



TRWC Board of Directors Meeting

October 1, 2020 - 11:00 a.m.

Video Conference: <https://global.gotomeeting.com/join/634118893>

Phone: 646-749-3122, Access Code 963-394-117

Agenda

1) Call to Order and Opening Comments

- a. Audio and video recording
- b. Board representative rollcall
- c. Announcement of other teleconference participants
- d. Teleconference protocol and Super-Majority procedures (Bill Anger)

2) Public Comment

Members of the public may address the Board on items not on the printed agenda. Please address the Board by sending an email to gina.ross@mesaaz.gov by 11:00 a.m. on October 1, 2020. (limited to 500 words – identify your name, address and whether you wish your comment to be read at the meeting or just submitted as part of the written record). The Board may not discuss or take action on any issue raised during public comment until a later meeting. Speakers are limited to three (3) minutes each. Only one comment per person per Agenda Item will be allowed and comments without identifying name and address will not be read or submitted as part of the written record.

3) Discussion and Action on Board Meeting Minutes

- a. April 20, 2020 Board Meeting Minutes

4) Committee Updates

- a. Executive Update – Bob Badgett
 - Introduction of Co-Chair Mike Dvorak
- b. User Group – Dale Crogan

5) Discussion and Possible Action on Preliminary Fiscal Year Budget 21/22 – Dale Shaw

6) Discussion and Action on Network and Administrator Updates

- a. Finance Update – Angie Huckaby
- b. Network Updates and Performance Overview – Denis Murphy

7) FirstNet Updates – David Faulkner, Geronimo Ramirez, Amos Chalmers

8) Comments from the Board

An opportunity will be provided for Board members to present a brief summary of current events. The Board is not allowed to propose, discuss, deliberate or take action at the meeting on any matter in the summary, unless the specific matter is properly noticed for legal action.

9) Future Meetings Schedule

Date	Upcoming Agenda Items
12/10/20	Budget Adoption
3/11/21	
5/6/21	
9/9/21	
12/9/21	Elections

All meeting dates and times are posted on the TOPAZ website <http://topazrwc.org/> .

10) Adjournment



TRWC Board of Directors Meeting Minutes

April 20, 2020 - 1:00 p.m.

Video Conference: <https://global.gotomeeting.com/join/634118893>
Phone: 224-501-3412, Access Code 634-118-893

Call to Order and Opening Comments

Chairman Kross opened the meeting at 1:00 and reviewed the audio recording procedures. Gina Ross completed the rollcall and the announcements of other participants. Bill Anger reviewed the Super-Majority procedures and explained that the four Board Members present will constitute for a quorum for a Super-Majority vote. The representing Board Members were John Kross with Queen Creek, John Pombier with Mesa, Matt Busby with Apache Junction, and Bob Badgett with Gilbert.

Public Comment

The Public had an opportunity to email items and/or comments to the Board by 1p.m. No emails were received.

Discussion and Action on Board Meeting Minutes

There were no comments or actions regarding the Board Meeting Minutes from February 12, 2020. John Pombier motioned for an approval of the minutes and Matt Busby seconded the motion. All Board members who were in favor signaled by saying aye; there was no opposition, the motion passed unanimously.

Discussion and Action on Proposed Budget Adjustment for FY 19/20, FY 20/21, and 5 Year Forecast

Dale Shaw shared the updates on the Budget Adjustments. Several opportunities were identified for adjustments with the current budget and the next year's fiscal budget to help the member agencies deal with the economic downturn. The reductions in the Operating Budget will be in Legal, Consulting, Networking Subscription, and Contingency. The reductions with the Capital Budget will be in Systems-of-Systems Networking, Coverage Consulting, and the Simulcast Capacity Upgrade. There will be a deferment of Capital Budgets for Site Expansions, TDMA, and the Fire Hazard Zone System projects. The 5-year Forecast will also be adjusted to reflect the delay in these projects. Dale stated that there was involvement from the Executive Committee, staff, and user representation to ensure that no reductions would result in any immediate safety concerns for the network and safety projects are still moving forward.

Bob Badgett thanked the Mesa team and informed the Board that the Executive Committee agreed on the adjusted budget unanimously.

Chairman Kross reiterated that everything will still proceed according to the system's needs from a public safety standpoint, primarily the first responders.

Dale Crogan stated that he and the user groups are in agreement with the adjustments.

Chairman Kross thanked all who were involved in the effort of this process and asked for a motion of approval of the Budget Adjustment for FY 19/20, FY 20/21, and 5 Year Forecast. Matt Busby motion for approval. Jay Ducote seconded the motion. All Board members who were in favor signaled by saying aye; there was no opposition, the motion passed unanimously.

Comments from the Board

John Pombier thanked the staff, consultants, and user groups for all their participation in the efforts to bring this forward in such a timely manner.

Future Meetings Schedule

All meetings are currently scheduled from 9:00 a.m. to 11:00 a.m. at PMGA.

Date	Upcoming Agenda Items
9/10/20	Prelim Budget Review
12/10/20	Budget Adoption

Adjournment

John Kross adjourned the meeting at 1:21pm.



Date: October 1, 2020
To: Topaz Regional Wireless Cooperative (TRWC) Board of Directors
From: Dale Shaw, TRWC Executive Director
Bob Badgett, TRWC Executive Committee Co-chairman
Mike Dvorak, TRWC Executive Committee Co-chairman
Subject: Fiscal Year 2021/2022 Budget

Recommendation

The TRWC Executive Director and Executive Committee recommend the review and consideration of the Preliminary TRWC Budget (attached) in the amount of \$4,288,343 for Fiscal Year 2021/2022.

Background & Discussion

The attached Preliminary Budget for Fiscal Year 2021/2022 has been under review and endorsed by the TRWC Executive Committee. When compared to the current 2020/2021 Fiscal Year Budget, the proposed Operating & Maintenance expenses will decrease by \$9,885. When compared to the previously presented Forecast, Capital expenditures will decrease by \$125,094.

Fiscal Impact

The Preliminary Budget represents the total planned contribution by all member agencies for the ongoing operation, maintenance, and improvement of the TRWC radio network. Each member agency will be invoiced as actual expenditures occur on a monthly basis using the cost allocation methodology outlined in the adopted Budget.

**TRWC Operating & Maintenance Budget
Summary of Labor and Non-labor**

	FY 20/21 PROPOSED BUDGET	FY 21/22 PROPOSED BUDGET	CHANGE FY20/21 to FY21/22	
1.90%				
ESCALATION FACTOR				
Salaries and Wages	\$ 348,266	354,883	\$ 6,617	Decrease of \$50
Total Labor	\$ 348,266	\$ 354,883	\$ 6,617	1.9%
1.90%				
ESCALATION FACTOR				
GENERAL & ADMINISTRATIVE - OTHER SERVICES				
Temp Services	\$ 6,114	6,230	\$ 116	
Prof Services - TRWC Executive Director	91,986	93,734	1,748	
Prof Services - Legal	12,703	38,419	25,716	
Prof Services - Consulting & Other	37,285	76,715	39,430	
Ins. Premiums - Agencies	8,662	8,827	165	
Utilities	70,000	71,330	1,330	
Telephone	3,465	3,531	66	
Repairs & Maint	31,589	32,189	600	
Equipment Usage (Vehicles)	20,380	20,767	387	
Shaw Butte & Florence Gardens-Land	25,781	26,271	490	
Training	10,000	20,000	10,000	Budget doubled
Travel	10,000	20,000	10,000	Budget doubled
System-of-Systems Networking Subscription Costs	-	-	-	Probably not nee
All Other Services	-	-	-	
TOTAL OTHER SERVICES	\$ 327,965	\$ 418,013	\$ 90,048	27.5%
GENERAL & ADMINISTRATIVE - COMMODITIES				
Non Cap Assets	\$ 25,474	25,959	\$ 485	
Contract - Motorola (Preventative & Security Monitoring)	874,214	890,824	16,610	
Software Maint-Mainsaver, Juniper	-	43,000	43,000	City of Mesa pai
Materials & Repair Parts	25,000	25,475	475	
All Other Commodities	-	-	-	
TOTAL COMMODITIES	\$ 924,688	\$ 985,258	\$ 60,570	6.6%
OTHER BUDGET ITEMS				
PROPOSED CONTINGENCY - 1.5%	\$ 24,860	\$ 27,301	\$ 2,442	
VHF OPERATIONS Equipment Repair	23,813	24,265	452	
VHF Equipment Staff Time	28,023	28,555	532	
TOTAL OTHER BUDGET ITEMS	\$ 76,696	\$ 80,122	\$ 3,426	
Total Operating & Maintenance	\$ 1,677,615	\$ 1,838,276	\$ 160,661	9.6%
O&M - AIRTIME PERCENTAGE (1)				
Mesa	68.54%	68.54%	0.00%	
Gilbert	17.79%	17.79%	0.00%	
Apache Junction	9.00%	9.00%	0.00%	
Ft McDowell	2.11%	2.11%	0.00%	
Superstition Fire & Medical	1.06%	1.06%	0.00%	
Queen Creek	0.41%	0.41%	0.00%	
Rio Verde	0.03%	0.03%	0.00%	
Southwest Ambulance	0.87%	0.87%	0.00%	
American Medical Response	0.19%	0.19%	0.00%	
Total	100.00%	100.00%	0.00%	
VHF SPECIAL ASSESSMENT (2,3)				
Mesa Fire & Medical	68.68%	68.68%	0.00%	
Gilbert Fire	17.16%	17.16%	0.00%	
Superstition Fire & Medical	10.01%	10.01%	0.00%	
Queen Creek Fire	3.22%	3.22%	0.00%	
Rio Verde Fire	0.93%	0.93%	0.00%	
Total	100.00%	100.00%	0.00%	
ANNUAL ESTIMATED REVENUE: OPERATING & MAINTENANCE				
Mesa	1,149,910	1,260,028	110,119	
Gilbert	298,121	326,697	28,575	
Apache Junction	146,320	160,691	14,371	
Ft McDowell	34,304	37,673	3,369	
Superstition Fire & Medical	22,422	24,213	1,791	
Queen Creek	8,335	9,021	686	
Rio Verde	970	1,027	57	
Southwest Ambulance	14,144	15,533	1,389	
American Medical Response	3,089	3,392	303	
Total	\$ 1,677,615	\$ 1,838,276	\$ 160,661	

(1) Normal partner assessments are allocated based on July, 2019 6-month rolling average airtime and will change based on actual monthly data.

(2) For FY 19/20 Endorsed Budget, agency cost distribution for the Fire Hazard Zone Communication (VHF) Special Assessment is based on 12 months average Airtime as of March 31, 2015.

(3) For FY 20/21 Proposed Budget, agency cost distribution for the Fire Hazard Zone Communication (VHF) Special Assessment is based on Call Volume July 1, 2018 - June 30, 2019.

TRWC Operating & Maintenance Budget
Summary of Labor and Non-labor

ESCALATION FACTOR

Salaries and Wages **Reduction (3)**
Total Labor

ESCALATION FACTOR
GENERAL & ADMINISTRATIVE - OTHER SERVICES

Temp Services
Prof Services - TRWC Executive Director
Prof Services - Legal
Prof Services - Consulting & Other
Ins. Premiums - Agencies
Utilities
Telephone
Repairs & Maint
Equipment Usage (Vehicles)
Shaw Butte & Florence Gardens
Training **(Increased) (4)**
Travel **(Increased) (4)**
System-of-Systems Networking Subscription Costs **(probably not needed) (5)**
All Other Services
TOTAL OTHER SERVICES

GENERAL & ADMINISTRATIVE - COMMODITIES

Non Cap Assets
Contract - Motorola (Preventative & Security Monitoring)
Software Maint-Avair Juniper **(Added) (6)**
Materials & Repair Parts
All Other Commodities
TOTAL COMMODITIES

OTHER BUDGET ITEMS

PROPOSED CONTINGENCY - 1.5%
VHF OPERATIONS Equipment Repair
VHF Equipment Staff Time
SAU II Fire Line
TOTAL OTHER BUDGET ITEMS

Total Operating & Maintenance

O&M - AIRTIME PERCENTAGE (1)

Mesa
Gilbert
Apache Junction
Ft McDowell
Superstition Fire & Medical
Queen Creek
Rio Verde
Southwest Ambulance
American Medical Response
Total

VHF SPECIAL ASSESSMENT (2)

Mesa Fire & Medical
Gilbert Fire
Superstition Fire & Medical
Queen Creek Fire
Rio Verde Fire
Total

ANNUAL ESTIMATED REVENUE: OPERATING & MAINTENANCE

Mesa
Gilbert
Apache Junction
Ft McDowell
Superstition Fire & Medical
Queen Creek
Rio Verde
Southwest Ambulance
American Medical Response
TOTAL

FY 20/21 PROPOSED BUDGET	FY 21/22 PROPOSED BUDGET	FORECAST				
		FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
	1.90%	1.90%	2.30%	3.00%	3.00%	3.00%
\$ 348,266	\$ 354,883	\$ 361,626	\$ 369,943	\$ 381,042	\$ 392,473	\$ 404,247
\$ 348,266	\$ 354,883	\$ 361,626	\$ 369,943	\$ 381,042	\$ 392,473	\$ 404,247
	1.90%	1.90%	1.90%	1.90%	1.90%	1.90%
\$ 6,114	\$ 6,230	\$ 6,349	\$ 6,469	\$ 6,592	\$ 6,717	\$ 6,845
91,986	93,734	95,515	97,329	99,179	101,063	102,983
12,703	38,419	39,149	39,893	40,651	41,423	42,210
37,285	76,715	78,173	79,658	81,171	82,714	84,285
8,662	8,827	8,994	9,165	9,339	9,517	9,698
70,000	71,330	72,685	74,066	75,474	76,908	78,369
3,465	3,531	3,598	3,666	3,736	3,807	3,879
31,589	32,189	32,801	33,424	34,059	34,706	35,366
20,380	20,767	21,162	21,564	21,974	22,391	22,817
25,781	26,271	26,770	27,279	27,797	28,325	28,863
10,000	20,000	20,000	20,380	20,767	21,162	21,564
10,000	20,000	20,000	20,380	20,767	21,162	21,564
-	-	-	-	-	-	-
-	-	-	-	-	-	-
\$ 327,965	\$ 418,013	\$ 425,195	\$ 433,274	\$ 441,506	\$ 449,894	\$ 458,442
\$ 25,474	25,958	\$ 26,451	\$ 26,954	\$ 27,466	\$ 27,988	\$ 28,520
874,214	890,824	\$ 907,750	\$ 924,997	\$ 942,572	\$ 960,481	\$ 978,730
-	43,000	63,562	64,770	66,000	67,254	68,532
25,000	25,475	25,959	26,452	26,955	27,467	27,989
-	-	-	-	-	-	-
\$ 924,688	\$ 985,257	\$1,023,722	\$1,043,173	\$1,062,993	\$1,083,190	\$1,103,770
\$ 24,860	\$ 31,436	\$ 28,115	\$ 28,771	\$ 29,280	\$ 30,005	\$ 30,536
23,813	24,265	24,726	25,196	25,675	26,163	26,660
28,023	28,555	29,098	29,650	30,214	30,788	31,373
-	-	25,000	25,475	25,959	26,452	26,955
\$ 76,696	\$ 84,256	\$ 106,939	\$ 109,093	\$ 111,127	\$ 113,408	\$ 115,524
\$ 1,677,615	\$1,842,409	\$1,917,482	\$1,955,482	\$1,996,668	\$2,038,965	\$2,081,983
68.54%	68.54%	68.54%	68.54%	68.54%	68.54%	68.54%
17.79%	17.79%	17.79%	17.79%	17.79%	17.79%	17.79%
9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
2.11%	2.11%	2.11%	2.11%	2.11%	2.11%	2.11%
1.06%	1.06%	1.06%	1.06%	1.06%	1.06%	1.06%
0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%
0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
0.87%	0.87%	0.87%	0.87%	0.87%	0.87%	0.87%
0.19%	0.19%	0.19%	0.19%	0.19%	0.19%	0.19%
100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
68.68%	68.68%	68.68%	68.68%	68.68%	68.68%	68.68%
17.16%	17.16%	17.16%	17.16%	17.16%	17.16%	17.16%
10.01%	10.01%	10.01%	10.01%	10.01%	10.01%	10.01%
3.22%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%
0.93%	0.93%	0.93%	0.93%	0.93%	0.93%	0.93%
100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
\$ 1,149,910	\$1,262,861	\$1,297,182	\$1,322,904	\$1,350,802	\$1,379,456	\$1,408,598
298,121	327,432	336,333	343,003	350,237	357,667	365,224
146,320	161,063	165,479	168,764	172,334	176,001	179,730
34,304	37,760	38,796	39,566	40,403	41,262	42,137
22,422	24,257	24,878	25,367	25,892	26,430	26,977
8,335	9,038	9,272	9,454	9,650	9,852	10,056
970	1,028	1,052	1,073	1,094	1,116	1,139
14,144	15,569	15,996	16,314	16,659	17,013	17,374
3,089	3,400	3,493	3,563	3,638	3,716	3,794
\$ 1,677,615	\$1,842,409	\$1,892,482	\$1,930,007	\$1,970,709	\$2,012,513	\$2,055,029

(1) Normal partner assessments are allocated based on the July 2019 6-month rolling average airtime and will change based on actual monthly data.

(2) For the FY19/20 Endorsed Budget, agency cost distribution for the Fire Hazard Zone Communication (VHF) Special Assessment is based on 12 months average Airtime as of March 31, 2015.

(3) Reduction to salary of \$50,000 a year due to Randy's retirement

(4) Training and Travel doubled to allow for new hire training

(5) System of Systems not needed reduction of \$63,000 plus escalation

(6) Addition of Aviat Juniper \$43,000 Avair \$20,000 (Aviat 22/23)

TRWC Capital Budget Plan

PROJECT	ID	Proposed FY20/21	Proposed FY 21/22	FORCAST					TOTAL	Project	Personnel	Overhead	
				FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27					FY 27/28
Site Expansion #1 (Increased) (1)	CP0091	-	1,350,000	1,590,000	560,000	-	-	-	-	\$ 3,500,000	-	-	-
Site Expansion #2 (Moved out a year starting in 23/24)	CP0754	-	-	-	590,276	1,013,847	-	-	-	\$ 1,604,123	-	-	-
Site Expansion #3 (Probably not needed) (2)	CP0779	-	-	-	-	-	-	605,703	1,040,515	\$ 1,646,218	-	-	-
System-of-Systems Networking Expansion CP0438 (Moved out a year starting 22/23)	CP0905	-	-	247,800	247,800	-	-	-	-	\$ 495,600	-	-	-
Upgrade Shaw Butte and Florence Gardens to P25 Phase II (TDMA)	CP0906	-	287,406	287,406	-	-	-	-	-	\$ 574,812	-	-	-
Radio Sites Emergency Power Upgrade	LF0226	106,200	106,200	106,200	106,200	-	-	-	-	\$ 424,800	85,714	15,429	5,057
Communications Building UPS Battery Replacement	LF0228	-	-	17,700	-	-	-	17,700	-	\$ 35,400	-	-	-
Radio & Core Sites Battery Backup Lifecycle Upgrade	LF0266	-	31,910	-	-	71,433	71,433	89,292	-	\$ 264,068	-	-	-
Radio & Core Sites DC Power Plant Lifecycle Upgrade	LF0267	-	-	-	-	-	750,000	750,000	-	\$ 1,500,000	-	-	-
Antenna & Transmission Lines Lifecycle Upgrade	LF0282	236,000	-	-	-	-	-	-	-	\$ 236,000	190,476	34,286	11,238
TOPAZ P25 Voice Radio Network Lifecycle Upgrade (FY31)	New	-	-	-	-	-	-	-	-	\$ -	-	-	-
Wireless Backhaul (Microwave) Network Lifecycle Upgrade	New	-	-	167,265	167,265	167,265	-	-	-	\$ 501,795	-	-	-
Consulting Services for VHF & 7/800 MHz Coverage Expansion		-	40,000	40,000	40,000	-	-	-	-	\$ -	-	-	-
Sub-total		342,200	1,815,516	2,456,371	1,711,541	1,252,545	821,433	1,462,695	1,040,515	\$ 10,902,816			
Fire Hazard Zone System Coverage Improvement and Expansion	CP0907	236,000	371,700	371,000	371,700	371,700	371,700	371,700	371,700	\$ 2,837,200	190,476	34,286	11,238
Fire Hazard Zone System Lifecycle Upgrade (SUAll increase to add routers) (3)	New	-	147,500	-	-	-	-	-	-	\$ 147,500	-	-	-
Fire Hazard Zone System Simulcast Timing Reference Lifecycle Upgrade	New	98,872	115,351	-	-	-	-	-	-	\$ 214,223	79,800	14,364	4,708
Sub-total VHF Special Assessment Projects		334,872	634,551	371,000	371,700	371,700	371,700	371,700	371,700	\$ 3,198,923			
Total Capital & Fire Special Assessment Projects		\$ 677,072	\$ 2,450,067	\$ 2,827,371	\$ 2,083,241	\$ 1,624,245	\$ 1,193,133	\$ 1,834,395	\$ 1,412,215	\$ 14,101,739			
Capital Assessment to Members													
Mesa	69.52%	237,896	1,262,146	1,707,669	1,189,863	870,769	571,060	1,016,865	723,366	7,579,634			
Gilbert	17.36%	59,406	315,174	426,426	297,124	217,442	142,601	253,924	180,633	1,892,730			
Apache Junction	9.68%	33,125	175,742	237,777	165,677	121,246	79,515	141,589	100,722	1,055,393			
Ft McDowell	2.14%	7,323	38,852	52,566	36,627	26,804	17,579	31,302	22,267	233,320			
Superstition Fire & Medical	0.78%	2,669	14,161	19,160	13,350	9,770	6,407	11,409	8,116	85,042			
Queen Creek	0.50%	1,711	9,078	12,282	8,558	6,263	4,107	7,313	5,203	54,515			
Rio Verde	0.02%	68	363	491	342	251	164	293	208	2,180			
Sub-total	100.00%	342,198	1,815,516	2,456,371	1,711,541	1,252,545	821,433	1,462,695	1,040,515	10,902,814			
VHF Special Assessment													
Mesa Fire & Medical	68.68%	229,990	435,809	254,802	255,283	255,283	255,283	255,283	255,283	1,737,036			
Gilbert Fire	17.16%	57,464	108,889	63,664	63,784	63,784	63,784	63,784	63,784	434,009			
Superstition Fire & Medical	10.01%	33,521	63,519	37,137	37,207	37,207	37,207	37,207	37,207	253,170			
Queen Creek Fire	3.22%	10,783	20,433	11,946	11,969	11,969	11,969	11,969	11,969	81,441			
Rio Verde Fire	0.93%	3,114	5,901	3,450	3,457	3,457	3,457	3,457	3,457	23,522			
Sub-total	100.00%	334,872	634,551	370,999	371,700	371,700	371,700	371,700	371,700	2,529,178			
Total Capital + Fire Special Assessment													
Mesa		467,886	1,697,955	1,962,471	1,445,146	1,126,052	826,343	1,272,148	978,649	9,776,650			
Gilbert		116,870	424,063	490,090	360,908	281,226	206,385	317,708	244,417	2,441,667			
Apache Junction		33,125	175,742	237,777	165,677	121,246	79,515	141,589	100,722	1,055,393			
Ft McDowell		7,323	38,852	52,566	36,627	26,804	17,579	31,302	22,267	233,320			
Superstition Fire & Medical		36,190	77,680	56,297	50,557	46,977	43,614	48,616	45,323	405,254			
Queen Creek		12,494	29,511	24,228	20,527	18,232	16,076	19,282	17,172	157,522			
Rio Verde		3,182	6,264	3,941	3,799	3,708	3,621	3,750	3,665	31,930			
Total		677,070	2,450,067	2,827,370	2,083,241	1,624,245	1,193,133	1,834,395	1,412,215	14,101,736			

Originally Proposed FY21/22	Proposed FY 21/22
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(1) Site #1 still needs to be adjusted based off of costs to be determined. Price has increased based on land prices, labor and materials	574,063	1,350,000	775,937	57%
(2) Site #3 may not be needed if Site #1 is able to be built	-	-	-	-
(3) Fire Hazard Zone System Lifecycle Upgrade SUAll increased to add new routers-This is a new cost not previously discussed	-	147,500	147,500	100%
	574,063	1,497,500	923,437	62%

TOPAZ
Detail of Operating and Maintenance
Fiscal Year 2019 / 2020

Year to Date Through June 30, 2020

Description	Budget	Updated Forecast	YTD Forecast*	YTD Actual	\$ Var	% Var
					From YTD Forecast	Incr/(Decr)
Personnel Services	\$ 398,266	\$ 398,266	\$ 398,266	\$ 363,160	\$ (35,106)	-9%
Insurance Premiums	8,662	8,662	8,662	-	(8,662)	-100%
Legal Services	37,703	37,703	37,703	9,576	(28,127)	-75%
Temp Services	6,114	6,114	6,114	-	(6,114)	-100%
Leases and Rents - Land	25,781	25,781	25,781	16,800	(8,981)	-35%
Professional Services - Consulting	90,182	90,182	90,182	112,586	22,404	25%
Professional Services - Other	15,285	15,285	15,285	35,220	19,935	130%
Utilities	70,000	70,000	70,000	52,126	(17,874)	-26%
Telephone	3,465	3,465	3,465	3,772	307	9%
Repairs & Maintenance	31,587	31,587	31,587	-	(31,587)	-100%
Equipment Usage (Vehicles)	20,380	20,380	20,380	19,623	(757)	-4%
All Other Services	10,000	10,000	10,000	-	(10,000)	-100%
Sub-total Services	319,159	319,159	319,159	249,704	(69,455)	-22%
Motorola Contract	1,012,200	1,012,200	1,012,200	862,883	(149,317)	-15%
Juniper Software	22,928	22,928	22,928	-	(22,928)	-100%
Materials & Parts	20,849	20,849	20,849	16,860	(3,989)	-19%
Non Cap Assets	25,474	25,474	25,474	749	(24,725)	-97%
All Other Commodities	-	-	-	-	-	0%
Sub-total Commodities	1,081,451	1,081,451	1,081,451	880,492	(200,959)	-19%
Subtotal O&M	1,798,876	1,798,876	1,798,876	1,493,356	(305,520)	-17%
Contingency - 3% of total O&M	53,966	53,966	53,966	-	(53,966)	-100%
VHF Operations	151,836	151,836	151,836	18,101	(133,735)	-88%
Total	\$ 2,004,678	\$ 2,004,678	\$ 2,004,678	\$ 1,511,457	\$ (493,221)	-25%

*YTD Forecast represents 12 months of operational costs plus any contractual expenses already incurred (i.e. one time payments such as Insurance Premiums, Land Rental and Motorola Contract).

TOPAZ
Detail of Operating and Maintenance
Fiscal Year 2020/ 2021

Year to Date Through August 31, 2020

Description	Budget	Updated Forecast	YTD Forecast*	YTD Actual	\$ Var		% Var	
					From YTD Forecast		Incr/(Decr)	
Personnel Services	\$ 348,266	\$ 348,266	\$ 53,579	\$ 55,020	\$	1,441		3%
Insurance Premiums	8,662	8,662	722	-		(722)		-100%
Legal Services	12,703	12,703	1,059	-		(1,059)		-100%
Temp Services	6,114	6,114	510	-		(510)		-100%
Leases and Rents - Land	25,781	25,781	2,148	-		(2,148)		-100%
Professional Services - Consulting	91,986	91,986	7,666	16,355		8,689		113%
Professional Services - Other	37,285	37,285	3,107	-		(3,107)		-100%
Utilities	70,000	70,000	5,833	8,384		2,551		44%
Telephone	3,465	3,465	289	155		(134)		-46%
Repairs & Maintenance	31,589	31,589	2,632	-		(2,632)		-100%
Equipment Usage (Vehicles)	20,380	20,380	1,698	1,237		(461)		-27%
All Other Services	20,000	20,000	1,667	-		(1,667)		-100%
Sub-total Services	327,965	327,965	27,331	26,131		(1,200)		-4%
Motorola Contract	874,214	874,214	72,851	-		(72,851)		-100%
Juniper Software	-	-	-	-		-		0%
Materials & Parts	25,000	25,000	2,083	-		(2,083)		-100%
Non Cap Assets	25,474	25,474	2,123	-		(2,123)		-100%
All Other Commodities	-	-	-	-		-		0%
Sub-total Commodities	924,688	924,688	77,057	-		(77,057)		-100%
Subtotal O&M	1,600,919	1,600,919	157,967	81,150		(76,817)		-49%
Contingency - 1.5% of total O&M	24,860	24,860	2,072	-		(2,072)		-100%
VHF Operations	51,836	51,836	4,320	-		(4,320)		-100%
Total	\$ 1,677,615	\$ 1,677,615	\$ 164,359	\$ 81,150	\$	(83,209)		-51%

*YTD Forecast represents 1 months of operational costs plus any contractual expenses already incurred (i.e. one time payments such as Insurance Premiums, Land Rental and Motorola Contract).



Date: October 1, 2020
To: TOPAZ Regional Wireless Cooperative (TRWC) Board of Directors
Through: Dale Shaw, TRWC Executive Director
From: Denis Murphy
Subject: Administrator Update

Capital Projects

1) Fiscal Year 2020 Capital Projects (approved in Fiscal Year 2020-2021 TRWC Capital Budget)

- a. System-of-Systems Networking Expansion.** This project has been moved out the 22-23 TRWC proposed budget.
- b.** We met with AT&T First-Net representatives a several months ago to inquire about the current status of the AT&T P-25 standards-based cellular push-to-talk. The current offer from AT&T requires a donor radio for each talk-group we want to connect. We have tested this solution in the past from other providers and the delay has always been too lengthy for first responders.
- c. Radio Sites Emergency Power Upgrade.** This project is for lifecycle replacement of the emergency generators at the TOPAZ radio sites.
 - Falcon Field Airport was replaced November 2019
 - Range Rider was replaced February 2019
 - Shaw Butte was replaced March 2020
 - Mesa Community College is in the process of being replaced and is scheduled to be completed by the end of October 2020.
 - East Mesa Service Center planned for replacement 1st quarter calendar year 2021
 - Fire Station 205 planned for replacement 1st quarter fiscal year 2021-2022
 - South (Greenfield) Water Plant planned for replacement 3rd quarter fiscal year 2021-2022
 - Fire Station 219 planned for replacement 1st quarter fiscal year 2022-2023
 - Central Radio Site planned for replacement 3rd quarter fiscal year 2021-2022 (if funding is available, Generator was replaced May 2017).
- d. Antenna & Transmission Lines Lifecycle Upgrade.** This a two-year project in its second year. Two of the nine sites have been replaced. The manufacture had a shortage of the required antennas but now all have been received. Antenna installations will continue 4th quarter 2020.
- e. Capacity Expansion for Shaw Butte and Florence Gardens.** Project moved to FY 21/22 The channels (talk groups) made available at the Shaw Butte and

TRWC Administrator Update, October 1, 2020

Florence Gardens sites have been limited due to concerns about capacity. Rather than add physical radio channels, the Shaw Butte and Florence Gardens sites will be converted to Project 25 Phase II, which doubles the voice carrying capacity of the site without adding physical radio channels.

- f. TOPAZ Network Coverage Improvement and Expansion.** Working with the TRWC Executive Committee, the recommendations from the TOPAZ Network Engineering Study were discussed and prioritized into an action plan to improve and expand the coverage of the existing 800 MHz and Fire Hazard Zone (VHF) systems. The results of this work are presented in a separate document. The projects for the current (FY20) and next (FY21) fiscal years are as follows:
- i. FY20: Disable the TOPAZ 800 MHz site at Mesa Fire & Medical Department station 205 (FS205).
 1. The Federal Engineering study confirmed the observation by staff that the site at FS205 contributed little to the TRWC coverage. The site was disabled on January 6, 2020. There have been no reports of coverage degradation or impairment as a result of this action. The 800 MHz equipment at FS205 will be redeployed to one of the TOPAZ coverage expansion sites (probably the US60 site). The VHF receive site at FS205 remains in service. We received coverage complaints from both Mesa Fire and Mesa PD that appeared to be caused by the disabling of FS205 800 MHz. We decided on the side of caution and brought the site back to Full Mission Capable (FMC) on 12 March 2020 until a field coverage test can be accomplished. We are in the process of doing a drive test to determine if this site needs to remain FMC or can be eliminated as originally planned.
 - FY20: VHF Receive-only site at Superstition Fire & Medical District station 261.
 - Site preparation and antenna/Micro-wave installation was completed last fiscal year. VHF Receiver equipment schedule for installation 4th quarter this calendar year
 - FY20: VHF Receive-only site at Superstition Fire & Medical District station 263.
 - Site preparation and antenna/Micro-wave installation was completed last fiscal year. VHF Receiver equipment schedule for installation 4th quarter this calendar year
 - FY20: Relocate Fire Mutual Aid to East Mesa Service Center tower.
 - Completed
 - ii. FY21: Land acquisition for the new “Queen Creek Hill” radio site.
 1. A potential location has been identified and preliminary work through the City of Mesa Real Estate/ Engineering Department’s groups has begun. We have also engaged an appraisal group to research the current market value of the land. Additionally, Mesa and TRWCs legal counsel are both investigating the possible interferences (if any) we might encounter on the selected site.

Operations Summary

TRWC Administrator Update, October 1, 2020

Unscheduled Impairments –Unimpaired system availability has been as follows:

System	Time frame	Unimpaired System Availability	Comments
Simulcast	MAR-AUG 2020	100%	No outages
Thompson Peak	MAR-AUG 2020	100%	No outages
Shaw Butte	MAR-AUG 2020	100%	No outages
Florence Gardens	MAR-AUG 2020	99.999%	28 seconds of outage due to a MW fade's
All TOPAZ 800MHZ systems	MAR-AUG 2020	99.99975%	

Airtime/Radio Counts – the following table is based on the rolling average airtime usage by members as of 1 September 2020.

	TRWC O&M	TRWC Capital
Superstition Fire & Medical District	0.98%	1.00%
City of Apache Junction	10.70%	10.82%
Town of Gilbert	20.18%	20.40%
City of Mesa	64.68%	65.39%
Fire	3.72%	3.76%
Police	59.31%	59.96%
Municipal	1.65%	1.67%
Southwest Ambulance	0.92%	
Town of Queen Creek	0.51%	0.52%
Rio Verde Fire District	0.07%	0.07%
American Medical Response	0.17%	
Ft. McDowell Yavapai Nation	1.80%	1.82%
	100.00%	100.00%

Peak Channel Usage – the following chart Peak channel usage for each site for March- August 2020 is shown on the table below:

Period	Simulcast Cell	Florence Gardens	Shaw Butte	Thompson Peak
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TRWC Administrator Update, October 1, 2020

March, 2020	0	0	0	0
April, 2020	0	0	0	0
May, 2020	0	0	0	0
June, 2020	0	0	0	0
July, 2020	0	0	0	0
August, 2020	0	0	0	0

- a. The system recorded zero system busies from March-August 2020.

Other Operational Events:

- As part of the upgrade of the TOPAZ network system release 7.18. Motorola network switches are being upgraded. Switch replacement is part of the SUA II contract /agreement we have with Motorola and this work is covered by the annual fee we pay.

Upcoming Events:

- All upcoming or in-progress events are discussed earlier in this report

Other News: