under that governance (except for West Sacramento’s use of the SRRCS). It could be a higher initial cost than connecting to SRRCS or Solano, depending on the selected vendor, as some vendors have a centralized system configuration (e.g. Motorola’s “P25 Core”), but may actually be lower, assuming more competitive pricing from an RFP and a better flexibility for the vendors to create a system specific to YECA in their design approach. One

benefit of Project25 is the Common Air Interface which dictates that radios certified as Project25 can communicate and support specific features on any P25 infrastructure and vice versa.

- **Benefits:**
 - Greater say over the final system configuration, etc.
 - Multiple vendors available, could get better pricing through competitive bid process
 - System could be tied to SRRCS and/or Solano through ISSI
 - Could create a VHF and 700/800 MHz system combination system, may be difficult due to licensing requirements for trunked systems, etc.
 - No ongoing monthly fees to a system provider.
 - Greater say over system policies, features, migration, etc.
- **Shortcomings:**
 - Need ISSI for transparent roaming onto SRRCS/Solano... “Fingertip roaming” can be achieved without ISSI and shared system keys
 - May require additional sites and backhaul
 - May require site development or improvement
 - Longest time from concept to implementation
- **Rough Order Magnitude of Cost:** **\$8M - \$22M**
(Lower part of range lower than Option 7 due to selection of more vendors and competitive bid process. Upper range assumes Motorola system with a P25 Core sized for YECA in addition to the upper range of Option 7).

Summary

Many different needs were expressed by the stakeholders of YECA. The options described meet anywhere from none to all of those needs and escalate in cost accordingly. The following is a table of the options, the benefits, the agencies who would benefit, and the ROMs. Please remember that in many cases, options can be independent of one another so that multiple options could be combined. “Opt” means that this benefit could be applied to the Option or not, for example migrating Woodland PD channel(s) to Project25 when reconfiguring the channel to improve coverage.

OPTION	BENEFIT				BENEFITTING AGENCY			ROM	
	COVERAGE	ENCRYPTION	CAPACITY	INTEROPERABILITY	WOODLAND PD/FD	YOLO SHERIFF/WINTERS	FIRE	LOWER RANGE	UPPER RANGE
1. Status Quo								\$0	\$0
2. Optimize Existing Simulcast Channels	✓					✓	✓	\$50	\$150
3. Improve and Standardize All Simulcast Channels	✓	Opt				✓	✓	\$150K	\$200K
4. Migrate the YSO Dispatch Channel to Project25	Opt	✓				✓		\$250K	\$500K
5. Move or Add Site for Woodland PD and Gold Fire	✓	Opt			✓			\$200K	\$1M
6. Add SRRCS Site(s) for Woodland PD and Gold Fire	✓	✓	✓	✓	✓			\$2.5M	\$4.0M
7. Trunking Subsystem(s) connected to a Regional System	✓	✓	✓	✓	✓	✓	✓	\$10M	\$20M
8. Create a YECA P25 Trunked System	✓	✓	✓	Opt	✓	✓	✓	\$8M	\$22M

Table 1 Options Summary