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## **TRWC Board of Director's Meeting**

December 7, 2017 - 9:00 a.m.

Phoenix-Mesa Gateway Airport (PMGA)

Administration Building, Board Room

5835 S. Sossaman Road

Mesa, AZ 85212

Video Conference: <https://global.gotomeeting.com/join/194407381>

Audio Bridge: 1-571-317-3122, Access Code 194-407-381

Members of the public may address the Board on any item. Please complete a "Request to Speak Card", located at the entry of the room and promptly turn it in to the Executive Director or designee prior to the beginning of the meeting. There is a time limit of three minutes for comments.

### **Agenda**

1) Call to Order and Opening Comments

- a. [Materials](#) and sign-in sheet
- b. Speaker cards
- c. Audio and video recording

2) Public Comment

Members of the public may address the Board on items not on the printed agenda. Please complete a "Request to Speak Card", located at the entry of the room and promptly turn it in to the Executive Director or designee prior to the beginning of the meeting. There is a time limit of three minutes for comments.

3) Discussion and Action on Board Meeting Minutes

[November 2, 2017 Board Meeting Minutes](#)

4) Discussion and Possible Action on FY18/19 Proposed Budget – Sherry McGlade, Dale Shaw, and Bob Badgett

5) Discussion and Action on Communications Strategic Alliance Agreement – Dale Shaw and John Locklin

6) FirstNet Update – Karen Ziegler (AZDOA) and Amos Chalmers (AT&T)

7) Discussion and Possible Action on Committee and Working Group Updates

- a. User Group Update – Dale Crogran

8) Discussion and Possible Action on Network Administrator Updates

- a. [Finance Update](#) – Sherry McGlade
- b. [Network Updates and Performance Overview](#) – Randy Thompson

9) 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.

10) Next TRWC Board Meetings:

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

2018 Schedule

Date	Upcoming Agenda Items
03/15/18	
05/03/18	
09/06/18	-FY19/20 Preliminary Budget Review
12/13/18	-FY19/20 Budget Adoption

2019 Schedule

Date	Upcoming Agenda Items
03/14/19	
05/09/19	
09/12/19	-Chairman and Vice-Chairman Elections -FY20/21 Preliminary Budget Review
12/12/19	-FY20/21 Budget Adoption

11) Adjournment



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## **TRWC Board of Directors Meeting – Conference Call**

November 2, 2017 - 9:00 a.m.

Video Conference: <https://global.gotomeeting.com/join/117369909>

Audio Bridge: 1-872-240-3212, Access Code 117-369-909

### *Public Attendance Access Only:*

Queen Creek Municipal Services Building

Saguaro Room

22358 S Ellsworth Rd

Queen Creek, AZ 85142

Members of the public may address the Board on any item. Please complete a "Request to Speak Card", located at the entry of the room and promptly turn it in to the Executive Director or designee prior to the beginning of the meeting. There is a time limit of three minutes for comments.

### **Agenda**

- 1) Call to Order and Opening Comments
  - a. Materials and sign-in sheet (public attendance access only)
  - b. Speaker cards (public attendance access only)
  - c. Audio and video recording
  - d. Board representative roll-call
  - e. Announcement of other teleconference participants
  - f. Board member departure instructions
  - g. Board action protocol

Chairman Kross called the meeting to order and thanked everyone for attending via a conference call.

Dale Shaw conducted a roll call and confirmed a quorum was present.

Chairman Kross asked that other participants on the call announce themselves and Dale Shaw conducted a roll call for other participants on the call.

Chairman Kross reminded everyone there were materials and a sign in sheet at the Queen Creek public access attendance location, no members of the public were in attendance except for Deputy Fire Chief Vance Gray, reminded the participants the meeting is audio recorded, to press the mute button on the phone if not speaking, unmute when speaking, and asked that Board members should advise if leaving the meeting early to make sure there is still a quorum for the rest of the meeting.

- 2) Public Comment

Members of the public may address the Board on items not on the printed agenda. Please complete a "Request to Speak Card", located at the entry of the room and promptly turn it in to the Executive Director or designee prior to the beginning of the meeting. There is a time limit of three minutes for comments.

There were no members of the public at the public attendance access location or on the phone.

3) Discussion and Action on Board Meeting Minutes

[September 14, 2017, Board Meeting Minutes](#)

John Pombier motioned to approve the 9/14/17 TRWC Board Meeting Minutes and Mike Farber seconded. All Board members who were in favor signaled by saying aye; there was no opposition, the motion passed unanimously.

4) Discussion and Action on Chairman and Vice-Chairman Elections – Dale Shaw

a. Election of a Chairman position for a two-year term

Dale Shaw solicited interest from the Board for nominations via email independent of this meeting indicating Chairman Kross and Chief Farber were interested in filling those rolls. For Chairman Kross it would be re-election for another two-year term and for Chief Farber, it would be the start of the new two-year term as Vice-chairman. Mr. Shaw received no other interest and no other nominations, opened it up to the Board for discussion, and asked for interest or nominations that were not already discussed. There were none.

Mark Openshaw motioned to approve the election of Chairman Kross for the two-year term and Mike Farber seconded. All Board members who were in favor signaled by saying aye; there was no opposition, the motion passed.

Chairman Kross thanked the Board for their confidence and support.

b. Election of a Vice-chairman position for a two-year term

Chairman Kross explained that Chief Mike Farber volunteered his name for the Vice-chairman position, and opened it up to the Board for discussion or a motion.

John Pombier motioned to approve the election of Vice-chairman Mike Farber for the two-year term and Mark Openshaw seconded. All Board members who were in favor signaled by saying aye; there was no opposition, the motion passed unanimously.

Chief Farber thanked the Board.

5) Discussion and Possible Action on Committee Update

a. Executive Committee Update – Bob Badgett (Co-chair)

-FY18/19 Proposed Budget Preparation

Bob Badgett shared that the Executive Committee has been working on budget preparation.

6) [Discussion and Possible Action on FY18/19 Proposed Budget](#) – Dale Shaw and Sherry McGlade

Chairman Kross indicated that even though the budget is ready for consideration, if the Board sees fit to mull this over until the next meeting, that is perfectly acceptable. The next meeting is scheduled for December 7, 2017.

Dale Shaw shared that the budget before the Board is a first take and not intended for adoption today unless the Board decides to move forward that way. In some discussions, it appears some time is necessary, so Mr. Shaw encouraged that the budget be considered at the December meeting instead, talk through the details today, and give everyone ample time to compare it to their plan in each agency to ensure everything aligns properly.

Sherry McGlade presented the budget as provided in the meeting materials.

The Board discussed aspects of the proposed budget such as contingency, combining Southwest Ambulance and AMR for billing, the driver for the capital budget increase, spreading costs by moving a capital project out, and the System of Systems Networking project. Additional Board discussion aspects included that the budget will be brought to the December 7<sup>th</sup> meeting for final action, and while December is the first opportunity for the Board to act on the budget, per governance, the Board has until April 1<sup>st</sup> for budget adoption, with the only consideration how this would impact each agency's own budgeting process.

7) 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.

John Pombier provided an update on Automatic Aid.

8) Next TRWC Board Meeting:

12/07/2017 9 to 11 a.m., PMGA

9) Adjournment

Chairman Kross adjourned the meeting.



**Date:** December 7, 2017  
**To:** Topaz Regional Wireless Cooperative (TRWC) Board of Directors  
**From:** Dale Shaw, TRWC Executive Director  
Bob Badgett, TRWC Executive Committee Co-chairman  
William Peters, TRWC Executive Committee Co-chairman  
**Subject:** Fiscal Year 2018/2019 Budget

### **Recommendation**

The TRWC Executive Director and Executive Committee recommend the approval of the Proposed TRWC Budget (attached) in the amount of \$4,141,512 for Fiscal Year 2018/2019.

### **Background & Discussion**

The attached Proposed Budget for Fiscal Year 2018/2019 has been under review and endorsed by the TRWC Executive Committee. When compared to the current 2017/2018 Fiscal Year Budget, the proposed Operating & Maintenance expenses will decrease by \$4,802 (primarily due to salary savings and a reduction in contingency) and Capital will increase by \$995,507 for planned improvements (as forecasted) - with a net overall Budget increase of \$990,705.

### **Fiscal Impact**

The Proposed 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 Proposed Budget.



FY2018/19  
Endorsed Budget

As Endorsed by the TRWC Executive Committee

# FY2018/19 Endorsed Projects Budget

	<b>FORECASTED FY 2018/19</b>	<b>ENDORSED FY 2018/19</b>
B. TOPAZ Voice Radio Network Upgrade (CP0090)	433,828	433,828
D. Radio Sites Emergency Power Upgrade (CP0094)	90,000	106,200
E. Florence Gardens ISR Site Lifecycle upgrade	300,000	354,000
F. Antenna & Transmission Lines Lifecycle Upgrade	200,000	236,000
H. System-of-Systems Networking	500,000	619,500
I. Internet Protocol Network Routers & Switches Expansion	420,000	464,625
J. Communications Building UPS Battery Replacement	-	17,700
<b>Total Improvements</b>	<b>\$1,943,828</b>	<b>\$2,231,853</b>
<b>Change from Forecasted:</b>		<b>\$ 288,025</b>
<b>% Change:</b>		<b>14.8%</b>



# FY2018/19 Endorsed Projects Budget

## Assessment to Members

	FORECASTED FY 2018/19		ENDORSED FY 2018/19	
Mesa	72.51%	\$ 1,409,383	71.96%	\$ 1,605,953
Gilbert	16.77%	325,996	16.62%	371,037
Apache Junction	8.22%	159,863	8.27%	184,618
Ft McDowell	1.51%	29,387	1.90%	42,327
Superstition Fire & Medical	0.63%	12,342	0.76%	16,886
Queen Creek	0.33%	6,465	0.46%	10,357
Rio Verde	0.02%	392	0.03%	675
<b>SubTotal</b>	100.00%	<u>\$ 1,943,828</u>	100.00%	<u>\$ 2,231,853</u>

# FY2018/19 Endorsed Projects Budget

	ORIGINAL FY 2017/18		CURRENT FY2017/18		ENDORSED FY 2018/19	
<b>Normal Assessment to Members</b>						
Mesa	72.52%	\$ 536,776	71.96%	\$ 761,529	71.96%	\$ 1,605,953
Gilbert	16.77%	124,128	16.62%	175,943	16.62%	371,037
Apache Junction	8.22%	60,843	8.27%	87,544	8.27%	184,618
Ft McDowell	1.51%	11,177	1.90%	20,071	1.90%	42,327
Superstition Fire & Medical	0.63%	4,663	0.76%	8,007	0.76%	16,886
Queen Creek	0.33%	2,443	0.46%	4,911	0.46%	10,357
Rio Verde	0.02%	149	0.03%	320	0.03%	675
<b>SubTotal</b>	100.00%	\$ 740,178	100.00%	\$ 1,058,325	100.00%	\$ 2,231,853
<b>Special Assessment to Members (VHF)</b>						
Mesa Fire & Medical	66.85%	\$ 331,689	66.85%	\$ 337,798		\$ -
Gilbert Fire	18.81%	93,329	18.81%	95,048		-
Superstition Fire & Medical	8.11%	40,239	8.11%	40,980		-
Queen Creek Fire	5.73%	28,430	5.73%	28,954		-
Rio Verde Fire	0.50%	2,481	0.50%	2,527		-
<b>SubTotal</b>	100.00%	\$ 496,168	100.00%	\$ 505,308		\$ -
<b>Total Assessment to Members</b>						
Mesa	70.24%	\$ 868,465	70.31%	\$ 1,099,327	71.96%	\$ 1,605,953
Gilbert	17.59%	217,457	17.33%	270,991	16.62%	371,037
Apache Junction	4.92%	60,843	5.60%	87,544	8.27%	184,618
Ft McDowell	0.90%	11,177	1.28%	20,071	1.90%	42,327
Superstition Fire & Medical	3.63%	44,902	3.13%	48,988	0.76%	16,886
Queen Creek	2.50%	30,873	2.17%	33,865	0.46%	10,357
Rio Verde	0.21%	2,630	0.18%	2,847	0.03%	675
<b>Total</b>	100.00%	\$ 1,236,346	100.00%	\$ 1,563,633	100.00%	\$ 2,231,853

# Topaz Projects

## Budget Year 2018-19 plus 5 year forecast

	<b>ENDORSED FY 2018/19</b>	<b>FORECASTED</b>					<b>TOTAL 6 Years</b>
		<b>FY 19/20</b>	<b>FY 20/21</b>	<b>FY 21/22</b>	<b>FY 22/23</b>	<b>FY 23/24</b>	
B. TOPAZ Voice Radio Network Upgrade (CP0090)	\$ 433,828	\$ 433,828					\$ 867,656
D. Radio Sites Emergency Power Upgrade (CP0094)	106,200	106,200	106,200	106,200	106,200	-	531,000
E. Florence Gardens ISR Site Lifecycle upgrade	354,000						354,000
F. Antenna & Transmission Lines Lifecycle Upgrade	236,000	236,000					472,000
H. System-of-Systems Networking	619,500	-					619,500
I. Internet Protocol Network Routers & Switches Expansi	464,625						464,625
J. Communications Building UPS Battery Replacement	17,700					17,700	35,400
K. Southeast Queen Creek Expansion Site		560,992	939,008				1,500,000
L. Southeast Apache Junction Expansion Site			560,992	939,008			1,500,000
M. Northeast Mesa Expansion Site		-	-	560,992	939,008		1,500,000
N. West side Coverage Solution			371,700				371,700
O. Interface for non-Motorola Dispatch Console						309,750	309,750
P. Automated billing & Upgrade Management Tool			309,750	309,750			619,500
<b>Total:</b>	<b>\$ 2,231,853</b>	<b>\$ 1,337,020</b>	<b>\$ 2,287,650</b>	<b>\$ 1,915,950</b>	<b>\$ 1,045,208</b>	<b>\$ 327,450</b>	<b>\$ 9,145,131</b>

# FY2017/18 Endorsed O&M Budget, Part 1

	FY 17/18		FY 18/19
	ORIGINAL BUDGET	UPDATED FORECAST	ENDORSED BUDGET
Salaries and Wages	\$ 486,600	\$ 390,840	\$ 390,840
<b>Total Labor</b>	<b>\$ 486,600</b>	<b>\$ 390,840</b>	<b>\$ 390,840</b>
<b>GENERAL &amp; ADMINISTRATIVE - OTHER SERVICES</b>			
Temp Services	\$ 6,000	\$ 6,000	\$ 6,000
Prof Services - Consulting	87,210	87,210	88,500
Prof Services - Legal	37,000	37,000	37,000
Prof Services - Other	15,000	15,000	15,000
Ins. Premiums - Agencies	10,600	8,300	8,500
Utilities	72,500	60,000	60,000
Telephone	5,700	3,400	3,400
Repairs & Maint	10,400	32,680	31,000
Equipment Usage (Vehicles)	22,000	20,000	20,000
Shaw Butte & Florence Gardens	22,800	22,800	25,300
All Other Services	2,000	-	-
<b>TOTAL OTHER SERVICES</b>	<b>\$ 291,210</b>	<b>\$ 292,390</b>	<b>\$ 294,700</b>

# FY2017/18 Endorsed O&M Budget, Part 2

	FY 17/18		FY 18/19
	ORIGINAL BUDGET	UPDATED FORECAST	ENDORSED BUDGET
<b>GENERAL &amp; ADMINISTRATIVE - COMMODITIES</b>			
Non Cap Assets	\$ 50,000	\$ 50,000	\$ 25,000
Contract - Preventative Motorola	594,200	594,200	597,400
Contract - Security Monitoring Motorola	330,000	330,000	359,800
Software Maint-Mainsaver, Juniper	22,000	22,000	22,500
Materials & Repair Parts	20,000	20,000	20,460
All Other Commodities	1,000	-	-
<b>TOTAL COMMODITIES</b>	<b>\$ 1,017,200</b>	<b>\$ 1,016,200</b>	<b>\$ 1,025,160</b>
<b>OTHER BUDGET ITEMS</b>			
<b>PROPOSED CONTINGENCY - 3%</b>	\$ 89,751	\$ 89,751	\$ 51,321
<b>VHF OPERATIONS (special assessment)</b>	29,700	29,700	120,138
<b>VHF Equipment Staff Time (special assessment)</b>			27,500
<b>TOTAL OTHER BUDGET ITEMS</b>	<b>\$ 119,451</b>	<b>\$ 119,451</b>	<b>\$ 198,959</b>
<b>Total Operating &amp; Maintenance</b>	<b>\$ 1,914,461</b>	<b>\$ 1,818,881</b>	<b>\$ 1,909,659</b>

# FY2017/18 Endorsed O&M Budget

	FY 17/18		FY 18/19
	ORIGINAL BUDGET	UPDATED FORECAST	ENDORSED BUDGET
<b>Total Operating &amp; Maintenance</b>	<b>\$ 1,914,461</b>	<b>\$ 1,818,881</b>	<b>\$ 1,909,659</b>
<b>O&amp;M - AIRTIME PERCENTAGE</b>			
Mesa	71.94%	71.33%	71.33%
Gilbert	16.64%	16.48%	16.48%
Apache Junction	8.16%	8.20%	8.20%
Ft McDowell	1.50%	1.88%	1.88%
Superstition Fire & Medical	0.63%	0.75%	0.75%
Queen Creek	0.33%	0.46%	0.46%
Rio Verde	0.02%	0.03%	0.03%
Southwest Ambulance	0.65%	0.71%	0.71%
American Medical Response	0.13%	0.16%	0.16%
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>VHF SPECIAL ASSESSMENT</b>			
Mesa Fire & Medical	66.85%	66.85%	66.85%
Gilbert Fire	18.81%	18.81%	18.81%
Ft McDowell (100% staff time for additional VHF equipment)			
Superstition Fire & Medical	8.11%	8.11%	8.11%
Queen Creek Fire	5.73%	5.73%	5.73%
Rio Verde Fire	0.50%	0.50%	0.50%
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# FY2017/18 Endorsed O&M Budget

	FY 17/18				FY 18/19	FY 18/19
	AIRTIME		ORIGINAL	UPDATED	ORIGINAL	ENDORSED
	ORIGINAL	UPDATED	BUDGET	FORECAST	FORECAST	BUDGET
Mesa	71.86%	71.26%	\$ 1,375,751	\$ 1,296,076	\$1,471,685	\$1,337,162
Gilbert	16.67%	16.52%	319,211	300,444	321,830	312,979
Apache Junction	8.03%	8.07%	153,796	146,713	157,821	144,486
Ft McDowell	0.75%	0.87%	14,283	15,828	29,011	60,626
Superstition Fire & Medical	1.48%	1.85%	28,271	33,637	21,928	22,958
Queen Creek	0.41%	0.55%	7,922	9,932	13,266	14,989
Rio Verde	0.03%	0.04%	526	686	988	1,130
Southwest Ambulance	0.64%	0.70%	12,251	12,703	12,571	12,510
American Medical Response	0.13%	0.16%	2,450	2,863	2,514	2,819
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$ 1,914,461</b>	<b>\$ 1,818,882</b>	<b>\$2,031,614</b>	<b>\$1,909,659</b>

# FY2017/18 Allocated Endorsed Budget

	FY 17/18		FY 18/19	
	ORIGINAL BUDGET	UPDATED FORECAST	ORIGINAL FORECAST	ENDORSED BUDGET
Mesa	\$ 2,244,216	\$ 2,395,403	\$2,881,068	\$2,943,115
Gilbert	536,668	571,435	647,826	684,016
Apache Junction	75,126	103,372	188,874	245,244
Ft McDowell	164,973	166,784	187,208	186,813
Superstition Fire & Medical	73,173	82,625	34,270	39,844
Queen Creek	31,398	34,551	19,731	25,346
Rio Verde	10,552	12,779	1,380	1,805
Southwest Ambulance	12,251	12,703	12,571	12,510
American Medical Response	2,450	2,863	2,514	2,819
	<u>\$ 3,150,807</u>	<u>\$ 3,382,515</u>	<u>3,975,442</u>	<u>4,141,512</u>





	FY 17/18 Original Budget	FY 18/19 PROPOSED	Increase (Decrease) From Budget	
<b>1. LABOR</b>	\$ 486,600	\$ 390,840	\$ (95,760)	-19.7%
<b>2. NON LABOR</b>	1,427,861	1,518,819	90,958	6.4%
<b>4. TOTAL OPERATING &amp; MAINTENANCE BUDGET</b>	<u>\$ 1,914,461</u>	<u>\$ 1,909,659</u>	<u>\$ (4,802)</u>	<u>-0.3%</u>
<b>5. RECONCILIATION OF BUDGET CHANGES:</b>				
a. Salaries - savings due to recently implemented Motorola contract			\$ (95,760)	
b. VHF Staff Time - Ft McDowell			27,500	
c. VHF Service Contract with Motorola (allocated among Fire partners)			90,000	
d. NonCapital Assets - reduced for one time purchase			(25,000)	
e. Motorol contract programmed increases			33,000	
f. Reduction of Contingency from 5% to 3%			(38,146)	
g. Other changes			<u>3,604</u>	
		TOTAL VARIANCE	<u>\$ (4,802)</u>	
<b>6. Capital Network Reliability Improvements</b>	<u>\$ 1,236,346</u>	<u>\$ 2,231,853</u>	<u>\$ 995,507</u>	<u>81%</u>
<b>TOTAL (O&amp;M + Capital)</b>	<u>\$ 3,150,807</u>	<u>\$ 4,141,512</u>	<u>\$ 990,705</u>	<u>31.4%</u>



	<u>FY 18/19</u>
Total Operating & Maintenance Budget	\$ 1,909,659
Capital Network Reliability Improvements	<u>2,231,853</u>
<b>PROPOSED BUDGET (O&amp;M + Capital)</b>	<b><u><u>\$ 4,141,512</u></u></b>



**PROPOSED FISCAL YEAR 2018 / 2019 BUDGET**

**DETAIL OF OPERATIONS, MAINTENANCE AND CAPITAL**

**As Endorsed by the TRWC Executive Committee**

**TRWC Operating & Maintenance Budget And Capital Improvement Costs  
RECONCILIATION BETWEEN FY 17/18 APPROVED AND 18/19 ENDORSED BUDGET**

	<u>FY 17/18 Original Budget</u>	<u>FY 18/19 ENDORSED</u>	<u>Endorsed FY18/19 Budget Increase (Decrease) From FY17/18 Budget</u>	
<b>1. LABOR</b>	\$ 486,600	\$ 390,840	\$ (95,760)	-19.7%
<b>2. NON LABOR</b>	1,427,861	1,518,819	90,958	6.4%
<b>3. TOTAL OPERATING &amp; MAINTENANCE BUDGET</b>	<u>\$ 1,914,461</u>	<u>\$ 1,909,659</u>	<u>\$ (4,802)</u>	<u>-0.3%</u>
<b>4. RECONCILIATION OF BUDGET CHANGES:</b>				
a. Salaries - savings due to recently implemented Motorola contract			\$ (95,760)	
b. VHF Staff Time - Ft McDowell			27,500	
c. VHF Service Contract with Motorola (allocated among Fire partners)			90,000	
d. NonCapital Assets - reduced for one time purchase			(25,000)	
e. Motorol contract programmed increases			33,000	
f. Reduction of Contingency from 5% to 3%			(38,146)	
g. Other changes			<u>3,604</u>	
			<u>TOTAL VARIANCE</u>	<u>\$ (4,802)</u>
<b>5. Capital Network Reliability Improvements</b>	<u>\$ 1,236,346</u>	<u>\$ 2,231,853</u>	<u>\$ 995,507</u>	<u>81%</u>
<b>TOTAL (O&amp;M + Capital)</b>	<u>\$ 3,150,807</u>	<u>\$ 4,141,512</u>	<u>\$ 990,705</u>	<u>31.4%</u>

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

	FY 17/18		FY 18/19 ENDORSED BUDGET	FORECAST					
	ORIGINAL BUDGET	UPDATED FORECAST		FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25
<b>ESCALATION FACTOR</b>					1.90%	2.30%	3.00%	3.00%	3.00%
Salaries and Wages	\$ 486,600	\$ 390,840	\$ 390,840	\$ 390,840	\$ 398,266	\$ 407,426	\$ 419,649	\$ 432,238	\$ 445,205
<b>Total Labor</b>	<b>\$ 486,600</b>	<b>\$ 390,840</b>	<b>\$ 390,840</b>	<b>\$ 390,840</b>	<b>\$ 398,266</b>	<b>\$ 407,426</b>	<b>\$ 419,649</b>	<b>\$ 432,238</b>	<b>\$ 445,205</b>
<b>ESCALATION FACTOR</b>					1.90%	1.90%	1.90%	1.90%	1.90%
<b>GENERAL &amp; ADMINISTRATIVE - OTHER SERVICES</b>									
Temp Services	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,114	\$ 6,230	\$ 6,349	\$ 6,469	\$ 6,592
Prof Services - Consulting	87,210	87,210	88,500	90,182	91,895	93,641	95,420	97,233	99,081
Prof Services - Legal	37,000	37,000	37,000	37,000	37,703	38,419	39,149	39,893	40,651
Prof Services - Other	15,000	15,000	15,000	15,000	15,285	15,575	15,871	16,173	16,480
Ins. Premiums - Agencies	10,600	8,300	8,500	8,500	8,662	8,826	8,994	9,165	9,339
Utilities	72,500	60,000	60,000	60,000	61,140	62,302	63,485	64,692	65,921
Telephone	5,700	3,400	3,400	3,400	3,465	3,530	3,598	3,666	3,736
Repairs & Maint	10,400	32,680	31,000	31,000	31,589	32,189	32,801	33,424	34,059
Equipment Usage (Vehicles)	22,000	20,000	20,000	20,000	20,380	20,767	21,162	21,564	21,974
Shaw Butte & Florence Gardens	22,800	22,800	25,300	25,300	25,781	26,271	26,770	27,278	27,797
All Other Services	2,000	-	-	-	-	-	-	-	-
<b>TOTAL OTHER SERVICES</b>	<b>\$ 291,210</b>	<b>\$ 292,390</b>	<b>\$ 294,700</b>	<b>\$ 296,382</b>	<b>\$ 302,013</b>	<b>\$ 307,751</b>	<b>\$ 313,598</b>	<b>\$ 319,557</b>	<b>\$ 325,628</b>
<b>GENERAL &amp; ADMINISTRATIVE - COMMODITIES</b>									
Non Cap Assets	\$ 50,000	\$ 50,000	\$ 25,000	\$ 25,000	\$ 25,475	\$ 25,959	\$ 26,452	\$ 26,955	\$ 27,467
Contract - Preventative Motorola	594,200	594,200	597,400	601,600	605,800	610,000	615,200	667,492	724,229
Contract - Security Monitoring Motorola	330,000	330,000	359,800	370,600	381,700	393,200	405,000	417,150	429,665
Software Maint-Mainsaver,Juniper	22,000	22,000	22,500	22,500	22,928	23,363	23,807	24,259	24,720
Materials & Repair Parts	20,000	20,000	20,460	20,460	20,849	21,245	21,649	22,060	22,479
All Other Commodities	1,000	-	-	-	-	-	-	-	-
<b>TOTAL COMMODITIES</b>	<b>\$ 1,017,200</b>	<b>\$ 1,016,200</b>	<b>\$ 1,025,160</b>	<b>\$ 1,040,160</b>	<b>\$ 1,056,751</b>	<b>\$ 1,073,767</b>	<b>\$ 1,092,108</b>	<b>\$ 1,157,916</b>	<b>\$ 1,228,560</b>
<b>OTHER BUDGET ITEMS</b>									
<b>PROPOSED CONTINGENCY - 3%</b>	\$ 89,751	\$ 89,751	\$ 51,321	\$ 51,821	\$ 52,711	\$ 53,668	\$ 54,761	\$ 57,291	\$ 59,982
<b>VHF OPERATIONS (special assessment)</b>	29,700	29,700	120,138	123,813	127,567	131,404	135,326	139,386	143,567
<b>VHF Equipment Staff Time (special assessment)</b>			27,500						
<b>TOTAL OTHER BUDGET ITEMS</b>	<b>\$ 119,451</b>	<b>\$ 119,451</b>	<b>\$ 198,959</b>	<b>\$ 175,634</b>	<b>\$ 180,278</b>	<b>\$ 185,072</b>	<b>\$ 190,087</b>	<b>\$ 196,677</b>	<b>\$ 203,549</b>
<b>Total Operating &amp; Maintenance</b>	<b>\$ 1,914,461</b>	<b>\$ 1,818,881</b>	<b>\$ 1,909,659</b>	<b>\$ 1,903,016</b>	<b>\$ 1,937,308</b>	<b>\$ 1,974,016</b>	<b>\$ 2,015,442</b>	<b>\$ 2,106,388</b>	<b>\$ 2,202,942</b>

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

	FY 17/18		FY 18/19	FORECAST					
	ORIGINAL BUDGET	UPDATED FORECAST	ENDORSED BUDGET	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25
<b>Total Operating &amp; Maintenance</b>	<b>\$ 1,914,461</b>	<b>\$ 1,818,881</b>	<b>\$ 1,909,659</b>	<b>\$1,903,016</b>	<b>\$1,937,308</b>	<b>\$1,974,016</b>	<b>\$2,015,442</b>	<b>\$2,106,388</b>	<b>\$2,202,942</b>
<b>O&amp;M - AIRTIME PERCENTAGE (1)</b>									
Mesa	71.94%	71.33%	71.33%	71.33%	71.33%	71.33%	71.33%	71.33%	71.33%
Gilbert	16.64%	16.48%	16.48%	16.48%	16.48%	16.48%	16.48%	16.48%	16.48%
Apache Junction	8.16%	8.20%	8.20%	8.20%	8.20%	8.20%	8.20%	8.20%	8.20%
Ft McDowell	1.50%	1.88%	1.88%	1.88%	1.88%	1.88%	1.88%	1.88%	1.88%
Superstition Fire & Medical	0.63%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%
Queen Creek	0.33%	0.46%	0.46%	0.46%	0.46%	0.46%	0.46%	0.46%	0.46%
Rio Verde	0.02%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Southwest Ambulance	0.65%	0.71%	0.71%	0.71%	0.71%	0.71%	0.71%	0.71%	0.71%
American Medical Response	0.13%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>VHF SPECIAL ASSESSMENT (2)</b>									
Mesa Fire & Medical	66.85%	66.85%	66.85%	66.85%	66.85%	66.85%	66.85%	66.85%	66.85%
Gilbert Fire	18.81%	18.81%	18.81%	18.81%	18.81%	18.81%	18.81%	18.81%	18.81%
Ft McDowell (100% staff time for additional VHF equipment)									
Superstition Fire & Medical	8.11%	8.11%	8.11%	8.11%	8.11%	8.11%	8.11%	8.11%	8.11%
Queen Creek Fire	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%
Rio Verde Fire	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>ANNUAL ESTIMATED REVENUE: OPERATING &amp; MAINTENANCE</b>									
Mesa	\$ 1,375,751	\$ 1,296,076	\$ 1,337,161	\$1,351,873	\$1,376,167	\$1,402,178	\$1,431,551	\$1,496,242	\$1,564,926
Gilbert	319,211	300,444	312,979	316,502	322,241	328,380	335,298	350,380	366,390
Apache Junction	153,796	146,713	144,486	145,895	23,919	24,476	25,076	26,057	27,089
Ft McDowell	28,271	33,637	60,626	33,449	148,399	151,094	154,169	161,294	168,869
Superstition Fire & Medical	14,283	15,828	22,958	23,385	34,023	34,641	35,346	36,980	38,716
Queen Creek	7,922	9,932	14,989	15,279	15,634	16,005	16,403	17,035	17,700
Rio Verde	526	686	1,130	1,153	12,849	13,083	13,349	13,966	14,622
Southwest Ambulance	12,251	12,703	12,510	12,632	2,896	2,948	3,008	3,147	3,295
American Medical Response	2,450	2,863	2,819	2,847	1,181	1,210	1,241	1,287	1,336
<b>TOTAL</b>	<b>\$ 1,914,461</b>	<b>\$ 1,818,882</b>	<b>\$ 1,909,658</b>	<b>\$1,903,015</b>	<b>\$1,937,309</b>	<b>\$1,974,015</b>	<b>\$2,015,441</b>	<b>\$2,106,388</b>	<b>\$2,202,943</b>

(1) Normal partner assessments are allocated based on recent rolling 6 month airtime averages and are subject to change based on actual monthly data.

(2) Agency cost distribution for the Hazard Zone Communication VHF Special Assessment is based on 12 months average Airtime as of March 31, 2015.

**TRWC Project Planning**

	ENDORSED	FORECASTED					TOTAL
	FY 2018/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	6 Years
B. TOPAZ Voice Radio Network Upgrade (CP0090)	\$ 433,828	\$ 433,828	\$ -	\$ -	\$ -	\$ -	\$ 867,656
D. Radio Sites Emergency Power Upgrade (CP0094)	106,200	106,200	106,200	106,200	106,200		531,000
E. Florence Gardens ISR Site Lifecycle upgrade	354,000						354,000
F. Antenna & Transmission Lines Lifecycle Upgrade	236,000	236,000					472,000
H. System-of-Systems Networking	619,500	-					619,500
I. Internet Protocol Network Routers & Switches Expansion	464,625						464,625
J. Communications Building UPS Battery Replacement	17,700					17,700	35,400
K. Southeast Queen Creek Expansion Site		560,992	939,008				1,500,000
L. Southeast Apache Junction Expansion Site			560,992	939,008			1,500,000
M. Northeast Mesa Expansion Site		-	-	560,992	939,008		1,500,000
N. West side Coverage Solution			371,700				371,700
O. Interface for non-Motorola Dispatch Console						309,750	309,750
P. Automated billing & Upgrade Management Tool			309,750	309,750			619,500
<b>Total Projects</b>	<b>\$ 2,231,853</b>	<b>\$ 1,337,020</b>	<b>\$ 2,287,650</b>	<b>\$ 1,915,950</b>	<b>\$ 1,045,208</b>	<b>\$ 327,450</b>	<b>\$ 9,145,131</b>
<b>Assessment to Members</b>							
Mesa	71.96% \$ 1,605,953	\$ 962,066	\$ 1,646,102	\$ 1,378,641	\$ 752,090	\$ 235,620	\$ 7,117,248
Gilbert	16.62% 371,037	222,275	380,313	318,520	173,762	54,437	1,644,472
Apache Junction	8.27% 184,618	110,598	189,234	158,487	86,459	27,087	817,325
Ft McDowell	1.90% 42,327	25,357	43,385	36,336	19,822	6,210	184,614
Superstition Fire & Medical	0.76% 16,886	10,116	17,308	14,496	7,908	2,477	73,854
Queen Creek	0.46% 10,357	6,204	10,616	8,891	4,850	1,519	44,879
Rio Verde	0.03% 675	405	692	580	316	99	2,917
<b>Total</b>	<b>100.00% \$ 2,231,853</b>	<b>\$ 1,337,020</b>	<b>\$ 2,287,650</b>	<b>\$ 1,915,950</b>	<b>\$ 1,045,208</b>	<b>\$ 327,450</b>	<b>\$ 9,885,309</b>



**Date:** December 7, 2017

**To:** Topaz Regional Wireless Cooperative (TRWC) Board of Directors

**From:** Dale Shaw, TRWC Executive Director  
John Locklin, City of Mesa Deputy Fire Chief / Fire Marshal  
Randy Thompson, City of Mesa Deputy CIO

**Subject:** Communications Strategic Alliance

At the 9/14/2017 TRWC Board Meeting we presented highlights of the Communications Strategic Alliance agreement (presentation materials attached for reference), which was the result of a multi-year joint effort with the RWC and other Arizona regional systems to foster a permanent formal relationship for partnering and sharing of resources. In conjunction with the September 2017 Board meeting, we provided the draft agreement to our members and have since received feedback that has resulted in minor modifications. The most current form of the agreement is attached.

Having received feedback and broad support for moving forward, we are recommending TRWC Board approval to authorize the execution of the Communication Strategic Alliance agreement, with minor non-substantive modification if necessary.

Once the agreement is executed by all parties, in early 2018, work will begin on jointly instituting the prescribed committees and processes, including the appointment of Coordinating Council representation by the TRWC Board (a governing and user representative), and the drafting and adoption of any necessary policies.



# Communications Systems Strategic Alliance

September 2017

# Guiding Principles

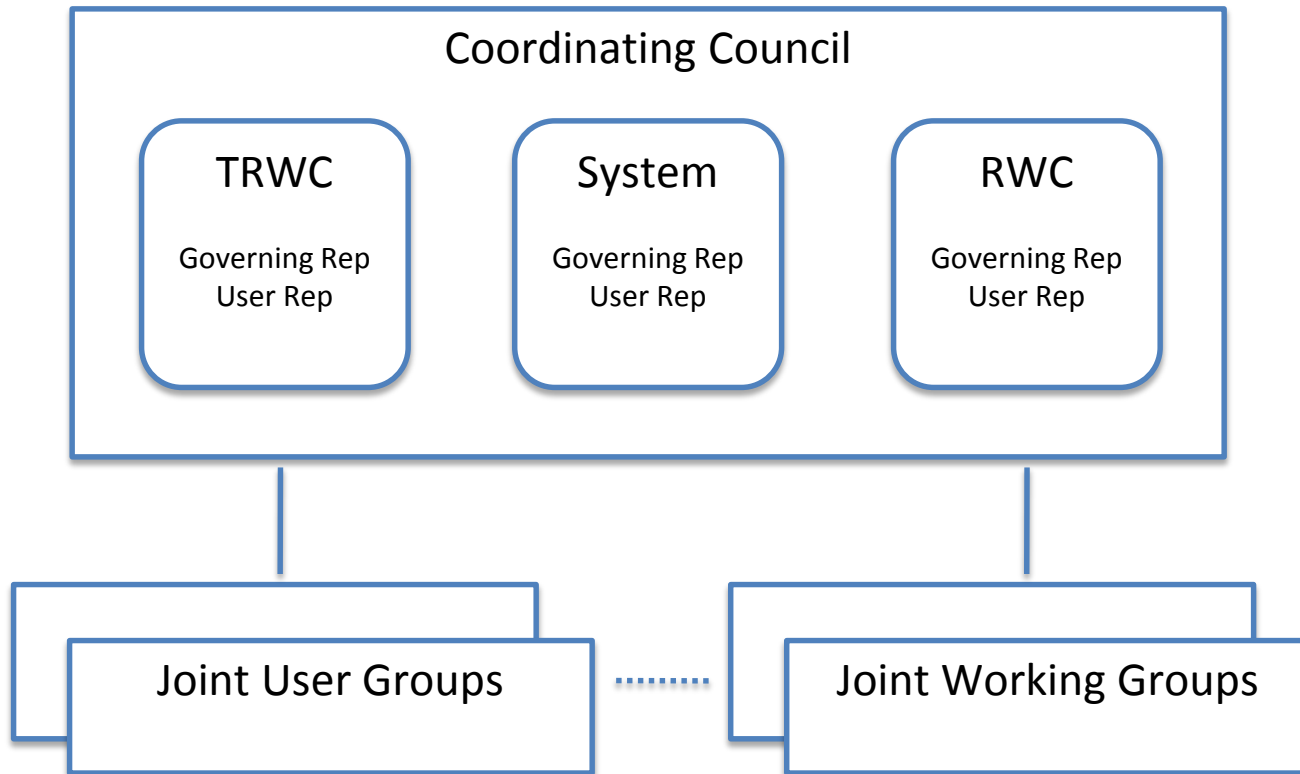
- Provide Valley-wide operable & interoperable communication services which are focused on the operational needs of the end user – universal “push to talk” coverage should be our overarching goal
- Maximize use of all existing resources including financial and personnel
- Establish and maintain system compatibility which is sustainable over time
- Focus on the needs of the end users which includes both first responders and the public

# Mission & Vision

- Mission:  
To achieve excellence in radio and data communications supporting public safety and municipal partners.
- Vision:  
To assure seamless radio and data communications to meet the operational needs of the users in a cost effective and sustainable manner.

# In Summary

- Master IGA structure with subordinate task orders
- Low-friction formalized approach to work together
- Emphasis on compatibility, cooperation, & sharing
- Coordinating Council to drive work among systems
- Heavy user participation to ensure needs are met
- Starting with TRWC & RWC, others likely to join
- December '17 execution, implementation to follow



**INTERGOVERNMENTAL AGREEMENT**

FOR

**COMMUNICATIONS SYSTEMS STRATEGIC ALLIANCE**

Draft

THIS INTERGOVERNMENTAL AGREEMENT FOR COMMUNICATIONS SYSTEMS STRATEGIC ALLIANCE (the “Master IGA”) is entered into by and between the attached signatories, (individually a “Party” and collectively the “Parties”).

RECITALS:

WHEREAS, public safety grade radio and data communications networks are critical resources for public safety first responders making timely and effective response to calls for preserving life, property and the general public safety and welfare; and

WHEREAS, public safety first responders must provide service in situations requiring cross-jurisdictional use of neighboring or overlapping radio or data communications networks; and

WHEREAS, public safety communications networks are expensive to build, expand and maintain; and

WHEREAS, coordinated communications systems strategies are in the public’s best interest; and

WHEREAS, the Parties each administer a public safety communications system (individually a “System” and collectively “Systems”) consisting, in part, of a collection of devices, software, hardware, technologies, facilities, towers or other devices or structures that provide voice and data communications capability and carry out their oversight responsibilities within the Parties’ respective Systems; and

WHEREAS, the Parties wish to collaborate concerning the delivery of communications services to their respective users when such collaboration benefits at least one of the Parties participating in a particular cooperative effort; and

WHEREAS, the Parties are authorized to enter into this Master IGA by explicit authority granted by their respective Systems’ governing documents or appropriate governing body action, and act on behalf of their respective System; and

WHEREAS, the Parties are authorized to enter into intergovernmental agreements for services or for the exercise of joint or common powers, pursuant to Arizona Revised Statutes § 9-240, § 11-951, et seq., § 15-342(13) and §15-1444(B)(4);

NOW, THEREFORE, the Parties, in consideration of the foregoing and the mutual promises contained herein, hereby agree as follows:

## AGREEMENT:

### Section 1. Coordinating Council and Committees

1.1 Coordinating Council. All initiatives and actions contemplated to be taken pursuant to this Master IGA will be evaluated by a committee consisting of representative(s) or alternate representative(s) from each of the Systems (“Coordinating Council”). The Coordinating Council will forward recommendations on any initiatives and actions within the scope of this Master IGA to each respective System’s governing body for consideration and possible action. The Parties must use diligent efforts to involve the Coordinating Council on Collaborative Efforts (defined in Section 3.1 below) between the Parties, but the Parties may take action independent of or not recommended by the Coordinating Council.

1.1.1 Coordinating Council Representatives. The Coordinating Council will be composed of representatives (“Coordinating Council Representatives”) who will be appointed as follows. Each Party will establish, through their respective System’s governing body, a primary representative from its governing System body to participate on the Coordinating Council. Each Party’s System’s governing body is entitled to have a maximum of two Coordinating Council Representatives. One representative must be an executive level member (“Coordinating Council Executive Representative”) who has direct involvement in the governance decision-making process for their respective System. In addition to the Coordinating Council Executive Representative, each Party may identify one Coordinating Council Representative that is an actual user of that Party’s System who possesses an understanding of routine operational system use (“Coordinating Council User Representative”). A Party’s System’s governing body may only have one Coordinating Council Executive Representative and one Coordinating Council User Representative.

1.1.2 Voting. All matters will be decided by a numerical vote. A numerical vote shall pass by the affirmative vote of a majority of the Coordinating Council Representatives present (either in person, by teleconference, or webcast) and voting. In case of a tie in votes on any motion, the motion shall not pass. There will be one vote per Coordinating Council Representative.

1.2 Committees and Working Groups. Committees and working groups will be established to advise and recommend initiatives and actions to the Coordinating Council.

1.2.1 Joint User Working Group(s). The Coordinating Council will establish joint user working group(s) to ensure end user needs are understood, coordinated, and addressed. The Coordinating Council may establish joint user working group(s) comprised of System users in all disciplines that use the System in accordance with Coordinating Council adopted policy applicable to those Systems where the policy has been ratified by that System’s governing body.

1.2.2 Other Joint Committees & Working Groups. The Coordinating Council will establish other joint committees and working groups in accordance with Coordinating Council adopted policy applicable to those Systems where the policy has been ratified by that System’s governing body.

1.3 Coordinating Council, Committee Support & Working Groups. As necessary, each System will provide direct support to the Coordinating Council and any committees by making their respective Executive Director (or equivalent) and staff available for advisement, meeting coordination, record keeping, and other duties.



## **Section 2. Term and Termination of Agreement; Expulsion of Parties; Addition of New Parties**

2.1 Term. The term of this Master IGA shall begin \_\_\_\_\_, 20\_\_ and continue until terminated as provided herein.

### 2.2 Termination

2.2.1 Termination For Convenience. A Party may terminate their participation in this Master IGA by delivering written notice to the other Parties. Such termination shall be effective on the date which is the earlier of (1) twenty-four (24) months after receipt of such notice by the non-terminating Parties or (2) a date agreed to by the non-terminating Parties.

2.2.2 Non-Appropriation. If any Party's performance under this Master IGA depends upon an appropriation of funds by their respective governing bodies, and if any Party's governing body fails to appropriate the funds necessary for performance, the affected Party or Parties may provide written notice of this failure to the other Parties and cancel either this Master IGA or the affected Task Order(s) (as defined in Section 4.1 below). Such written notice shall specify the effective date of such cancellation. Each Party shall give the other Parties as much advance notice as reasonably possible of a cancellation for non-appropriation. Notwithstanding the foregoing, each Party shall make good faith, reasonable efforts to seek appropriation of the funds necessary for such Party's performance under this Master IGA.

2.2.3 Party Termination. A Party's participation in the relationship established by this Master IGA may be terminated (resulting in a "Party Termination") upon the affirmative vote of a majority of the other Parties' System's governing bodies. A Party Termination will result in removal of the terminated Party's Coordinating Council Representatives from the Coordinating Council and the loss of the associated Coordinating Council voting rights, removal of the Party's representatives from user committees and working groups, cessation of the Party's participation in Collaborative Efforts (including all rights and privileges accruing as a result of such participation), and termination of the Party's participation in Task Orders. A Party Termination will take effect sixty (60) calendar days after completion of the vote, except that the Coordinating Council Representatives for the terminated Party shall be removed from the Coordinating Council and will lose associated voting rights effective immediately after a Termination vote.

2.2.4 Conflict of Interest. This Master IGA shall be subject to cancellation for conflict of interest pursuant to A.R.S. § 38-511.

### 2.3 Post-Termination – Property Disposition

2.3.1 Continued Ownership. Upon termination by a Party of its participation in this Master IGA or upon a Party Termination, each Party shall continue to own: (i) all System resources that the Party owned prior to this Master IGA; and (ii) all System resources that were acquired pursuant to this Master IGA and any Task Order (as defined in Paragraph 4) signed by authorized representatives (as defined in Paragraph 9.12) of the Participating Parties (as defined in Paragraph 3.1 below) that identifies that Party or Parties as the owner of such System resources.

2.3.2 Shared System Resources. Upon termination by a Party of its participation in this Master IGA or upon a Party Termination, the Party that owns the System resources that are shared with the other Party or Parties shall cooperate with and give adequate time for the other Party or Parties to acquire a suitable replacement, remove any shared portion and/or work with the other Party or Parties to create and implement an action plan for the successful separation for the System resources that will no longer be available to it. During the post-termination period, the Party that owns the System resources will allow the other Parties to continue to use the System resources as necessary to carry on its operations for a maximum period of twelve (12) months.

2.4 Addition of New Parties. Any public entity who owns or operates a System may apply to become a Party to this Master IGA, entitled to all benefits and subject to all obligations accruing to the Parties (an “Application”). An applicant shall be admitted as a Party upon occurrence of all of the following events:

2.3.1 Applicant submits an Application to the Coordinating Council in writing.

2.3.2 The Coordinating Council will forward the Application to the respective Systems’ governing bodies for review and approval.

2.3.3 After approval by a majority of the respective Systems’ governing bodies, Applicant executes this Agreement, thereby becoming a Party.

### **Section 3. Collaboration on Acquisition and Use of System Resources**

3.1 Authorization of Collaborative Efforts. This Master IGA authorizes two or more of the Parties (the “Participating Parties”), to collaborate on the acquisition, sharing, or use of communications related to the Participating Parties’ Systems resources (“Collaborative Effort(s)”).

3.2 Examples of Collaborative Efforts. The following is a non-exclusive list of potential Collaborative Efforts examples and is not intended to impose requirements or limit the potential joint, cooperative, or shared System resources or related services contemplated by this Master IGA:

3.2.1 Purchasing of equipment and related services.

3.2.2 Use of facilities and co-location of equipment.

3.2.3 Installation and use of connectivity and communications equipment.

3.2.4 Services such as maintenance of equipment.

3.2.5 Interoperable and/or operable use of each other’s Systems.

3.2.6 Research and development.

3.2.7 Staff resources and support.

3.2.8 Sharing administrative expenses incurred pursuant to this Master IGA.

3.2.9 Policies & procedures.

3.2.10 Strategic planning.

3.2.11 Grant applications.

3.2.12 Technical coordination and planning to ensure Systems compatibility.

3.2.13 Review performance of shared resources.

3.3 Limitation. The Parties understand that their authority to provide in-house services to each other or to share resources is limited and that any joint or cooperative effort under this Master IGA must be for beneficial projects that are within each of the Parties’ statutory authority and mission.

### **Section 4. Participating Parties’ Task Orders**

4.1 Authorization of Task Orders. The Participating Parties may enter into a task order for any Collaborative Effort(s) (“Task Order”).

4.2 Task Order Financing. Pursuant to A.R.S. Section 11-952(B)(3), Task Orders that will require expenditures by any Participating Party will include a budget and allocation of anticipated costs to the Participating Parties. A Participating Party shall not be obligated to pay costs in excess of its anticipated allocation without its written approval.

4.3 Scope. Examples of items that Task Orders may address include, but are not limited to, Parties, duration, duties and responsibilities, ownership, security and personnel requirements, authorization for access to data, capital asset control matters such as inventory and insurance coverage, contract management, shared usage parameters, hours of operation, reimbursement of costs, and accounting requirements.

4.4 Project Management. For any Collaborative Effort(s) requiring implementation planning and coordination, the Participating Parties will manage the project according to an adopted joint project management policy. For Collaborative Efforts where the Participating Parties have executed a Task Order, the joint project management policy will be set forth within the Task Order.

## **Section 5. Records**

Each Party shall maintain accurate and complete accounting records in support of all invoicing to the other Parties in accordance with generally accepted government accounting practices, and shall provide copies of such records to the invoiced Party upon request by the invoiced Party.

## **Section 6. Confidential Information**

6.1 Definition. "Confidential Information" means any information, whether in electronic, written, graphic, machine readable, or other tangible form of a confidential or proprietary nature including, but not limited to, system infrastructure and security information, technical data, engineering details, construction documents, equipment lists, programming configurations, and operational procedures.

6.2 Obligations Regarding Confidential Information. The Parties shall hold all Confidential Information in strict confidence and shall refrain from using Confidential Information received from other Parties for any purpose other than fulfillment of the receiving Party’s duties under this Master IGA or an applicable Task Order. When a Party receives a public records request or subpoena seeking disclosure of Confidential Information relating to another Party or another Party’s System, the Party receiving the public records request or subpoena shall promptly notify the other Party so that the other Party may have an opportunity to object to disclosure.

## **Section 7. Indemnification and Insurance**

7.1 Indemnification. Each Party (the “Indemnifying Party”) shall, to the extent permitted by law, defend, indemnify, and hold harmless, jointly and severally, the other Party and/or other Parties and each official, agent, or employee thereof (any such person being referred to herein as an “Indemnified Party”) from all Liabilities (defined below) to the extent provided in the remainder of this Section 7.1. This indemnity applies to any and all losses, claims, actions, judgments, damages, expenses (including reasonable attorney fees), or liabilities (“Liabilities”), joint or several, which the Indemnified Party may be subject to in law or in equity, but only to the extent that such Liabilities arise out of or based upon the negligent or intentional misconduct of the Indemnifying Party. Where bodily injury, personal injury, death, or loss of or damage to property is the result of the joint negligence or misconduct of two of the Parties or

all the Parties, each Party's duty of indemnification will be in proportion to its allocable share of such joint negligence or misconduct.

7.2 Insurance. Each Party, at its cost, shall maintain comprehensive general liability insurance with limits of not less than \$1,000,000 per occurrence, insuring against all liability of that Party and its authorized representatives arising out of and in connection with that Party's use or occupancy of the facilities. This insurance shall include coverage of the liability assumed under the indemnification provisions of this Master IGA. If the policy is to be written with an annual aggregate limit, that limit shall be not less than \$2,000,000. Comprehensive general liability shall name the other Parties to this Master IGA as additional insureds, a copy of which shall be provided at Master IGA execution and thereafter to the other Parties upon request. Each Party shall maintain worker's compensation insurance as required by statute and employer's liability insurance in an amount not less than \$1,000,000 per occurrence, which may consist of self-insurance. All insurance policies shall provide that the policies cannot be canceled, renewed, or limited in scope of coverage or limits until and unless the insurer endeavors to provide thirty (30) calendar days' prior notice to the other Parties.

7.3 Self-Insurance. Notwithstanding the provisions of Section 7.2, the obligations of the Parties, with respect to the insurance specified in this Section 7 may be satisfied by the existence of a self-insurance program containing the same coverage and limits specified herein with respect to third-party insurance. The aforementioned requirement to name other Parties as additional insureds shall not apply with respect to self-insurance. Furthermore, Parties self-insuring under this Section 7.3 need not secure any formal endorsement providing that the policies cannot be canceled, renewed, or limited in scope of coverage or limits until and unless the insurer endeavors to provide thirty (30) calendar days' prior notice to the other Parties; however, such Parties agree to provide thirty (30) calendar days' prior notice to the other Parties in the event that applicable self-insurance programs are canceled, renewed, or limited in scope of coverage or limits.

## **Section 8. Notices**

8.1 Notices. All notices given, or to be given, by any Party to another Party or to the other Parties shall be given in writing and either delivered: (i) in person; (ii) by registered or certified mail; (iii) by overnight commercial air courier or express service; or (iv) by email, so long as a hard copy of the notice is sent as provided by one of the methods set forth in (i) through (iii) of this paragraph. All notices shall be addressed to the Party at the address hereinafter set forth on the signatory page attached for each Party, or at such other address as any Party may designate by written notice. All notices, if sent by certified or registered mail, shall be deemed received upon actual receipt or three (3) business days after deposit in the United States mail; if delivered in person, notices shall be deemed received at the time it is personally served; if sent via overnight commercial air courier or express service, receipt shall be deemed effective one (1) day after the sending thereof; if sent via email, receipt shall be deemed effective as of the time the email is sent.

## **Section 9. General Provisions**

9.1 Entire Agreement, Amendments. This Master IGA represents the entire agreement of the Parties with respect to its subject matter. This Master IGA shall not be changed, modified, or rescinded, except through a writing signed by all Parties.

9.2 Governing Law, Forum. It is mutually understood and agreed that this Master IGA will be governed by the laws of the State of Arizona, both as to interpretation and performance. Any lawsuit for the enforcement of this Master IGA, or any provision thereof, will be instituted only in the courts of the State of Arizona.

9.3 Headings Not Controlling. Headings used in this Master IGA are intended for convenience or reference only and shall not control or affect the meaning or construction of any provision of this Master IGA.

9.4 Severability. In the event any term or provision of this Master IGA is held to be invalid or unenforceable, the validity of the other provisions shall not be affected, and the Master IGA shall be construed and enforced as if it did not contain the particular term or provision that is deemed to be invalid or unenforceable.

9.5 Nondiscrimination. The Parties agree to comply with all provisions of applicable federal, state, and local laws related to nondiscrimination, equal employment opportunity, and the Americans with Disabilities Act.

9.6 No Assignment. No Party shall assign or otherwise transfer this Master IGA or its rights or duties hereunder without the prior written consent of the other Parties. Any such assignment or other transfer, either voluntary or by operation of law, shall be void.

9.7 Surviving Provisions. The obligations under Section 2.2 (Termination), Section 2.3 (Post-Termination – Property Disposition), Section 4 (Participating Parties’ Task Orders) Section 4.1 through 4.3, Section 5 (Records), Section 6 (Confidential Information) section 6.1 through 6.2, Section 7 (Indemnification and Insurance) Section 7.1 through 7.3, Section 9.1 (Entire Agreement, Amendments), Section 9.2 (Governing Law, Forum), Section 9.3 (Headings Not Controlling), Section 9.4 (Severability), this Section 9.7 (Surviving Provisions), and any other Section which reasonably should survive, shall survive expiration or other termination of this Agreement.

9.10 Force Majeure. Any Party shall be excused for delay or failure to perform its obligations under this Agreement, in whole or in part, when and to the extent that such delay or failure is a result of causes beyond the control and without the fault or negligence of the Party unable to perform. Such causes include, without limitation, acts of God, acts of the public enemy, acts of the United States government, fires, floods, epidemics, quarantine restrictions, or embargoes.

9.11 Continuation of Master IGA. If any Party’s participation in this Master IGA terminates, all rights and duties under this Master IGA shall continue in full force and effect with respect to the remaining Parties to this Master IGA without further action.

9.12 Authorized Representatives; Counterparts. Authorized representatives shall sign this Master IGA on behalf of their respective Parties. This Master IGA may be signed in counterparts and the original signatures of all authorized representatives and of their attorneys may appear on separate signature pages.

9.13 Timing of Notice and Acts. If any act is required to be performed or notice given on a date which is a Saturday, Sunday or legal holiday recognized by the State of Arizona, the act or notice shall be performed or given on the next succeeding business day. Days herein shall include Saturdays, Sundays, and weekdays, except that as used herein the term “business day” shall exclude any day that is a Saturday, Sunday or legal holiday of the State of Arizona.

9.14 Time of the Essence. The Parties specifically agree time is of the essence of with respect to this Agreement and all provisions, obligations and conditions herein.

## **Section 10. Dispute Resolution**

10.1 Dispute Resolution. Should any dispute arise in relation to this Master IGA or a Task Order, the Parties who are party to such dispute must make a good faith effort to reconcile such dispute through informal negotiation before filing an action in any court.

10.2 Default. A default occurs under this Master IGA when a Party breaches a material term or provision of this Master IGA or of a Task Order.

10.3 Notice. If a Party fails to cure its default within thirty (30) calendar days following receipt of written notice from another Party, that Party shall be considered in default.

10.4 Default Procedures. Upon the default by a Party, the Parties may, with the approval of the process by their governing bodies, refer the matter to non-binding mediation. The initiation of non-binding mediation shall not in any way impair the right of the non-defaulting Party(ies) to file a claim under Arizona Revised Statutes § 12-821.01 and that statute shall be tolled for the period from the date of the approval of the governing bodies to mediate until the date that the mediation is complete.

10.5 Attorney Fees. In the event of any litigation instituted under this Master IGA or a Task Order, the successful Party to any such action (whether or not prosecuted to judgment) shall recover from the other Party(ies) reasonable attorney fees and court costs as determined by the court.

[Signature pages to follow.]

IN WITNESS WHEREOF, the below-referenced Party has caused this Master IGA to be executed in counterpart:

The CITY OF PHOENIX, ARIZONA, an Arizona municipal corporation; for and on behalf of the Regional Wireless Cooperative as its Administrative Managing Member

By: \_\_\_\_\_  
David Felix  
Regional Wireless Cooperative Executive Director

APPROVED AS TO FORM:

ATTEST:

\_\_\_\_\_  
City Attorney

\_\_\_\_\_  
City Clerk

**Address:**

City of Phoenix  
Executive Director, Regional Wireless Cooperative  
200 W. Washington St.  
Phoenix, Arizona 85003-1611  
RWCExecutiveDirector@phoenix.gov

Copy to:  
City of Phoenix  
Law Department  
200 W. Washington St., 12<sup>th</sup> Floor  
Phoenix, Arizona 85003-1611  
c/o David Francis  
david.francis@phoenix.gov

IN WITNESS WHEREOF, the below-referenced Party has caused this Master IGA to be executed in counterpart:

TOPAZ REGIONAL WIRELESS COOPERATIVE

By: The CITY OF MESA, ARIZONA, an Arizona municipal corporation

Its: Administrative Member

By: \_\_\_\_\_  
Dale Shaw  
Executive Director  
Topaz Regional Wireless Cooperative

ATTEST:

\_\_\_\_\_  
City Clerk

\_\_\_\_\_  
Printed Name

APPROVED AS TO FORM and within the powers and authority granted under the laws of Arizona to the City of Mesa

\_\_\_\_\_  
City Attorney

\_\_\_\_\_  
Printed Name

Copy to:

William H. Anger  
Engelman Berger, P.C.  
3636 North Central, Suite 700  
Phoenix, AZ 85018





## ARIZONA PUBLIC SAFETY BROADBAND PROGRAM/FIRSTNET REGIONAL FORUM

Education, Information, and Networking for all Public Safety First Responders, Administrators, and IT Support Personnel

### DATES AND LOCATIONS

<b>November 7, 2017</b>	<b>November 29, 2017</b>	<b>December 13, 2017 (Tribal)</b>	<b>December 14, 2017</b>
<b>Tucson</b>	<b>Flagstaff</b>	<b>Chandler</b>	<b>Phoenix</b>
Tucson Fire Central 300 S Fire Central PL Tucson, AZ 85701	Law Enf. Facility (LEAF) 911 E. Sawmill Flagstaff, AZ 86001	AZ HIDTA Training Ctr. Gila River Indian Community Wild Horse Pass Corporate Ctr. 5350 N. 48 <sup>th</sup> St. Chandler, AZ 85226	Phoenix Fire Dept. Special Operations 2430 S. 22 <sup>nd</sup> Ave. Phoenix, AZ

**REGISTER HERE:** <http://info.mcp911.com/arizona-public-safety-broadband-forum-0>

- Learn about the Nationwide Public Safety Broadband Network
- See FirstNet and AT&T's coverage objectives within your area
- Understand what functionality is available today, what's on the roadmap, and how it may impact your public safety operations
- Discover new technologies from industry leaders and see the latest devices supporting public safety data sharing
- Hear about FirstNet's Public Safety Applications Store
- Engage Federal and State leaders with questions, concerns, and insight
- Discover how you can take advantage of these capabilities now
- Registration is FREE



## ARIZONA PUBLIC SAFETY BROADBAND PROGRAM/FIRSTNET REGIONAL FORUM

### AGENDA

- 9:00 AM – 12:00 PM Welcoming Remarks and Introductions  
FirstNet & AT&T Partnership (*FirstNet*)  
Arizona State Plan (*AT&T*)  
Coverage/Capacity/Construction (*AT&T*)  
Arizona State Plan Review/Decision Process (*AZ SPOC or Designee*)  
(15 minute break)  
Network Disaster Recovery/Cell on Wheels (*AT&T*)  
Internet of First Responder Things (*Clear Management*)  
LMR/LTE Integration (*Mission Critical Partners*)
- 12:00 PM – 1:30 PM Lunch
- 1:30 PM – 3:30 PM Apps/Devices Presentation
- *Motorola Solutions*
  - *Sonim Technologies, Inc.*
  - *Cradlepoint*
  - *Inmarsat*
  - *Kodiak*
  - *Panasonic*
- 3:30 PM – 4:00 PM Wrap Up



**FISCAL YEAR 2017/18  
Year to Date Actuals  
Through October 31, 2017**

**OPERATIONS, MAINTENANCE,  
SPECIAL ASSESSMENT AND CAPITAL**

**November 30, 2017**

Description	FY16/17	FY17/18	FY17/18	YTD
	Actual	Adjusted Budget	Current Forecast	10/31/17 Actual
Personnel Services	\$374,771	\$486,600	\$390,840	\$114,548
Services	300,033	291,210	294,390	109,020
Commodities	754,953	1,017,200	1,017,200	579
Subtotal O&M	1,429,757	1,795,010	1,702,430	224,147
Special Assessment: VHF Ops	-	29,700	29,700	-
Contingency - 5% of total O&M	-	89,751	89,751	-
Total O&M	1,429,757	1,914,461	1,821,881	224,147
Projects	433,828	1,023,325	1,023,325	444,048
VHF Project	668,762	496,168	510,044	507,378
Total Topaz:	\$2,532,347	\$3,433,954	\$3,355,250	\$1,175,573

	FY16/17	FY17/18	FY17/18	YTD
	Actual	Budget	Forecast	10/31/17 Actual
Mesa	\$1,797,706	\$2,449,448	2,167,654	\$813,346
Gilbert	427,886	584,158	527,354	211,646
Queen Creek	67,293	39,748	36,663	31,334
Superstition Fire	146,889	61,006	56,306	45,485
Apach Junction	44,272	237,944	213,949	58,064
Ft McDowell	3,768	43,737	39,097	11,062
Rio Verde	9,695	3,212	2,993	2,686
Southwest Ambulance	1,958	12,251	11,842	1,596
American Medical	20,885	2,450	2,368	354
	\$2,520,352	\$3,433,954	\$3,058,227	\$1,175,573

**Date:** December 7, 2017

**To:** TOPAZ Regional Wireless Cooperative (TRWC) Board of Directors

**Through:** Dale Shaw, TRWC Executive Director

**From:** Randy Thompson

**Subject:** Administrator Update

### **Capital Projects**

- 1) **Fire Hazard Zone Communication Infrastructure.** This infrastructure will enable the Mesa Fire & Medical Regional Dispatch Alarm Room to communicate with the mobile and portable radios in Fire Hazard or Hot Zones, which will be operating on Very High Frequency (VHF, 150-174 MHz) radio frequencies in analog simplex mode. The funding for this project is included in the TRWC budget. The project milestones with status and dates are shown in the Appendix. The project is complete, was accepted from Motorola Solutions on November 30, 2017, and has been turned over to the TRWC fire members for training, testing, and commencement of operational use.
- 2) **Point-to-Point Microwave Radio Wireless Backhaul Lifecycle upgrade.** This lifecycle upgrade will replace the point-to-point microwave radios that connect the radio towers in the TOPAZ network together to transport data to and from the network core. The current equipment is no longer supported by the manufacturer, and uses older technology that does not support current transport protocols. This project is budgeted in the TRWC FY2017 - 2018 capital budget. The project milestones with status and dates are shown in the Appendix. This project has been delayed due to vendor personnel turnover and delays by the vendor in submitting security clearance documents. There have also been delays due to errors by the agency providing the clearances. These issues are actively being worked by the vendor and City of Mesa personnel.
- 3) **Lifecycle Upgrade for Microwave Radio Network Routers.** The network routers in the point-to-point microwave radio network control the flow of data in and out of the TOPAZ radio sites to ensure the data finds the fastest route to its destination and does not encounter congestion or other impairments that would delay delivery of data. In a radio system such as TOPAZ, minimizing these delays is critical to delivering clear voice radio communications. These network routers also automatically reroute data around disruptions in the point-to-point microwave radio network to ensure clear voice radio calls. These routers support both the 7/800 MHz and VHF radio networks. The Mesa City Council approved the purchase contract for this lifecycle upgrade on October 2, 2017, the new equipment is on order, and the project milestones with status and dates are shown in the Appendix.

## TRWC Administrator Update, December 7, 2017

### Operations Summary

**Unscheduled Impairments** – Please see the unscheduled impairments graph on page 5. Since the last Administrator update on September 14<sup>th</sup>, the unimpaired system availability has been as follows:

Period	Unimpaired System Availability	Comments
September, 2017	100%	9/26/17: MCC subsite out of service 8 seconds due to a network problem.
October, 2017	100.000%	

**Airtime and Radio Counts** – the following charts are included:

- 1) Six month rolling average airtime usage by member for calendar year 2017 through October.
- 2) Average number of radios enabled by member for calendar year 2017 through October.
- 3) Six month rolling average airtime usage by service type for calendar year 2017 through October.
- 4) Average number of radios enabled by service type for calendar year 2017 through October.

**Peak Channel Usage** – the following charts are included:

- 1) Peak channel usage for each site for September – October 2017, is shown on the graphs at the end of this report. The following table is a summary of the number of days with an all channels in use event:

Period	Simulcast Cell	Florence Gardens	Shaw Butte	Thompson Peak
September 2017	3	0	0	0
October 2017	2	1	0	0

- a. Although all channels were in use on several occasions as shown above, no system busies have been reported by users.

### Other Operational Events:

- 1) The TOPAZ 800 MHz radio network backup capability was successfully tested on October 2, 2017.
- 2) The City of Mesa Communications Building (quarterly) simulated power outage test was completed successfully on November 1, 2017. During this quarterly test, each generator was shut down, one after the other, and the equipment ran on the Uninterruptible Power Supply only for 10 minutes. Each generator was then restarted, and the test continued for the scheduled 30-minute duration.

### Upcoming Events:

- 1) Testing of TOPAZ 800 MHz radio network backup capability is to be determined.
- 2) The next City of Mesa Communications Building (quarterly) simulated power outage testing is planned for 5:00 AM on January 10, 2018.

## TRWC Administrator Update, December 7, 2017

### Other News:

- 1) **Potential Point-to-Point Microwave Radio Interference.** Higher Ground LLC, a mobile satellite earth station startup business, applied to the Federal Communications Commission (FCC) for a nationwide license to operate mobile satellite earth station transmitters in the 6 GHz radio frequency band. Higher Ground's license application was granted on January 18, 2017. The 6 GHz radio frequency band is the same radio frequency band utilized by the TRWC and other Public Safety communications networks for point-to-point microwave radio service, which connects the TOPAZ radio sites to each other and together as a network. The Higher Ground system utilizes an attachment to a cellular telephone that would enable consumer-based text messaging, e-mail, and "Internet of Things" communications via geostationary satellites.

Higher Ground was granted a waiver of two very important rules, as follows:

- a) Authorization of mobile operations in a Fixed Service radio frequency band; and
- b) Bypassing the required frequency coordination process

The concern is that bypassing these rules could result in interference to point-to-point microwave radio links which carry mission critical Public Safety communications.

Higher Ground appears to be producing product currently, and by not acting, the FCC seems to be affirming its previous decision to grant a license. As a result, this item is closed.

- 2) **More Potential Point-to-Point Microwave Radio Interference.** On August 3, 2017, the FCC issued a Notice of Inquiry (NOI) for "Expanding the Flexible Use in Mid-band Spectrum Between 3.7 and 24 GHz." This inquiry seeks comment on ways to expand opportunities for next-generation services, particularly wireless broadband services in mid-band (radio frequency) spectrum.

The TRWC and City of Mesa filed comments, attached at the end of this report, to this NOI on September 20, 2017. While not wanting to discourage innovation and progress, the comments state our concern for potential interference and the need to protect incumbent users of this radio frequency spectrum against interference. Our comments were cited and quoted in a filing on this NOI by AT&T.

Since this was a NOI, there is no further action on our part, and the FCC's timeline on any proposed rulemaking is unknown. As a result, this item is closed.

TRWC Administrator Update, December 7, 2017

Appendix

***Fire Hazard Zone Communications Infrastructure Schedule***

<b>Milestone</b>	<b>Status</b>	<b>Date</b>
Contract awarded to Motorola Solutions	Complete	September 28, 2015
First lease payment of \$600,000	Complete	November 12, 2015
Second lease payment of \$600,000	Complete	September 8, 2016
Third & final lease payment of \$496,164	Pending	September 2017
Frequency acquisition	Complete	October 19, 2016
Equipment ordering	Complete	October 2016
Equipment staging at Motorola Solutions in Illinois	Complete	December 6 - 7, 2016
Site preparation	Complete	January-February 2017
Shipment of equipment from Motorola Solutions in Illinois	Complete	Week of December 12, 2016
Installation of equipment at sites	Complete	January - February 2017
Optimization & testing of equipment	Complete	March - April 2017
System Coverage Acceptance Testing	Complete	May 2017
System Acceptance	Pending	December 1, 2017

***Point-to-Point Microwave Radio Wireless Backhaul Lifecycle Upgrade Schedule***

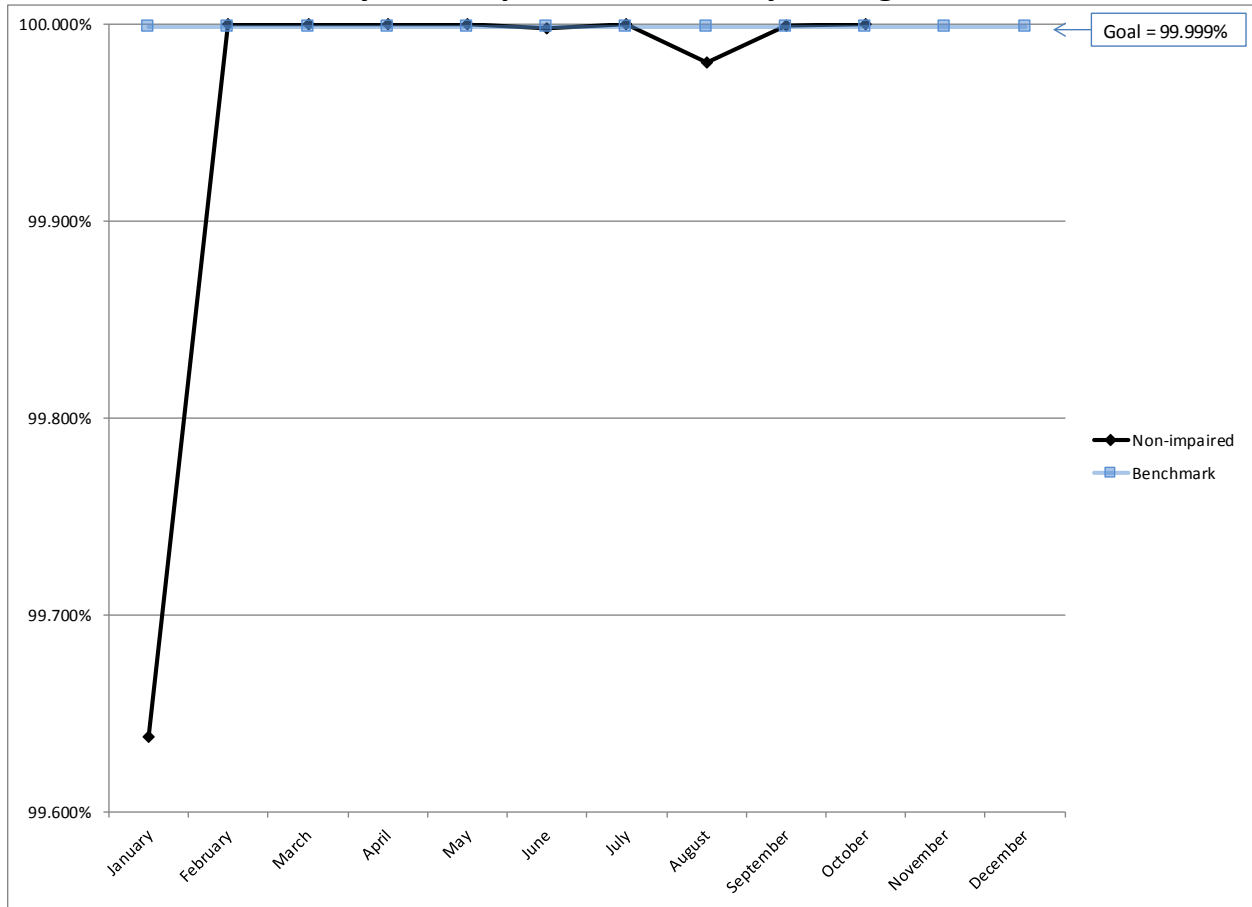
<b>Milestone</b>	<b>Status</b>	<b>Date</b>
Contract awarded to Aviat Networks	Complete	
Equipment received	Complete	August 14, 2017
Path equipment installation	Started, Planned	September 2017 – March 2018
Path equipment commissioning	Started, Planned	September 2017 – March 2018
Path Acceptance Testing	Started, Planned	September 2017 – March 2018
Project Completion	Planned	May 2018

***Lifecycle Upgrade for Microwave Radio Network Routers***

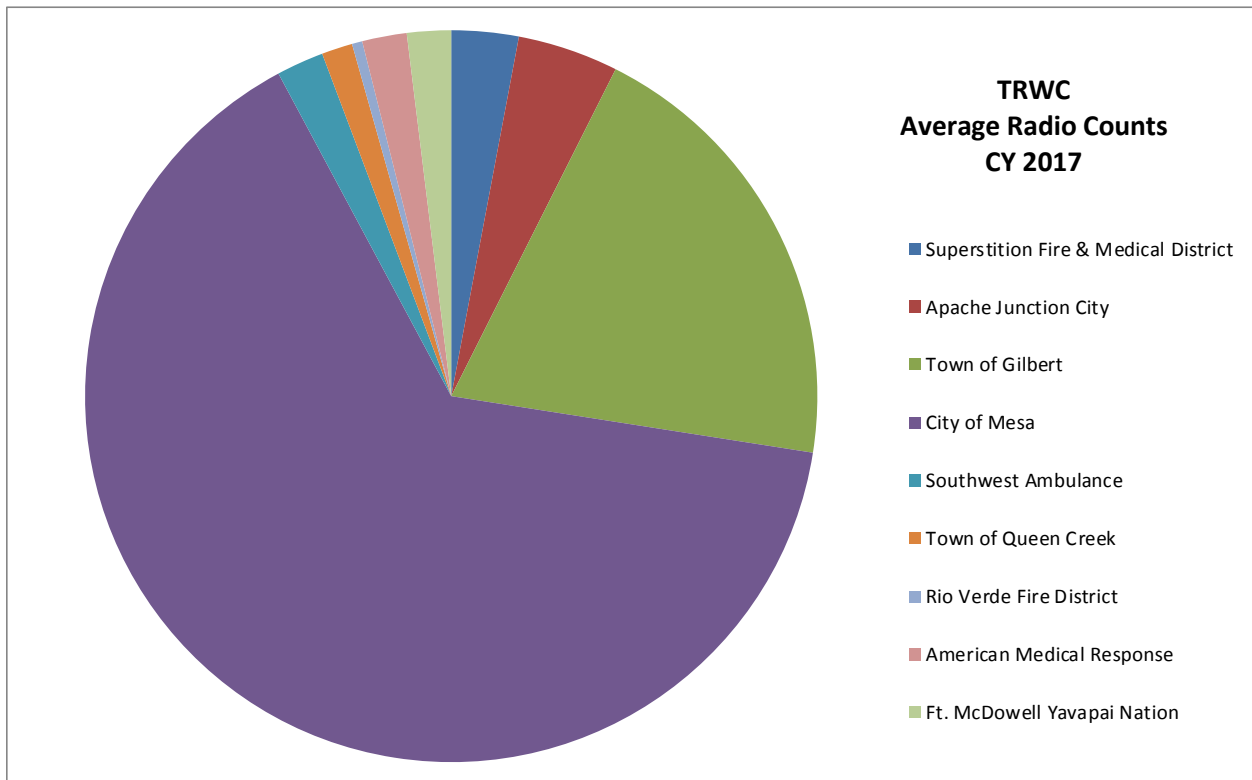
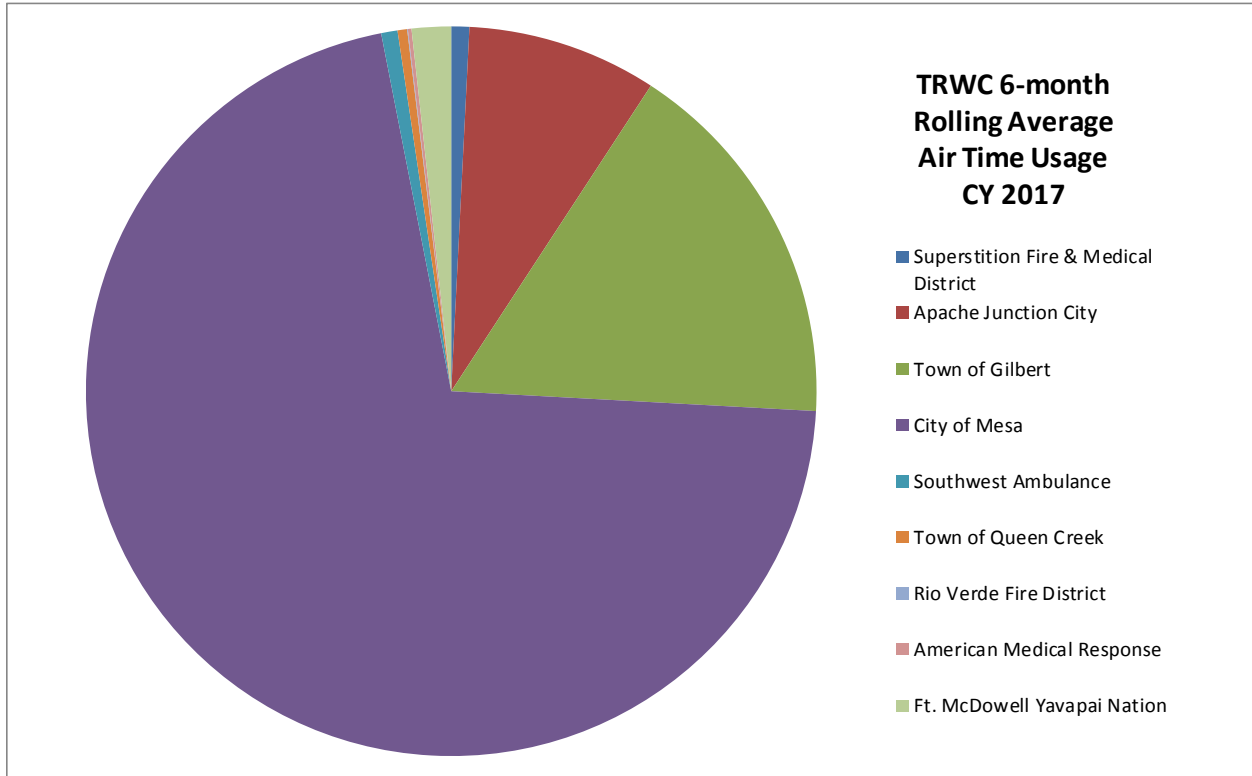
<b>Milestone</b>	<b>Status</b>	<b>Date</b>
Contract awarded to Enterprise Network Solutions	Complete	October 2, 2017
Equipment ordered	Complete	
Equipment received	Partial	In progress
Equipment staging & testing	Planned	To Be Determined
Equipment installed & operational	Planned	To Be Determined
Project Completion	Planned	June 2018

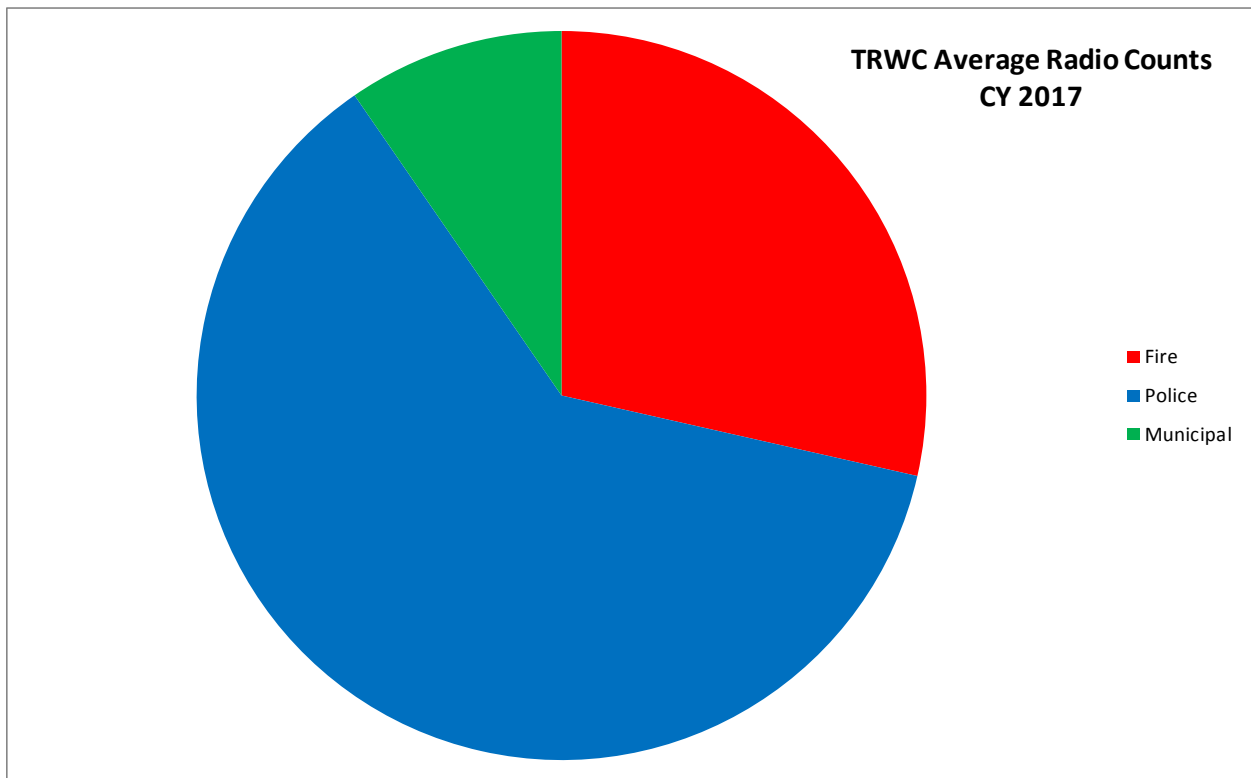
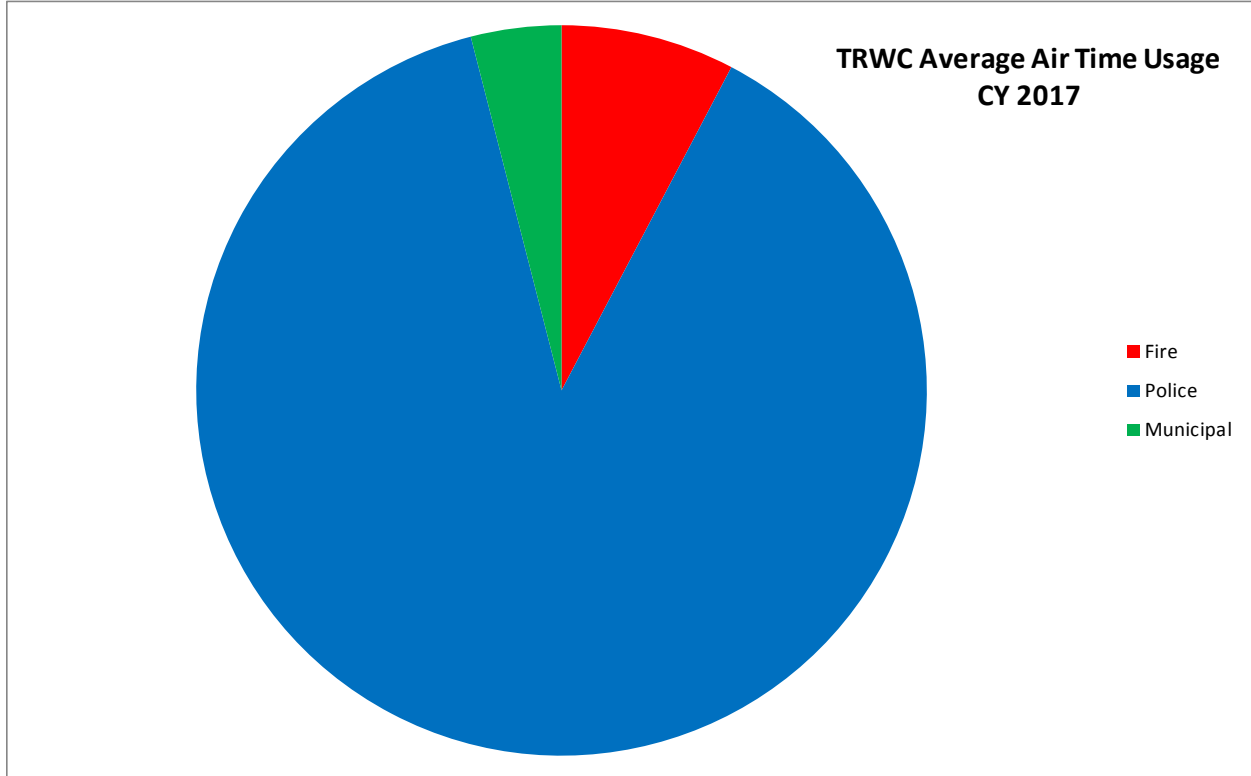


### Unscheduled System Impairment, January through October 2017

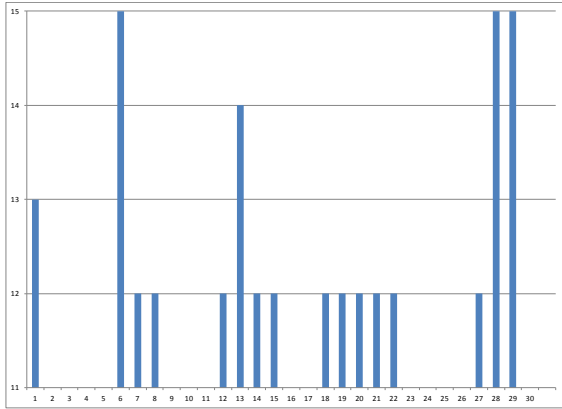


TRWC Administrator Update, December 7, 2017

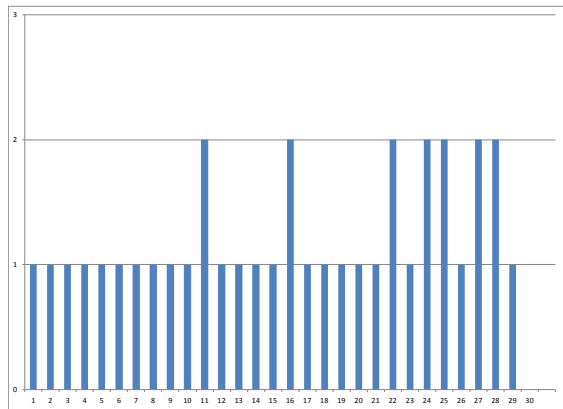




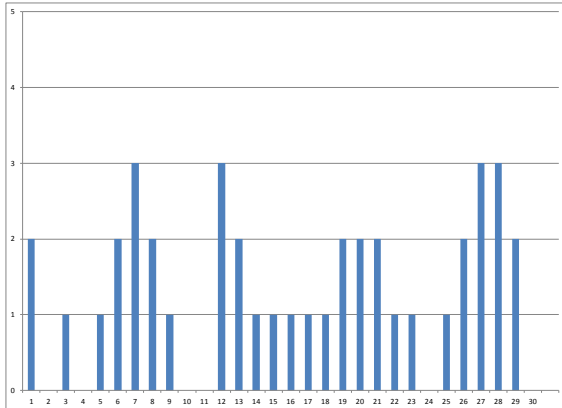
TOPAZ Peak Channel Usage, September 2017



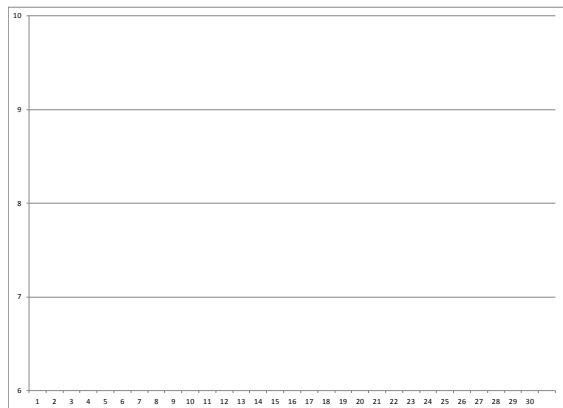
**Simulcast Cell**



**Florence Gardens**

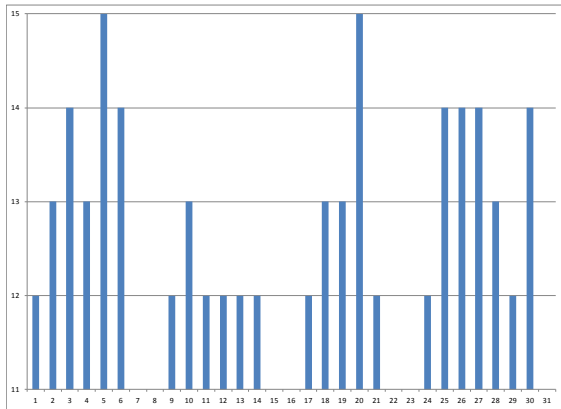


**Shaw Butte**

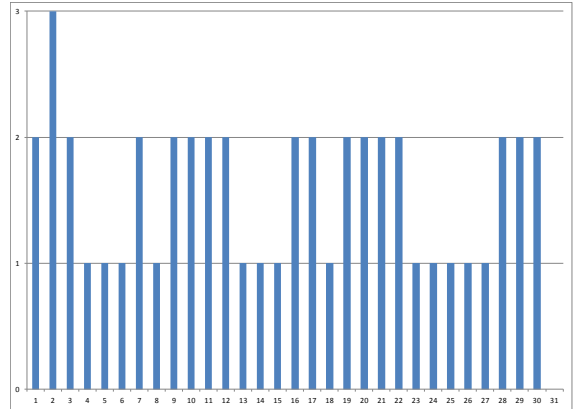


**Thompson Peak**

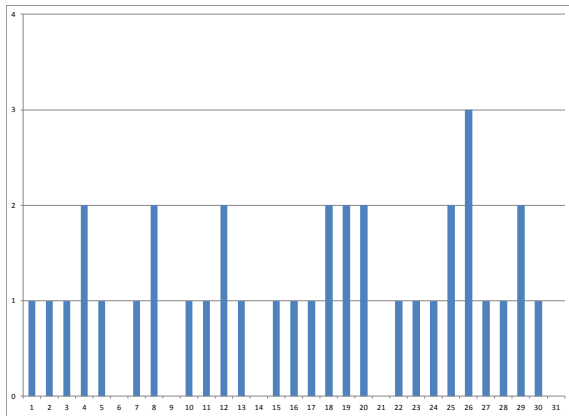
TOPAZ Peak Channel Usage, October 2017



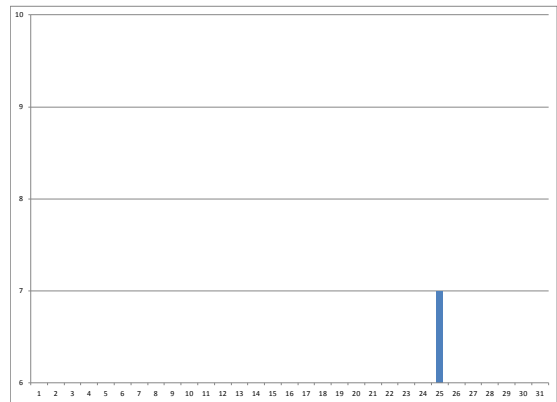
Simulcast Cell



Florence Gardens



Shaw Butte



Thompson Peak

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

**Expanding Flexible Use in Mid-Band Spectrum     )     GN Docket 17-183  
Between 3.7 and 24 GHz                             )**

**City of Mesa Comments on Flexible Use of  
5925-6425 MHz and 6425-7125 MHz bands**

The City of Mesa, Arizona is a license holder of 54 mission critical public safety microwave paths throughout the East valley (Phoenix metro area), with 11 of those paths licensed in the proposed bands of 5925-6425 MHz and 6425-7125 MHz. The City of Mesa is also the Administrative Manager of the TOPAZ Regional Wireless Cooperative (TRWC)<sup>1</sup>.

The TRWC operates and maintains a 7/800 MHz APCO Project 25 (P25) Public Safety Land Mobile Radio System, and an analog simplex VHF system for use by firefighters in “Hazard Zones.” Both of these networks rely on point-to-point microwave radio paths for proper operation and clear communications with First Responders.

---

<sup>1</sup> The Cities of Mesa and Apache Junction, the Towns of Gilbert, Rio Verde and Queen Creek, Superstition Fire & Medical, and the Fort McDowell Yavapai Nation have established the Topaz Regional Wireless Cooperative (TRWC). The TRWC Region covers over 320 square miles in the Southeast Phoenix/Mesa Standard Metropolitan Statistical Area and represents over 750,000 citizens. Within this area there are 263,917 households, 20,239 businesses and 175 community anchor institutions (schools, hospitals, clinics, etc.). The TRWC network itself connects 21 public safety agencies (Law Enforcement, Fire/Rescue, Emergency Medical, and Emergency Management), Mesa Community College, Mesa Public Schools and the City of Phoenix. The function of the TRWC, through the implementation of the TRWC Governance Process, is to jointly operate a regional radio system that is modern in its management, has equity in membership, and provides for support and future growth.

<http://www.topazrwc.org/Home.aspx>

The City of Mesa and the members of the TRWC embrace new technology, and realize it can bring capabilities we can only imagine. We recognize the wireless technologies being developed for the 3.7-24 GHz band may well be revolutionary for wide-area one-to-many communications, and may likewise be revolutionary in their effects on existing communications technologies, such as point-to-point microwave radio to weave radio networks together.

While we are excited about the possibilities of future technology, we also need to protect existing communications networks from harmful interference, especially from mobile sources. It is extremely difficult to track down sources of interference when they are intermittent and moving. As you have seen in the comments we filed regarding the mobile satellite service proposed in essentially the same frequency band by Higher Ground, LLC, we are unconvinced interference mitigation technologies are reliable enough to avoid interference that could have potentially catastrophic results to citizens and First Responders.

We request the FCC disallow the proposed flexible use of frequencies in the bands of 5925-6425 MHz and 6425-7125 MHz until independent laboratory and field trial testing can be performed. This testing must prove the cell carriers claim of zero interference to licensed frequencies in the bands of 5925-6425 MHz and 6425-7125 MHz. In addition, we recommend the Commission develop policies and procedures for the rapid investigation and resolution of interference claims.

Sincerely,

/s/ Randy Thompson  
Randy Thompson  
Deputy Chief Information Officer  
City of Mesa Arizona

/s/ Dale Shaw  
Dale Shaw  
TRWC Executive Director